

# The Linux Line

February 2003

This month: Leo Suarez, IBM Vice President, @server, xSeries and Workstations, analyzes what drives Linux growth on Intel architecture; Jeff Benck, Server Group Director of Product Marketing for xSeries, details how customers are using IBM BladeCenter and what's in the product pipeline; UnitedLinux signs IBM and AMD as first technology partners; a German city builds its IT infrastructure on SuSE Linux; developerWorks announces an expanded 2003 Linux Software Evaluation Kit; IBM introduces Integrated Platform for e-business on zSeries; and more.

## Departments

### PARTNER NEWS

UnitedLinux signs IBM and AMD as first technology partners; @server developer community site's links to platforms helps those porting Linux applications. [PAGE 14](#)

### FRONTLINES

German city goes entirely Linux with SuSE and IBM; PGA uses IBM and Linux to inform fans; global customers move to @serversystems with Linux for key applications ...and more. [PAGE 24](#)

### DEVELOPMENTS

IBM developerWorks expands 2003 Linux Software Evaluation Kit; introduction to SashXB; Linux Technology Center addresses Intel Xeon Hyper-Threading; professional-grade benchmarking; Redbooks on Linux clustering, x440 planning and installation ...and more. [PAGE 16](#)

### DEVELOPMENTS

IBM developerWorks expands its 2003 Linux Software Evaluation Kit to four CDs plus other perks; an introduction to SashXB; what the Linux Technology Center has learned about Intel Xeon Hyper-Threading; spotlight on professional-grade benchmarking; Redbooks on Linux clustering, xSeries 440 planning and installation ...and more. [PAGE 15](#)

### SOLUTIONS

zSeries integrated platform for e-business; Linux for iSeries; Grid computing and industry; Tivoli and Linux for e-business; SteelEye-SAP AG, deCODE genetics-IBM pacts; Octave Software's content-management solution ...and more [PAGE 20](#)

### SUPPORT

Benefit of single point of service for xSeries customers; CIOview tool helps assess iSeries Linux TCO ...and more. [PAGE 13](#)

### IN THE LOOP

Keeping current with Linux events. [PAGE 10](#)

### ILEARNING LINUX

The latest in Linux education. [PAGE 18](#)

### BUSINESS PARTNERS

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## Top of the line

### INTERVIEW WITH LEO SUAREZ



Leo Suarez, IBM Vice President, @server, xSeries and Workstations, details reasons behind the outstanding growth rate of xSeries, and explores the related dynamic of tremendous growth in the uniprocessor and two-way space. Suarez also discusses reasons for the market shift away from Solaris environments to an Intel architecture on Linux. [PAGE 2](#)

### INTERVIEW WITH JEFF BENCK



Jeff Benck, Server Group Director of Product Marketing for xSeries, responds to questions about what BladeCenter is all about, its reception in the marketplace, what differentiates it from competing products, and new developments in the works. Benck's update on the IBM BladeCenter roadmap includes news about high-speed Infiniband switching solutions for Linux cluster environments. [PAGE 6](#)

### DID YOU KNOW?

In an August 2002 Morgan Stanley study, 29% of respondents said they owned GNU/Linux servers; 8% did not, but were formally considering buying them; and 17% of the CIOs said they were informally considering them.

A 2002 survey by OpenForum Europe found 37% of CIOs polled were already using OSS/FS, and 49% of CIOs in financial services, retail and the public sector expected to be using OSS/FS. Perceived benefits cited included decreased costs, better control over development and improved security. (54%), lower software license cost (24%), better control over development (22%), and improved security (22%) [PAGE 26](#)

### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### FEBRUARY 2003

When people think of IBM, they often think "enterprise," and when they think "enterprise" they also think of big iron and SMP. But while IBM is certainly a dominant player on the high end, there have recently been some important developments in the one and two processor space, which IBM calls the "high volume" space. To find out more about xSeries and the recent high-volume Linux growth on Intel Architecture, we caught up with Leo Suarez, IBM Vice President, @server, x-Series and Workstations. Here's what he had to say.

#### **Leo, how are IBM xSeries products doing in the marketplace, and where are you seeing the most growth?**

Leo: We're coming off a really outstanding fourth quarter, where we had a phenomenal growth rate of 19% year-to-year for xSeries. It was widely believed that xSeries growth would be in the high end, because we have an eight-way platform that is just outstanding... we're now number one in market share in the eight-way space, in fact. But the new dynamic that's starting to emerge is tremendous growth in the uniprocessor and two-way space, what we at IBM call our high-volume products.

#### **How are IBM's high-volume Linux products being positioned in the marketplace?**

Leo: We're heavily involved in moving customers from traditional Sun Solaris UNIX-type environments to the industry-standard Intel Architecture on Linux. Much of this activity is in clustered environments, because customers have found they can replace proprietary Sun products with a cluster of two-way Intel servers that do similar workloads, but for less money. The value is particularly visible in high-performance computing environments, and we've seen a lot of new business in that area. But our commercial customers are also deploying Linux on Intel in their enterprises in significant numbers. It's not just academia anymore.

#### **Recent xSeries announcements include high-performance processors from Intel, with the 533 Mhz front-side bus. What does that mean, and why should customers care about that?**

Leo: The front-side bus speed is basically the speed at which the CPU talks to RAM memory and the motherboard chipset. For customers, the 533 Mhz front-side bus could mean up to a 10% to 20% improvement in performance. They'll see better scalability. And, they'll be able to move more workloads from Sun's high-end proprietary systems onto the lower-cost industry-standard Linux space. So whether they're in a distributed environment, or in an enterprise data center, we expect to see more customers move to this space to exploit this improved performance.

I'd like to add that IBM will be the first vendor to transition their whole Intel product line to the 533 Mhz front-side bus. We made the decision some time ago that it was really important for our customers to be on the Intel roadmap, so they could get the latest,

most relevant technology from us. This lets resellers know that when they purchase one of these servers and go into a customer engagement, they're offering the best technology available. At IBM, we've been very focused on that over the last few years, and we think we have really executed well.

### **Are there other important IBM high-volume differentiators that you can talk about?**

Leo: Customers are really looking to us first for several reasons. The number one reason is our focus on Linux. IBM is clearly recognized in the industry as a leader in Linux. We're working with the community to help improve Linux all the time, in the high end in the SMP space, in the carrier space for our telecommunications customers, in horizontal clusters. We were in Linux early, and we've been totally committed to Linux across the board for some time now.

Our second differentiator is our solutions approach. At the hardware level, we're not just delivering a box. We're not just delivering a subsystem. We're delivering complete solutions to our customers. A customer that wants to put together a data center and create a new e-business infrastructure can get their rack-dense 1U servers from us. But wrapped around that, we've got the right rack subsystem that they need to put in place, the right power distribution units, the right keyboard and mouse solutions for a rack environment, and so on.

At the software level, we're delivering applications, including over 3000 Linux ISV applications, that have been enabled on our **@server** hardware. And these integrated solutions can be supported by our partner channel, or by IBM Global Services. So we've really taken a broader view of what solutions our customers deploy, so they won't have to go to multiple vendors and suppliers to get the technology and support that they need.

The third element is technology. Technology really does matter, even -- perhaps especially -- in the entry-level Intel space. We've had a four- to five-month time-to-market advantage, which is unheard of in the Intel industry. Because of our investment in technology and our focus on time-to-market, we were the first to deploy Intel's P4 and Xeon technologies in the uniprocessor and two-way space, both tower and rack optimized. Now we're completing our transition to 533 before anyone else in the industry. Both HP and Dell have one or two offerings that are 533, but when we complete this transition, as I said, we will be the first vendor to transition their whole Intel product line to the 533 Mhz front-side bus.

IBM technology gives us advantages in other areas as well. One of our technology advantages is our cable-chaining technology, which has reduced "cable spaghetti" and saved our customers thousands of dollars, and not an inconsiderable amount of pain. There are significant technical challenges involved in cooling a dense 1U pizza-box server with Xeon processors, too. And in systems management, deployment tools like IBM Director and Remote Deployment Manager let customers deploy and manage hundreds of servers easily, and move images onto a large cluster of Linux-based servers with

drag-and-drop simplicity. Anyone who's tried to develop, deploy and manage a cluster "by hand" will appreciate the value this technology adds.

**You mentioned the entry-level Intel space. There has been a lot of interest in some of the WhiteBox solutions available in the marketplace, especially where Linux clusters are concerned. How do you position xSeries against some of these offerings?**

Leo: First of all, I want customers to know that we are very aggressive on price in this space. We recognize that these industry-standard platforms have to be price competitive. Customers, in our experience, want to say, "Why not IBM, if the price is competitive?" So we make the price competitive.

There are other reasons to choose IBM as well. We have a customer that recently deployed WhiteBox solutions, but then made the decision to move away from the WhiteBox player to IBM. Why? Because the white box solution wasn't everything they thought it would be.

One issue they had was that their WhiteBox cluster was just plain loud. But the biggest issue was service and support. When one of the nodes failed, they had to send the node away for service. Then they found themselves arguing with the vendor over what the problem was -- in fact they were expected to prove what it was. They had to diagnose the failure down to the subsystem level, and then argue whether it was a video card or a SCSI adapter to get this vendor to replace the failing component, and only the failing component. And the support line was only available from 8 to 5 on the West Coast.

So they really liked the fact that IBM had the on-site service and support. They didn't want their engineering team to spend their time diagnosing and debugging problems, but wanted them to do the work that they were supposed to be doing.

Last but not least, they have come to really appreciate the IBM customer-vendor relationship. The WhiteBox player popped in and made the sale, but didn't have the long-term relationship with the account that IBM had. At the end of the day, they just weren't in it for the long haul.

**What sort of customers have been buying these high-volume solutions? Are there some folks you can talk about?**

Leo: We've seen our solutions, particularly the high-volume solutions, delivered into distributed enterprises where there is a big emphasis on systems management and remote management. These distributed companies may not have a on-site resource, so they really need the systems management tools. This has been an important business for us, and will continue to be going forward.

But interestingly, within the high-volume space, the bulk of our new growth is coming from the rack-dense part of our portfolio. In the current economic climate, we're seeing

that customers have been asked to manage their workloads, or larger workloads with less resource. So they are consolidating their servers into data centers on Linux and the industry standard Intel Architecture... to help them get a handle on their costs. That's playing right into our Linux and high-volume Intel strengths. Staying relevant by executing the Intel roadmap to provide the best technology and value to our customers is really what's fueled our growth.

A recent example is PGS, who does petroleum exploration. They've decided to deploy several industry-standard 256-node clusters running Linux on our x335 platform. In fact we've seen a lot of high-performance computing customers, whether they be in the petroleum industry, in the financial industry, or in life sciences mapping the human genome... they've all seen a benefit from rolling out high-volume Linux on Intel and on xSeries, and we expect much more of this sort of business going forward.

Thanks for taking the time to talk to us.

### **Related resources**

IBM xSeries Intel Architecture Solutions  
<http://www-1.ibm.com/servers/solutions/xseries/index.html>

IBM Cluster servers  
<http://www-1.ibm.com/servers/eserver/clusters/>

**BladeCenter Redux: How are we doing?**  
<http://www-1.ibm.com/linux/news/bladecenter2.shtml>

### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### FEBRUARY 2003

In the third quarter of last year, IBM launched its BladeCenter product into a market where other vendors were already out there staking their claims. Now that a couple of quarters have gone by, we caught up with IBM's Jeff Benck, Server Group Director of Product Marketing for xSeries to ask him to review with us what IBM BladeCenter is all about, how has it been received, what distinguishes it from the competition, and what new developments we might look for going forward. Here's what he had to say.

#### **Jeff, thanks again for joining us for a BladeCenter update. For those who aren't really familiar with IBM BladeCenter, what is it? What's the offering all about?**

Jeff: BladeCenter is a brand new packaging concept, where we leverage common infrastructure like power and cooling subsystems that multiple servers use. Blades are just servers that slide into and out of an enclosure, like books on a shelf, and they plug into a backplane that allows them all to connect to and communicate with each other.

IBM BladeCenter is all about the integration of servers, networking and storage to deliver an enterprise platform for deploying e-business applications, and we're really focused on providing a flexible infrastructure to give the customer a lot of choices. BladeCenter isn't only about Intel based offerings, but also Power processor platforms, multiple storage solutions, a variety of networking elements, and of course different operating systems.

Besides being lower power and higher density -- in fact, twice the density of today's 1U pizza box platform servers -- BladeCenter is made stronger by the management tools that go with it. It's tempting to think of blades as purely a hardware play. But systems management is really one of the key elements, because as customers consolidate hundreds or even thousands of servers, perhaps with different operating systems or even different processors into one location, you need powerful tools to simplify management. IBM Director performs these tasks extremely well, and with the same tools they use to manage their other Intel server platforms,

#### **IBM introduced BladeCenter in September of 2002. How has it been received in the marketplace?**

Jeff: We had an outstanding start in the fourth quarter. BladeCenter has been one of the fastest selling new servers we've ever produced. We sold several thousand Blades in less than a month; eclipsing the 5,000 order point early this year. And significantly, customers are deploying real enterprise applications on our blade platform, so we're pretty excited about our success up to this point.

Why have we done so well? Well, we believe it's because a lot of the earlier blade solutions were really tier-one, edge of network products that focused on things like file and print, web caching and web serving. But when we developed BladeCenter, we really were focused on performance. We wanted to have the latest Intel technology as it came out the door. And, we were very focused on enterprise features like high availability, because we knew as customers looked to deploy enterprise solutions like collabora-

tion servers, app servers and terminal servers, those critical infrastructure applications would require all the resiliency that we could bring to the platform.

And again, there's our focus on systems management,. Moving a bunch of servers into the centralized data center without having the tools to deploy, manage, provision and redeploy those servers is just repackaging old problems. So because of this focus, BladeCenter has been very well received, and we're excited about where we are today.

**You mentioned a few second-tier application areas. Could you talk more about what customers have been doing with IBM BladeCenter?**

Jeff: Well first of all, we've frankly been surprised at the demand we've seen for Linux on BladeCenter. A lot of our customers are moving off of Sun Solaris and have decided that BladeCenter and Linux are the ideal platform for doing that. In fact, more than 50% of the applications that our customers have deployed in the fourth quarter have been Linux based.

We've also seen a number of customers move high-performance computing solutions to Linux and BladeCenter. The University of Washington was one of the first BladeCenter customers -- they're mapping the human genome in their Genome Sequencing Center. They have an enormous amount of data that they needed to crunch, and they are running Linux on BladeCenter to help them do data collection, acquisition and analysis as they plot genome sequences. They were interested in the high-performance and scalability features of BladeCenter, and wanted to modify the operating system to get the highest performance possible, so Linux on BladeCenter was the right answer for them.

Compagnie Generale De Geophysique, or CGG is another of our customers. They do oil and gas exploration, and deployed a 256-node Linux cluster to perform computational analysis of geological data to look for new sources of oil. BladeCenter's ability to deploy at low cost, and then scale up easily made it the best solution for the very high-performance cluster computing work that they have planned.

**You mentioned having the latest Intel technology. What is IBM's relationship with Intel in this space, and how did it come about?**

Jeff: It's unique because we're sharing strategy and development on Blades; and we are the only ones partnering with Intel on Blades.

We talked with Intel last year, and found that our strategies were very closely aligned. We have a similar vision for deployment of Blades in the enterprise, and since there are a lot of things you can do with blades we felt if we put our heads together, then our customers would benefit from more choices and better technology, so that's what we did. Basically, we take the results of our combined efforts to market as BladeCenter, but Intel can also sell building blocks to their OEMs.

The arrangement allows us to share development expenses, and increase volume. That lowers our costs and ensures at the end of the day that we have both the best technology, and very competitive pricing. In tough economic times, we felt this was the prudent

thing to do.

### **How is BladeCenter differentiated from some of our primary competitors?**

Jeff: Our competition had initially come out with low performance Pentium III blades that were really targeted at edge of network applications. But we wanted to deploy blades that were suitable for enterprise applications, so we were the first to market with the highly-available dual Xeon blades. This gives us leadership in performance density over the competition.

BladeCenter not only has redundant power and cooling, as you might expect for an enterprise solution, and hot swappability at the blade level, but we also have redundant mid-planes, redundant management modules, and unprecedented high availability features.

We have a fiber channel connection to each blade, but we also take the 14 blades in each chassis and combine them together through a fiber channel switch that's integrated into the chassis. This increases inter-server bandwidth and data transfer rates for SANs, and since our switch is integrated into the chassis, it saves customers about 20% on the cost of the switch without taking up additional rack space. We're also working on other high-speed switch technology like Infiniband and iSCSI for the new storage and networking solutions that are in the pipeline.

This brings us back to the other key differentiator... our roadmap of offerings, thanks to our BladeCenter Alliance Program and our close relationship with Intel. When you deploy IBM BladeCenter in your infrastructure, you're not headed into a dead end. You'll be able to continue to enhance your deployment with the best technology available, as the need arises.

### **Could you talk more about BladeCenter storage strategies?**

We support four different types of storage. First, we support local IDE drives for those customers that want drives right on the blade. While we really don't see storage residing on a blade long-term, in legacy environments where customers are just migrating to blades, we wanted to make that option available.

We also have an optional hot plug SCSI blade that connects to a processor blade and allows two hot-swap SCSI drives to be connected to the blade. We support Ethernet connectivity to Network Attached Storage. And the fourth and preferred solution is fiber channel. Dual-port Fiber channel host bus adaptors on each blade and an integrated fiber channel switch in the chassis allows you to connect to our FASTT external storage controller offerings, ideal for creating enterprise SANs.

### **What can you tell us about the future of BladeCenter?**

Jeff: Though BladeCenter has had a record-setting launch, we think the best may still be ahead. Our partnership with Intel and our BladeCenter Alliance Program, where

we're working with a number of ISVs and IHVs on everything from Linux apps to bringing new networking and storage offerings to the BladeCenter platform gives us a very strong, very comprehensive roadmap.

You'll see a four-way blade server offering that will plug in to this same chassis infrastructure. We're working on some high-speed switching solutions for Linux cluster environments for customers who have a need for high-speed interconnect beyond the gigabit solution we have today. We're working on some advanced networking technology with partners like Nortel and Cisco, which will let us move beyond simple layer two switching, to content-level switching to provide even higher performance and scalability, but on a simpler infrastructure. And later this year, you can expect to see Power processor based blades that will run both Linux and AIX. There's some pretty exciting stuff going on, and a lot of products are in the pipe that we're going to be rolling out as we go through '03. We're already declaring it the "Year of the Blade".

Thanks for taking the time to talk to us.

### **Related resources**

IBM BladeCenter Video

[ftp://ftp.pc.ibm.com/pub/pccbbs/bp\\_server/ibm\\_eserver.mpg](ftp://ftp.pc.ibm.com/pub/pccbbs/bp_server/ibm_eserver.mpg)

IBM BladeCenter Alliance Program

<http://www-1.ibm.com/servers/eserver/clusters/>

### **IBM BladeCenter Page**

[http://www.pc.ibm.com/us/eserver/xseries/bladecenter\\_family.html](http://www.pc.ibm.com/us/eserver/xseries/bladecenter_family.html)

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### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### **DON'T MISS IBM'S PREMIER TECHNICAL EVENT, THE 2ND ANNUAL IBM DEVELOPERWORKS LIVE!**

April 9-12, 2003  
Morial Convention Center  
New Orleans, LA

Attendees can expect more at this event designed exclusively for technical teams. They will be offered a wealth of information and a variety of stimulating experiences, including general session presentations by industry experts, hands-on labs, birds-of-a-feather meetings, hundreds of elective sessions including over 20 hours of sessions dedicated to Linux, certification testing, exhibits and meet-the-developer opportunities. Attendees can start planning their conference schedule with the Agenda Builder tool today. The Agenda Builder contains session abstracts for proposed sessions at developerWorks Live! Attendees may browse abstracts for Linux, Planet Tivoli, Data Management, Lotus and WebSphere, as well as for autonomic and pervasive computing, Web Services, server platforms and other technologies. A sampling of Linux sessions includes:

- Building Applications with the IBM Grid Toolbox for Linux - Architecture and APIs
- Case study: Deploying Web-server Environment with Linux on xSeries Intel Servers using WebSphere App Server
- Hands-on: Installing and Configuring DB2 8.1/WAS 5.0 on Linux
- IBM Software for Linux Strategy
- System Automation for OS/390 and Linux
- Linux and the Mainframe - Ready for Production

Hands-on lab sessions have limited capacity, so attendees should use Agenda Builder to pre-enroll and reserve seats. In addition there will be:

- Unique hands-on learning on: XML/XSL, EJBs, JSPs, servlets in the context of WebSphere, Lotus, DB2 and other technologies
- Opportunities to learn from the best: well-known experts and senior execs will guide attendees through WebSphere, Linux, XML, Web Services, Data Management, wireless technologies, Lotus messaging and collaboration
- Content on the full range of IBM's open middleware
- Opportunities to share best practices and learn to avoid the "gotchas": see the code, hear the tips, and find out how to build, manage and fine-tune applications.

Sign up now at: <http://www.ibm.com/events/ibmdeveloperworkslive/r/nltr2>

### **IBM PARTNERWORLD OFFERING NEW OPPORTUNITIES TO LEARN & CONNECT**

Feb. 16-19, 2003  
New Orleans, La.

This year's PartnerWorld is expected to draw over 3,000 Business Partners. The three-day event has been redesigned to offer increased opportunities to network with IBM Business Partners and executives and exchange ideas in a very interactive forum. Attendees will have an opportunity to:

- Be among the first to learn about and discuss IBM plans and strategies for 2003

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- Connect with other Business Partners to reach new markets
- Learn about new tools to help grow your business and be more profitable
- Exhibit your products and solutions

More information: [http://www-1.ibm.com/partnerworld/pwhome.nsf/weblook/pw2003\\_index.html](http://www-1.ibm.com/partnerworld/pwhome.nsf/weblook/pw2003_index.html)

### **FREE WORKSHOP ON DEVELOPING, DEPLOYING AND INTEGRATING ON LINUX**

Are you a software developer or IT decision-maker who wants to develop on Linux? Do you want an introduction to IBM's middleware on Linux? If so, this 2-day, no-charge workshop is for you! Find out how to develop on Linux and install and configure IBM middleware in the course scheduled in cities worldwide beginning in March.

Details: [http://ibm.com/partnerworld/developer/spc/events/ddi\\_linux.html?ca=dsp-1q11ln](http://ibm.com/partnerworld/developer/spc/events/ddi_linux.html?ca=dsp-1q11ln)

### **SEMINAR: DEPLOYING & MANAGING IT INFRASTRUCTURE ON RED HAT LINUX ADVANCED SERVER**

The world's largest financial institutions are migrating. So are British Petroleum, Amazon.com, and Deutsche Telekom. Learn why and how the world's most successful global enterprises are migrating major parts of their IT application infrastructure from RISC/UNIX to Red Hat Linux on Intel architecture. In this technical seminar cosponsored by Red Hat and IBM senior field engineers will demonstrate the realities, benefits, and best practices for migrating enterprise applications and infrastructure to Red Hat Linux on IA-32 architecture. Then they'll perform a complete demonstration of deployment and management strategies with Red Hat Linux Advanced Server and Red Hat Network on IBM xSeries systems. Attendees will learn how IT managers are capitalizing on the price/performance advantages of migrating to Red Hat Linux on IBM xSeries systems. Registration, locations and seminar overviews:

Los Angeles, CA - Tuesday, February 18, 2003: <http://www.redhat.com/seminars/losangeles>  
Denver, CO - Friday, February 21, 2003: <http://www.redhat.com/seminars/denver>

### **LINUX EVENTS KICK OFF 2003 WITH ENERGY & OPPORTUNITY**

**LinuxWorld Conference and Expo** kicked off its fifth consecutive year at the Jacob Javits Center in New York City on Jan 21-24th, 2003 and was attended by over 19,000 people. IBM was a Platinum sponsor at this year's event which was the sixth time IBM has participated in a LinuxWorld Conference and Expo. In addition to an extensive booth presence in the Expo Exhibit Hall, IBM held its third annual 'IBM Customer Day,' which is an 'event within an event,' targeted at CIO/IT and LOB professionals. The general session was hosted by Jim Stallings, General Manager, Linux, IBM. The IBM Customer Day also featured an industry analyst session, as well as a special panel and Q and A discussion featuring executive speakers from Mobil Travel Guide, Merrill Lynch, Lehman Brothers and Goldman Sachs. Other IBM highlights at this event included:

- IBM's keynote session, presented by Steve Mills, Senior Vice President & Group Executive, Software Group, was attended by over 1,200 (standing room only).

## In the Loop - keep current with Linux events

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- The IBM booth featured demonstrations of Linux applications across our entire server line, including software and services, as well as a special scalability zone which featured IBM's on demand initiatives.
- A total of 14 IBM Business Partners demonstrated Linux solutions.
- A special Business and Technology Chat area was included in the IBM booth where topics of interested were presented throughout the three days.
- IBM offerings were named as finalists in all 10 of the show award categories and won both the Best Developer Tools (WebSphere) and the Best Data Storage Solution (Tivoli) awards.
- IBM hosted five sessions which were included as part of the overall conference.

Earlier this month, IBM also participated as a platinum sponsor of **Linux Solutions Paris 2003**. IBM presented Linux solutions and technologies at the show held from Feb. 4 - 6 at the CNIT Paris La Defense. Jim Stallings, General Manager, Linux, gave a keynote speech.

More information: <http://www.linuxsolutions.fr/EN/home/index.php?site=default>

### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### **NEW ENHANCED TECHNICAL SUPPORT FOR IBM XSERIES SERVER CUSTOMERS**

IBM has announced the consolidation of xSeries customer support into a single, comprehensive integrated structure. As a result, there will now be a single point of contact for customers to call for service. At the same time, IBM will enhance end-to-end ownership of customers' problems while providing a consistent way to measure their satisfaction with our service support and products. Our goal is to utilize IBM resources and operational improvements to maximize call screening effectiveness while increasing customer satisfaction.

The ITS Global Services Support Center in Atlanta is now considered the IBM Systems Group xSeries front office, formally Level One Help. Previously, the Atlanta and the Research Triangle Park facilities had shared this responsibility. Research Triangle Park will now become the focal point for complex problems on a worldwide basis. This new mission will include acting as one of the delivery service teams for xSeries support line offerings in the United States. IBM expects this entire consolidation/restructuring to be completed by February 2003.

IBM xSeries customers who currently call 1-800-772-2227 for support will be routed to the ITS Global Services Support Center in Atlanta. We are in the process of changing all publications, Web sites and collateral materials to indicate this new direction.

### **TAKE THE TCONOW CHALLENGE WITH ISERIES LINUX TOTAL COST OF OWNERSHIP TOOL**

IBM iSeries is designed to deliver low cost of ownership when deploying business critical solutions. That value proposition is extended into the Linux environment - and by using the TCONow assessment tool from CIOview Corp. customers can estimate how Linux consolidation with iSeries stacks up to competitive alternatives. It only takes a few minutes to estimate their IT cost savings over time. Take the TCONow challenge today.

Get the tool: <http://w3->

[1.ibm.com/sales/systems/ibmsm.nsf/MainFrameset?OpenForm&cdoc=tcoe6a](http://1.ibm.com/sales/systems/ibmsm.nsf/MainFrameset?OpenForm&cdoc=tcoe6a)

### **IBM HELP AVAILABLE TO CUSTOMERS BUILDING LINUX APPLICATIONS**

Customers can check out IBM's middleware for Linux (DB2 Universal Database, WebSphere Application Server, WebSphere Studio Application Developer, and Lotus Domino) on a free Software Evaluation Kit (SEK) at the developerWorks Linux Zone Web site. They can also receive free tech support and training to get started.

More information: <http://www-106.ibm.com/developerworks/offers/linux-speed-start/>

### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### UNITEDLINUX SIGNS IBM AND AMD AS FIRST TECHNOLOGY PARTNERS

IBM and AMD have joined UnitedLinux as the first Technology Partners, UnitedLinux. UnitedLinux is the result of an industry initiative to streamline Linux development and certification around a global, uniform distribution of Linux targeted at the business user. The role of Technology Partners includes, among other benefits, participation in the UnitedLinux Technical Advisory Board and its committees, pre-release access to UnitedLinux deliverables, the right to propose enhancements for consideration by the UnitedLinux Technical Steering Committee, and joint marketing activities. Full press release: <http://www.unitedlinux.com/en/press/pr011403.html>

### HELP FOR PARTNERS PORTING LINUX APPLICATIONS

ISVs and solution developers interested in porting or enabling a Linux application to IBM's **@server** platforms can visit the IBM **@server** solution developer community site for links to the various platforms. The site contains information specific to the IBM **@server** iSeries, pSeries, xSeries, and zSeries Linux porting programs and the "Roadmap for Linux **@server** Enablements and Marketing" document. More information: <http://www-1.ibm.com/servers/enable/linux/>

### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### **"SPEED-START YOUR LINUX APP" WITH THE NEW LINUX SOFTWARE EVALUATION KIT FOR 2003**

IBM developerWorks is serving up IBM middleware for Linux, and because the free Linux Software Evaluation Kit (SEK) was so popular in 2002, we've expanded it to four CDs for 2003. Its content includes: DB2 Universal Database, WebSphere Application Server, WebSphere Studio Site Developer, WebSphere MQ, WebSphere SDK for Web Services, Tivoli Access Manager, Directory Server and Lotus Domino. All this comes in the free Linux SEK - - plus all the free tech support and training your customers need to get started! IBM will help your customers learn Linux, get familiar with IBM middleware and tools for Linux, and develop their new app -- at no charge, at their own pace. We'll even mail a free T-shirt to those who submit their completed application to us. The 2003 Linux SEK is available at: [http://www.ibm.com/developerworks/offers/linux-speed-start/?S\\_TACT=103AMW67&S\\_CMP=ell1](http://www.ibm.com/developerworks/offers/linux-speed-start/?S_TACT=103AMW67&S_CMP=ell1)

### **SASHXB LENDS MINI-RAD TO LINUX**

Few - - if any - - Linux users would wish to trade anything about their environment for Windows. But there is one thing that they might sometimes miss; easy, lightweight scripting. While PHP and like technologies go a long way toward filling that niche for Linux and UNIX - SashXB is another such tool, which builds on the strengths of JavaScript to give choices in the quick-n-dirty scripting arena. Learn about it in this introduction from IBMers Wing Yung and John Corwin: <http://www.ibm.com/developerworks/library/l-sashxb/>

### **HYPER-THREADING SPEEDS LINUX**

Intel Xeon Hyper-Threading makes a single processor behave like two logical processors to the operating system, allowing the processor to execute multiple threads simultaneously. This is very good in theory, but how does it work in practice? Quite well, apparently: the IBM Linux Technology Center recently put Xeon Hyper-Threading through a variety of benchmark tests; Duc Vianney reports on the positive results they obtained:

<http://www.ibm.com/developerworks/library/l-htl/>

### **IMPROVING LINUX KERNEL PERFORMANCE AND SCALABILITY**

Getting Linux "enterprise-ready" has been a clarion call ever since it burst into the public limelight in early 1999. But what exactly does that mean? The folks at the IBM Linux Technology Center had a pretty specific definition of enterprise-level computing in mind when they ran a series of benchmarks last year on 2.x kernels to determine architecture-independent performance issues on the premise that you've got to quantify performance before you can improve it. Read about their idea of enterprise-ready (and why we aren't there yet) - - learn the methodology and terminology of professional-grade benchmarking - - and see the results of the benchmarks (including the relatively new Volano benchmark):

<http://www.ibm.com/developerworks/library/l-kperf/>

### **TUTORIAL: INTRODUCTION TO USER-MODE LINUX**

Ever wish you had a place to let your Linux applications play - - where they wouldn't hurt anything else? Do your killer apps spend too much time killing each other? Originally conceived as a kernel developer's tool, UML lets you set up multiple virtual machines that are isolated from each other and from the hardware. Now you can test applications all the way to failure without breaking the host system - - or even requiring a reboot. Veteran administrator Carla Schroder shows you how:  
<http://www.ibm.com/developerworks/education/r-luml.html>

### **REDPAPERS ON DEPLOYING APACHE AND SAMBA ON IBM @server BLADECENTER**

These Redpapers detail how to set up and configure Linux and Apache or Samba on the IBM @server BladeCenter and provide pointers on what applications to use to manage the installation. It tells how to build a Web cluster using Linux, Apache and Linux Virtual Server and describes the functionality of the BladeCenter in this type of environment and in the Apache environment.

Access the Apache Redpaper: <http://www-106.ibm.com/developerworks/cgi-bin/esddck.cgi?url=http://www.redbooks.ibm.com/redpapers/abstracts/redp3588.html&origin=x>  
Access the Samba Redpaper:

<http://www-106.ibm.com/developerworks/cgi-bin/esddck.cgi?url=http://www.redbooks.ibm.com/redpapers/abstracts/redp3595.html&origin=x>

### **REDBOOK ON IBM XSERIES 440 PLANNING AND INSTALLATION**

The IBM xSeries 440 is IBM's flagship industry standard server and is the first full implementation of the 32-bit IBM XA-32 chipset, code named "Summit," as part of the Enterprise X-Architecture strategy. The x440 provides new levels of high availability and price performance and offers scalability from two-way to 16-way SMP, from 2 GB to 128 GB of memory, and up to 24 PCI slots, all in one single system image. This Redbook is a comprehensive resource on the technical aspects of the server and is divided into five key subject areas:

- Chapter 1 – "Technical description" introduces the server and describes the key features and how they work
- Chapter 2 – "Positioning" examines the types of applications that would be used on the x440
- Chapter 3 – "Planning" describes the aspects of planning to purchase and planning to install the x440
- Chapter 4 – "Installation" goes through the process of installing key operating systems
- Chapter 5 – "Management" describes how to use the key IBM Director extensions designed for the x440.

Access the x440 Planning and Installation Guide Redbook:<http://publib-b.boulder.ibm.com/Redbooks.nsf/9445fa5b416f6e32852569ae006bb65f/7e035684195b7df785256be4006462cb?OpenDocument&Highlight=0,x440>

Access a partner Redbook on Server Consolidation with the xSeries 440 and VMware

ESX Server, SG24-6852:<http://publib-b.boulder.ibm.com/Redbooks.nsf/9445fa5b416f6e32852569ae006bb65f/f330d7327189f7c185256bd50054b345?OpenDocument&Highlight=0,x440>

### **REDBOOK ON LINUX CLUSTERING WITH CSM AND GPFS**

This IBM Redbook will guide system architects and systems engineers toward an understanding of cluster technology based on the IBM **@server** Cluster 1350. It combines IBM **@server** xSeries rack-optimized servers running Linux with robust systems management and world-class service and support to deliver highly scalable, integrated cluster offerings.

Access the Redbook: [http://www-106.ibm.com/developerworks/cgi-bin/esddck.cgi?url=http://publib-b.boulder.ibm.com/Redbooks.nsf/RedbookAbstracts/sg246601.html&origin=esdd\\_main](http://www-106.ibm.com/developerworks/cgi-bin/esddck.cgi?url=http://publib-b.boulder.ibm.com/Redbooks.nsf/RedbookAbstracts/sg246601.html&origin=esdd_main)

### **CHOOSING THE RIGHT RED HAT LINUX**

Red Hat Advanced Server has many people asking "which Red Hat product should I use?" If you are deploying Linux, Red Hat Advanced Server may be the correct answer. The following article explains why.

Access the article: [http://www.redhat.com/mktg/utb/011403\\_which\\_rhl.html](http://www.redhat.com/mktg/utb/011403_which_rhl.html)

### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### **NEW COURSE - BECOME A RED HAT CERTIFIED TECHNICIAN**

April 7, 2003

Orlando, Fla.

The first Red Hat Certified Technician class will be offered on April 7, 2003 and more classes will soon be scheduled. The Red Hat Linux certification: Red Hat Certified Technician course provides performance-based certification for Linux technical people who are competent to set up new Linux systems and attach them to a production network. This certification is an ideal technician-level credential for persons supporting Linux systems throughout the organization. RHCT is a good choice for those transitioning to Linux from non-UNIX operating systems or who want to prove their competency at a midway point on the way to RHCE.

Enroll today:

[http://www-3.ibm.com/services/learning/MainServlet.wss?pageType=course\\_description&country=us&language=en&webLanguage=en&includeNotScheduled=y&courseCode=ql134](http://www-3.ibm.com/services/learning/MainServlet.wss?pageType=course_description&country=us&language=en&webLanguage=en&includeNotScheduled=y&courseCode=ql134)

### **@server LINUX CLUSTER: ARCHITECTURE AND IMPLEMENTATION COURSE NOW HAS HANDS-ON LABS**

Course Code: QLC31 - Duration: 2 Days

Linux clusters on IBM @server xSeries can be an effective way to scale the computing power of your Linux Servers. In this course, you will learn how to install Linux clusters and how to install and configure IBM's Cluster Systems Management (CSM) and General Parallel File System for Linux (GPFS) on Linux clusters. CSM provides system management capabilities that help an administrator more easily set up and maintain the Linux system through features such as parallel install, hardware control, configuration file management and event monitoring. GPFS is a high-performance file system, widely used in RS/6000 SP systems and is now available for Linux clusters. GPFS provides vastly increased aggregate bandwidth and capacity versus existing industry file systems. GPFS supports concurrent reads and writes from the same file by multiple application processes running on multiple nodes. This course is designed for Linux system administrators, system engineers, and deployment and support individuals, who desire a comprehensive understanding of the design, components, and installation process of an xSeries Linux cluster running CSM and GPFS.

Details and enrollment: <http://www-3.ibm.com/services/learning/us/catalog/linux/>

### **NEW COURSE: ADVANCED SOLUTIONS FOR LINUX ON ZSERIES**

Course code: ZL150 - Duration: 4 Days

In this course, you will learn how to prepare your Linux for zSeries system for a production environment. You'll learn how to install middleware, set up a Samba solution for file and print servers and clone Linux instances as well as discuss alternative authentication methods, hardening Linux, and methods for backing up data.

Upcoming Classes:

April 28, 2003 - IBM Education Center Wildwood E 3100 Windy Hill Rd, Atlanta, GA

July 7-14, 2003 - IBM Education Center 1503 LBJ Freeway, Dallas, TX

Details and enrollment: <http://www-3.ibm.com/services/learning/>

[MainServlet.wss?pageType=course\\_description&country=us&language=en&webLanguage=en](http://www-3.ibm.com/services/learning/MainServlet.wss?pageType=course_description&country=us&language=en&webLanguage=en)

## Learning Linux

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### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

ge=en&includeNotScheduled=y&courseCode=z1150

### RED HAT LINUX 8.0 CLASSES AVAILABLE

What's new in Red Hat Linux 8.0? This course will teach you how to make the most of the enhancements, including:

- A new interface – a user-friendly desktop with graphical enhancements and improved menu organization
- The latest Gnu Compiler Collection, gcc-3.2, and a specially tuned and tested high-performance kernel, 2.4.18
- Cutting-edge Web server technology powered by the latest release of Apache 2.0
- Updated graphical configuration tools that make setting up a Linux server a truly point-and-click experience
- A single interface for package selection during and after installation
- Enhanced personal security, featuring a point-and-click firewall tool to protect your system from Internet intruders

More information: <http://www-3.ibm.com/services/learning/us/catalog/>

## Solutions

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### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### IBM DELIVERS INTEGRATED LINUX SOLUTION FOR ZSERIES

IBM has announced the IBM **@server** Integrated Platform for e-business on zSeries - an open, integrated solution that provides everything customers need to quickly and easily deploy e-business solutions for Linux on zSeries. This announcement is the second phase of IBM's commitment to deliver integrated Linux solutions across the IBM **@server** family of products. Last May, IBM introduced the IBM **@server** Integrated Platform for e-business on xSeries and plans to deliver it on pSeries and iSeries servers this year. With this offering, customers can choose from pre-configured and tested hardware and software packages that provide all the components required to build a rock-solid, Linux- and mainframe-based e-business. They include SuSE Linux Enterprise Server 7 for S/390 and zSeries; z/VM v4.3; WebSphere Application Server v4.0.4 Advanced Edition for Linux on zSeries; IBM Directory Server (LDAP) v4.1; and one year of software support and IBM Global Services Linux Support Line. Customers can add optional hardware and software, including IFL engines for IBM's z800 entry-class mainframe or a z900, DB2 Connect v7.2, installation and customization support from IBM Global Services and IBM Global Financing options.

Partners can access a sales kit at:

<http://www.ibm.com/partnerworld/sales/systems/ibmsm.nsf/mainframeset?readform&cdoc=zlinuxskext>

(Partners need to enter their PartnerInfo id/pw to access the page.)

### POWERFUL NEW SERVERS TAKE LINUX ON ISERIES TO NEW LEVEL

In response to customer demand for easy-to-deploy and flexible e-business solutions, IBM has introduced the broadest transformation of its **@server** iSeries in more than a decade, delivering pre-packaged software, on/off capacity upgrade on demand and price/performance improvements of up to 80% for mid-market customers. iSeries can combine business applications and e-business solutions with Linux applications on a single server. A Linux server can be set up with as little as 10% of an iSeries processor. Up to 10 partitions are supported per iSeries processor, with a maximum of 31. Each partition supports its own independent operating system image and can be isolated from other partitions allowing business applications to run securely alongside Internet solutions. With an OS/400 V5R2 primary partition, processor resources can be dynamically moved between partitions to support changing business demands. For even greater flexibility, iSeries offers on/off capacity upgrade on demand to handle temporary peaks in demand. Additional iSeries processors can be dynamically brought on line and made available to Linux applications. The i825, i870, and i890 support CUoD. More information: <http://www-1.ibm.com/servers/eserver/iseries/linux/>

### IBM DRIVES GRID COMPUTING FOR COMMERCIAL BUSINESS WITH TEN NEW OFFERINGS

IBM is driving the benefits of Grid computing beyond its academic and research roots and into business enterprises with the introduction of ten Grid offerings targeting key industries - aerospace, automotive, financial markets, government and life sciences. IBM also announced that it's working with Charles Schwab on Grid computing solutions at the financial services giant's headquarters in San Francisco. The first Grid research

and development project, just completed there, focused on maximizing processor efficiency and reduced the processing time on a financial application from more than four minutes to 15 seconds. The two companies are now looking to expand Grid research into other areas of Charles Schwab's business. IBM also announced that it has established master relationship agreements with two Grid middleware vendors - - Platform Computing and DataSynapse - - both of which will play key roles in helping IBM deploy Grids in the enterprise. IBM also has agreements with middleware providers Avaki, Entropia and United Devices

Press release: [http://www-](http://www-916.ibm.com/press/prnews.nsf/jan/FB06DEB6E722171F85256CBC0006BF7F)

[916.ibm.com/press/prnews.nsf/jan/FB06DEB6E722171F85256CBC0006BF7F](http://www-916.ibm.com/press/prnews.nsf/jan/FB06DEB6E722171F85256CBC0006BF7F)

### **IBM TIVOLI SYSTEM AUTOMATION FOR LINUX PROVIDES MAINFRAME-LIKE AVAILABILITY**

The success of Linux as an e-business platform drives the need for a high-availability solution that can also reduce complexity and costs. As a result, IBM has announced its Tivoli System Automation for Linux, which manages availability through policy-based self-healing capabilities. It manages availability of business applications, running in single Linux systems or clusters on zSeries and xSeries, according to customer defined goals, by providing:

- Fast detection of outages
- Sophisticated knowledge about application components and their relationships
- Quick and consistent recovery of failed resources and whole applications either in place or on another system of a Linux cluster

More information: <http://www-3.ibm.com/software/tivoli/products/sys-auto-linux/>

### **@server XSERIES 345 SERVERS FEATURE IMPROVED SCALABILITY & PERFORMANCE**

IBM's xSeries 345 servers bring powerful, two-way, SMP-capable Intel Xeon processing, PCI-X architecture, Ultra320 SCSI technology, and high-availability and manageability features to rack-optimized server applications. These servers are available with 2.67 or 2.8 GHz/533 MHz Xeon processors with Hyper-Threading and simultaneous multi-threaded (SMT) technologies for more efficient program execution. With a compact 2U footprint, the rack-optimized xSeries 345 server helps save valuable rack space and resources. Yet it is packed with highly integrated, advanced server features designed for compute-intensive, Web-based, or enterprise network applications where space is a primary consideration. The xSeries 345 server applies powerful processors, large amounts of memory, and high-bandwidth PCI/PCI-X buses to Web-farm applications. More information: [http://www.ibmink.ibm.com/usalets&parms=H\\_103-008](http://www.ibmink.ibm.com/usalets&parms=H_103-008)

### **IBM ANNOUNCEMENTS AT LINUXWORLD NEW YORK**

At LinuxWorld New York, IBM announced new offerings that can help companies expand the use of Linux across an e-business infrastructure, making it easier to integrate everything from access devices to servers with hardware, software and services

on the open source operating system.

More information: <http://www->

[916.ibm.com/press/prnews.nsf/jan/ABEEF907AF3569C585256CB6004D6683](http://916.ibm.com/press/prnews.nsf/jan/ABEEF907AF3569C585256CB6004D6683)

### **STEELEYE ANNOUNCES STEELEYE LIFEKEEPER FOR MYSAP.COM ON LINUX & DEVELOPMENT AGREEMENT WITH SAP AG**

SteelEye Technology Inc., a leading provider of enterprise IT reliability solutions for business continuity, has announced the immediate availability of SteelEye LifeKeeper for the mySAP.com e-business platform, a comprehensive fault-resilient protection solution for mySAP.com on Linux, developed in partnership with SAP AG, Hewlett-Packard and IBM. In conjunction with this new product release, SteelEye also announced a Software Development Cooperation agreement with SAP aimed at providing mySAP.com customers with advanced solutions and support for High Availability of mySAP.com on Linux. SteelEye LifeKeeper for mySAP.com is the first Linux High Availability product to be supported by and incorporated within the context of a Software Development Cooperation Agreement with SAP. It is also the first product to be fully supported and certified across multiple hardware and storage platforms, and multiple Linux distributions by leading mySAP.com infrastructure implementation providers, including HP and IBM.

Press release: [http://www.steeleye.com/news/press\\_releases/012103\\_b.html](http://www.steeleye.com/news/press_releases/012103_b.html)

SteelEye also announced that Plastal S.P.A, a leading manufacturer of plastic components for the automotive industry, based in Oderzo, Italy has selected SteelEye LifeKeeper to provide High Availability protection of their implementations of mySAP.com on IBM **@server** xSeries platforms running SuSE Linux. Press release: [http://www.steeleye.com/news/press\\_releases/012103\\_c.html](http://www.steeleye.com/news/press_releases/012103_c.html)

### **DECODE & IBM FORM STRATEGIC ALLIANCE TO DELIVER SOLUTIONS FOR APPLYING GENETICS TO DRUG DISCOVERY**

deCODE genetics and IBM have announced a strategic alliance to deliver a set of integrated applications, technologies, and services for analyzing, managing and storing genetic, genealogical and clinical data. Through the three-year agreement, the companies will jointly market and sell deCODE's Clinical Genome Miner (CGM) Discovery system running on IBM hardware and software. The solution will be available globally to pharmaceutical and biotechnology firms, government-sponsored research organizations, research hospitals and medical care facilities beginning mid-year. The CGM Discovery system is a proven statistically-based application for isolating and analyzing genes and gene variations associated with particular diseases. It is the same application that deCODE has used in its population genetics research in Iceland to isolate key genes and drug targets in nine common diseases. The alliance advances information-based medicine, which is the use of IT to augment clinical information - - patient records, family histories, and lab tests, for example - - with knowledge about the human genome. By understanding illnesses on the molecular level, including gene variations linked to disease or drug response, doctors can make more precise diagnoses and tailor treatment decisions. Also, drug makers can develop more targeted treatment therapies and identify potential clinical trial participants more effectively.

Press release: <http://www-916.ibm.com/press/prnews.nsf/print/16711DB2F583612185256CB7004E3C69>

### **IBM AND CADENCE USE SUPERCOMPUTING POWER OF LINUX IN ELECTRONIC DESIGN SOLUTIONS**

Building on a long-standing relationship to provide leading integrated circuit design solutions, IBM and Cadence Design Systems, Inc. have announced an agreement to jointly optimize and market electronic design solutions from Cadence using IBM's advanced Linux-based technology. The agreement enables joint customers to benefit from the supercomputing power of Linux clusters - - running comprehensive electronic design technology from Cadence on IBM's industrial-strength **@servers** and IntelliStations - - to develop integrated circuit solutions with greater cost efficiency, performance and flexibility. The Linux platform's interoperability and modularity better leverage the multi-processor performance and large memory capacity available in these systems, significantly speeding customers' time-to-market for new designs and lowering overall cost in what is one of the world's most competitive industries.

Solutions from Cadence enable the design of electronic systems and semiconductors down to nanometer scale. Cadence solutions are used by virtually all of the world's wireless, networking, computer and other consumer electronics companies. Under the joint agreement, Cadence design solutions will run on IBM **@server** xSeries systems, **@server** Linux Clusters systems, and IntelliStation workstations using an open standards-based Linux platform.

Press release: <http://www-916.ibm.com/press/prnews.nsf/jan/05646CF5FF40B89E85256CB40071B8EA>

### **OCTAVE SOFTWARE ANNOUNCES CONTENT MANAGEMENT SOLUTION FOR SMB MARKET**

Octave Software, Inc., a provider of next-generation content management (CM) solutions, has announced the new WebOctave M-Class, targeting the small to mid-size business (SMB) market. WebOctave M-Class will be available on Linux in the first quarter of 2003, and included in the IBM **@server** Integrated Platform for e-business. "Our SMB customers need technologies that streamline and simplify operations, expand potential markets and most importantly, reduce costs," said Shannon McWilliams, director of software solutions at Mainline Information Systems, the largest IBM solution provider in the U.S. "Octave Software offers an effective content management solution for this market because it accomplishes those goals through low maintenance next generation technology, and by leveraging the excellent performance of Linux and IBM's xSeries servers."

Press release:

[http://www.octavesoftware.com/wox/dispatch?TN=NEWS\\_detail&CSID=10177158309349X4MRFQ&CIID=104330836914534NY8P5&frame=Press%20Releases](http://www.octavesoftware.com/wox/dispatch?TN=NEWS_detail&CSID=10177158309349X4MRFQ&CIID=104330836914534NY8P5&frame=Press%20Releases)

### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

### **IBM WINS TOP HONORS AT LINUXWORLD FOR BEST DATA STORAGE SOLUTION & BEST DEVELOPER TOOL**

IBM was awarded two Open Source Product Excellence Awards at the LinuxWorld Conference and Expo 2003 last month. IBM Tivoli Management solution won the "Best Data Storage Solution" category and WebSphere Studio, Version 5 took honors in the "Best Developer Tools" category. The awards were sponsored by OSDN and presented in conjunction with the UniForm Association and IDG World Expo. A group of industry experts including analysts, reporters and storage vendors selected this year's winners for their innovation in the Linux and open source community.

Press release: <http://www->

[3.ibm.com/software/swnews/swnews.nsf/n/lsc05jells?OpenDocument&Site=software](http://www-3.ibm.com/software/swnews/swnews.nsf/n/lsc05jells?OpenDocument&Site=software)

### **GERMAN CITY GOES ENTIRELY LINUX; BUILDS IT INFRASTRUCTURE BASED ON SUSE LINUX & IBM SERVERS**

The German city of Schwäbisch Hall (population 36,000) will build its IT infrastructure entirely on SuSE Linux - - replacing a more costly Windows installation. The town will deploy SuSE Linux on IBM Intel-based servers as well as up to 400 PCs - saving the city an estimated more than 100,000 Euro over the Windows installation. "My decision for Linux (was) based on three factors," said Hermann-Josef Pelgrim, Mayor of Schwäbisch Hall, Baden-Württemberg, Germany. "First, I expect a considerable reduction of our IT expenses due to lower software license fees. This will contribute to the consolidation of our municipal budget. Second, based on Linux's excellent grades from the experts on security, our IT structure will become more secure. Third, the choice of open standards ensures interoperability among different technical offerings."

"Schwäbisch Hall's decision reflects the strongly growing acceptance of Linux in enterprises and governments around the world," said Boris Nalbach, CTO of SuSE Linux AG. "With the lower software licensing fees - as well as the lower administrative costs associated with Linux, the town will be able to provide the most cost effective civil services to its citizens."

Press release: [http://www.suse.de/en/company/press/press\\_releases/archive02/german\\_city.html](http://www.suse.de/en/company/press/press_releases/archive02/german_city.html)

### **SUSE LINUX ENTERPRISE SERVER ON ZSERIES WINS IN GERMANY**

Two major customers in Germany are seeing great success with SuSE Linux Enterprise Server on zSeries. Eberspaecher GmbH & Co. KG is a developer and supplier of automotive waste gas systems which had revenue of ca. 1.6 billion Euros in 2001 and is a partner for almost every European car manufacturer. They are using an IBM **@server** zSeries mainframe as SAP R/3 application server under SuSE Linux Enterprise Server for S/390 and zSeries and as a data base server under Z/OS. In addition, a Linux partition is used as server for a network computer manufacturing solution. As a parts supplier with 24/7 operations, high availability was the highest priority for Eberspaecher.

Read how the system fit Eberspaecher's needs:

[http://www.suse.com/us/company/press/press\\_releases/archive03/eberspaecher.html](http://www.suse.com/us/company/press/press_releases/archive03/eberspaecher.html)

The German communal datacenter Niederhein, which serves more than 40 municipali-

ties in the northwestern section of Germany, has chosen Linux and IBM zSeries mainframes to keep systems management costs low, consolidate servers and still offer high availability and investment protection for future applications.

Read how the system fit the datacenter's needs:

[http://www.suse.com/us/company/press/press\\_releases/archive03/krzn.html](http://www.suse.com/us/company/press/press_releases/archive03/krzn.html)

### **LINUX TRANSFORMING BUSINESS INDUSTRY BY INDUSTRY; IBM ANNOUNCES NEW CUSTOMERS**

IBM announced at LinuxWorld last month that the PGA Tour and nine additional customers are the latest to move to Linux to transform their businesses. Three years after IBM's public embrace of Linux, customers in every industry are turning to IBM in record numbers to expand their use of Linux across an e-business infrastructure. PGA Tour will offer unique new applications to golf fans using IBM Linux Virtual Services and Storage. PGA Tour turned to IBM and Linux to launch TOURCast, a first-of-its-kind online application that enables golf fans to follow tournament action in real time or replay through rich graphic and statistical presentations. PGA Tour is among the latest of more than 6,300 IBM customer engagements around Linux, more evidence that the open source operating system is changing the way companies do business.

Press release: <http://www-916.ibm.com/press/prnews.nsf/print/FDB873AA741F882985256CB6004CFA6C>

### **CUSTOMERS SCALE UP & OUT WITH IBM @server SOLUTIONS RUNNING LINUX**

IBM has announced that new customers are moving to @server systems running Linux for enterprise applications that help them dynamically adapt to changing business needs. IBM's broad portfolio of Intel processor-based @server products, from super-dense blade servers to highly scalable multiprocessor systems, are being used by customers worldwide, including Compagnie Generale de Geophysique (CGG), Mindshare GmbH & Co KG, Mercury Insurance and Washington University. "It's significant that customers of every size and from multiple industries are turning to IBM @server products running Linux for a variety of mission critical applications," said Rich Michos, Vice President, Linux Servers, IBM. "IBM has been seeing strong Intel-based server sales and increased adoption of Linux across the line. Super-dense server blades will transform the low end, and highly scalable 'building block' servers are evolving into the high end to help customers grow their businesses with high availability and reliability." IBM's blade strategy leverages IBM storage, software and server solutions to provide customers a system that can be easily managed and help reduce total cost of ownership. The blade architecture, which is ideal for customers to scale out infrastructures, is designed to reduce cost and complexity as well as increase reliability.

Press release: <http://www-916.ibm.com/press/prnews.nsf/print/1102D6F24CA166D785256CB6004E397E>

## Did You Know? Facts and figures on the growing Linux marketplace

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### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

Morgan Stanley found significant and growing use of GNU/Linux. In an August 2002 study, 29% of respondents said they owned GNU/Linux servers, 8% did not, but were formally considering buying them and 17% of the CIOs said they neither owned nor were formally considering GNU/Linux servers but were informally considering them. The remainder (46%) noted they didn't own and weren't considering GNU/Linux. For those that have recently purchased new GNU/Linux servers, 31% were adding capacity, 31% were replacing Windows systems, 24% were replacing UNIX and 14% were replacing other operating systems.

Morgan Stanley

A 2002 survey found that 49% of CIOs in financial services, retail, and the public sector expect to be using OSS/FS. A survey titled Market Opportunity Analysis for Open Source Software found that 37% of the CIOs stated that they were already using OSS/FS and 49% expected to be using OSS/FS in the future. It is quite likely that even more companies are using OSS/FS but their CIOs are not aware of it. Perceived benefits cited included decreased costs in general (54%), lower software license cost (24%), better control over development (22%), and improved security (22%).

OpenForum Europe

## Related Links – other Linux resources

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### RELATED READINGS:

<http://www.ibm.com/linux/linuxline/feb03/resource.shtml>

To stay up to date on the latest developments with IBM **@server** xSeries & Linux, visit our Web site for information on all aspects of Linux on the xSeries at:  
[http://www.pc.ibm.com/ww/eserver/xseries/linux\\_update/](http://www.pc.ibm.com/ww/eserver/xseries/linux_update/)

For more information on iSeries Linux support:  
<http://www.ibm.com/eservers/series/linux>

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