



EduConnection

Technology Trends in
Education and Research



Scott McNealy's presentation at the recent Sun Worldwide Education And Research Conference included some thought-provoking suggestions as well as exciting announcements that will benefit the education community. [More...](#)

Kim Jones
VP Global Education/Research
Sun Microsystems, Inc.

SPECIAL DEALS FOR EDUCATORS

- ➔ [Duke's Choice Awards](#)
- ➔ [Free Software Downloads](#)
- ➔ [Canada Matching Grant](#)
- ➔ [US Matching Grant](#)
- ➔ [EMEA Matching Grant](#)
- ➔ [JavaOne Offer NEED COPY](#)

[Announcing the Third Annual Duke's Choice Awards!](#) Don't miss this opportunity to be recognized as one of the Java developer community elite. The primary judging criteria for this prestigious award is innovation — putting students, faculty and education ISVs on an equal footing with multi-national software giants.



[Free Software Downloads for Education](#) Students, faculty, researchers and IT staff can download dozens of Sun software products for free.

[Sun Canada Education Matching Grant Program](#) Sun Microsystems of Canada Inc. announces the Canadian Education Matching Grant Program!

[Matching Grants for Academic & Research Computing](#) For a limited

FEATURING

- [The Challenge of Identity Management on Campus](#)
- [Integrating E-mail Systems at USC](#)
- [Education And Research Conference Recap](#)
- [The Challenge of Identity Management on Campus](#)

EDU INSIGHT

Identity Management: Opportunities and Challenges on the Digital Campus



This article discusses how identity management addresses an educational institution's top priorities — providing protection against security breaches and other disruptions, providing data protection and privacy, and "doing more with less" budgeting requirements. [More...](#)

EDU IN ACTION



Edu in Action: University of Southern California

Integrated E-mail System Improves Service and Cuts Costs [More...](#)

INSIDE TECHNOLOGY

Solaris 10 Goes Open Source, Free Downloads



Sun recently announced that the Solaris 10 OS — the most advanced operating system in the industry — is now available for customers to download and deploy, free of charge. The source code for the Solaris 10 OS will also be made available. [More...](#)

EDU RESOURCES

[Sun's Worldwide Education Website](#) Information, resources, tools, communities of interest, and special offers.



[Multimedia Educational Resource for Learning and Online Teaching \(MERLOT\)](#) MERLOT is a free and open resource designed primarily for faculty and students of higher education. Links to

time, education and research customers in the U.S. can take advantage of matching grants from Sun to equip your institution's academic and research computing needs.

[Sun EMEA Education Matching Grant Program](#) Buy one, get one free on selected products.

GIVE US YOUR OPINION

Last month, we asked "what you thought is the single most important IT issue for your institution."

[See your responses...](#)

EDUCATION EVENTS

[Sun Tech Days](#)

Various locations around the world, *March - April 2005*. Sun Tech Days is a global 2-day developer conference that challenges you to expand your technical vision and influence the direction of today's rapidly changing software development environment.

[OS Security: Solaris 10 Breaks New Ground](#)

View this Sun Net Talk on Demand to find out how you can better protect your software environment with the ground-breaking, out-of-the-box security capabilities of the Solaris 10 OS.

[Sun Cluster: More Open. More Manageable. Still Rock Solid.](#)

You and your users need high availability. What you don't need are complex admin tools and restrictive system support. Good news. The latest Sun Cluster offers more choice, simpler controls, and it's still rock solid Sun. View this Sun Net Talk on Demand to see it in action.

[SunGard \(SCT\) Summit](#)

Honolulu, Hawaii, March 6-9

SCT Summit is now SunGard Summit just as SCT became SunGard SCT. Users of common systems and services will come together for four days to share their expertise with peers, learn about best practices in higher education, and return to their institutions with a renewed commitment to contribute

online learning materials are collected here along with annotations such as peer reviews and assignments. You are welcome to browse the collection or search for materials. Members may add materials, comments and assignments to MERLOT. Membership is free.

[Java Platform Migration Guide](#) This Sun white paper helps developers migrate Java applets, standalone applications, Java Web Start applications and development tools from version 1.3 and 1.4 of the Java platform to version 5.0.

[Asking "Why?" at Sun Laboratories](#) In this conversation with Sun Labs Director Glenn Edens, he discusses new research developments in the Java language and the gratifications and trials of running a research lab.

Get Involved. If there are topics you'd like to see in future issues of *EduConnection* or you would like to submit an article, we want to hear from you. [Click here to e-mail us.](#)

[Please have Sun Sales contact me.](#)

to a rich learning community.

[PeopleSoft Higher Education Users Group Conference](#)

Las Vegas, Nevada, March 21-24

The Higher Education Users Group Conference is an annual conference for all higher education users of PeopleSoft applications, and is hosted by the Higher Education Users Group (HEUG).

[International Symposium on Web Services For Computational Biology and Bioinformatics](#)

Blacksburg, Virginia, May 26-27

[EUNIS 2005 – “Leadership & Strategy in a Cyber-infrastructure World”](#)

Manchester, UK, 21-24 June 2005

EUNIS 2005 is a multidisciplinary conference that aims to provide Managers from the areas of Information Systems and Services, Researchers, Academics, Practitioners from academia together with Leading Suppliers to the community with a forum to report on and to discuss the latest developments, applications, and impact of Information and Communication Technologies (ICT) on all aspects of university activities.

[JavaOne 2005](#)

San Francisco, California, June 27-30

The JavaOne conference, now in its tenth year, is one of the largest gatherings in the world of developers, IT managers, and business professionals who are focused on Java technology. As a cornerstone for network computing, the 2005 JavaOne conference in San Francisco will continue to bring innovation and great technical education for those who develop and deploy Java technology-based applications.

[European Conference on Research and Advanced Technology for Digital Libraries \(ECDL 2005\)](#)

Vienna, Austria, 18-23 Sept.

ECDL has become the major European conference on digital libraries, and associated technical, practical, and social issues, bringing together researchers, developers, content providers and users in the field.



Kim's Notebook:

March 2005: ERC Recap

By Kim Jones, Vice President, Global Education/Research, Sun Microsystems, Inc.

Last month, Sun hosted the annual [Worldwide Education and Research Conference \(WWERC\)](#) in San Francisco. Education's top thought leaders convened to discuss the importance of technology innovation in education. Each year, WWERC draws attendees from all over the world to keynotes, events, solutions pavilions, and discussions with Sun executives and education thought leaders.

Student Developer Program

At the conference, Sun Chairman and CEO Scott McNealy outlined Sun's expanded [student developer program](#), designed to assist young software developers in learning how to initiate open, secure projects based on Sun's applications.

"Solaris is enjoying a tremendous surge in popularity with more than 500,000 downloads since the release of [Solaris 10](#)," McNealy said. "We want young developers around the world to have access to the tools, the experience and the necessary knowledge to write to this environment and to take advantage of its superior features."

Sun will offer the student developer community direct access to the brightest minds at Sun, free software development tools, and free web-based training and donations to student labs at select universities.

"Nowhere is the digital divide wider or deeper than in the area of education," McNealy said. "We need to close that divide, not widen it. The educational experience for the 'haves' is qualitatively different from those on the other side. We must encourage and train the next generation of developers to think big and act boldly no matter what side of the divide they're on."

Sun Grid Research Grants

Scott also announced Sun's plans to donate ten blocks of 100,000 hours of CPU processing power, accompanied by 100 terabytes of data storage capacity per month, to academic and research institutions. This follows the recent launch of the [Sun Grid utility offering](#). Institutions interested in applying for Sun Grid Research Grants can visit www.sun.com/edu/programs/star.html or email education_news@sun.com for details.

Sun is currently working with University of California at Berkeley and the University of Southern California to define the Sun Grid Research Grant program and engage the resources of the Grid to aid current research projects.

"One of our professors at U.C. Berkeley, Professor Ethan Ligon, plans to use a Sun Grid Research Grant to lessen the risk associated with drought and disease in Southern India," said Shelton Waggener, chief information officer at U.C. Berkeley. "Professor Ligon's studies require complex statistical analysis which has been previously limited by the small number of workstations available for his calculations. By utilizing Sun's Grid Research Grant program, a task that previously took more than nine months to compute can now be solved in only a few hours."

"What's Hot... and What's Not" in Education

To illustrate other ways in which technology could advance the goal of closing the digital divide, Scott took the audience through a tour of "what's hot... and what's not" in education. Highlights include:

- Given their average price of over \$100, textbooks are not hot. On the other hand Web-based training is hot.
- Expensive, proprietary software stacks are not hot, while open source projects like OpenSolaris OS and Firefox are hot.
- Overcrowded classrooms? Not hot. When three million students took at least one on-line course last year, distance learning is hot.
- Other items on McNealy's hot list included: Google, blogs and RFID.
- Not hot? Brick and mortar libraries, television network news and manual inventory management.

McNealy urged the audience to continue pushing technology into every aspect of the education process, noting that students and educators of every age, background and location can benefit. "We don't want to automate the library or the classroom, we want to automate the entire education system," McNealy concluded. "We don't just want 'no child left behind,' we want 'no child held back' as well."

By the end of the week, conference attendees understood that the future of education is the digital campus and the mobile student. Beginning with education portals, which integrate various academic, library and administrative functions of the campus, to eLearning programs, Sun is committed to advancing education through technology at an affordable cost. Collaborating with Ministers of Education, visionaries, technologists and educators from around the globe-such as those that attended the Education & Research Conference-we're leading the way in digitizing the campus on a worldwide level.

Sincerely yours,

Kim Jones
Vice President, Sun Global Education and Research

Identity Management: Opportunities and Challenges on the Digital Campus

IN THIS ARTICLE:

- [The Identity Management Opportunity](#)
- [Technology Challenges of the Digital Campus](#)
- [How Identify Management Benefits the Digital Campus](#)
- [Sun Identity Management: Uniquely Suited to the Digital Campus](#)

The Identity Management Opportunity

For IT people in education, the concept of a digital “open campus” is both appealing and intimidating. While web services offer the opportunity to achieve unprecedented levels of operational efficiency and provide much better service to a wider variety of on and off-campus constituents, they also offer a security nightmare. How can these services be offered openly and seamlessly and still provide security and controlled access across a potentially infinite number of systems? Some physics professors on campus may like to deal with uncertainly, but IT people do not.



Here is the dilemma. Using the Internet, students can register themselves for classes, buy materials from the bookstore, and take assessments, from just about anywhere. All these self-service actions increase efficiency and reduce costs for the school, and perhaps more importantly, leave a much more satisfied client if things go smoothly. But allowing a student access to such systems raises an IT challenge of bringing together a multitude of different processes, in many cases integrating operations from multiple departments, schools, and even off-campus entities, all of which have their own uniquely functioning technology infrastructures already in place. To the student, all these backend systems must interact seamlessly, and securely protect the student’s privacy and sensitive information as it travels across the network.

In other words, the Digital Campus must achieve the seemingly impossible: To open and protect systems equally effectively. Without this balance between accessibility and security, the Digital Campus can never achieve the full promise of its potential. That’s where identity management comes in.

What is identity management? The Burton Group describes it as, “the set of business processes, and a supporting infrastructure, for the creation, maintenance, and use of digital identities.” Identity management provisions access, authenticates and authorizes, while protecting privacy and complying with regulations.

Technology Challenges of the Digital Campus

Identity management helps address some of an educational institution’s top priorities — providing protection against security breaches and other disruptions, providing data protection and privacy, and “doing more with less” budgeting requirements. An educational environment is an especially complicated one in terms of the scale and speed of change.



Academia presents a complex set of identity requirements — people rapidly change roles and sometimes play multiple roles simultaneously, the increasing need to manage access to licensed digital content, and federation of identities to support collaborative research. In addition, education usually faces a more stringent set of regulations, protecting against copyright abuse, guarding personal data, even controlling access to MP-3 files in campus dorms.

Campus portals, prevalent today in many schools, represent just a fraction of the number of learning and information dissemination sites that will emerge in the future. Open standards-based projects, such as [JA-SIG's uPortal](#), promise to generate exponential growth in the number of discrete, yet connected sites as they mature, almost forcing the requirement for federated identity management.

The key challenge is creating the open, yet secure, environment to support the Digital Campus. These challenges include:

- *Integrating* disparate applications, processes, and people across campus
- Ensuring the best possible campus *user experience*
- Achieving *security and compliance* within increasingly open environments
- *Controlling the cost* to create and maintain the Digital Campus.

Integration

To support the greater and greater levels of integration that the Digital Campus requires, IT infrastructures must be built on open standards that support multiple technology platforms. They must also support dynamic, rather than static, integration in environments in which collaborations and user relationships with the campus are constantly changing.

User Experience

With the competition for students increasing today, a positive student, or more importantly a potential student experience, is the key to increasing a school's visibility and advantage. Delivering the best possible user experience possible becomes even more important as the definition of users extends further and further to growing numbers of potential students, faculty collaborators, parents, and alumni. As the number of users and the types of information and services they receive grow and change, it can become more difficult to keep service levels high. This is particularly true when many users are trying to access the same mission-critical applications simultaneously, such as registration and finals assessments, which must be consistently reliable and available. Technology supporting the Digital Campus must be capable of ensuring that the user's experience with these applications remains positive — regardless of how users and services change.

Security and Compliance

Traditional exclusionary security models will not work in the context of the emerging Digital Campus. "Inclusionary" alternatives must focus on extending secure access across processes, applications, and organizations. With many students accessing web services from inside the campus firewall, the protections we once associated with security — firewalls, bastion hosts, and DMZs — are no longer effective. Today's security solutions for the Digital Campus must rise to the challenge of protecting sensitive information in a range of diverse environments and across multiple security domains, and must also reflect the need to comply with regulatory and legislative mandates.

Cost Control

A critical issue in shaping the Digital Campus is not just whether it can be done, but whether it can be done cost-effectively in an era of tight capital budgets. In a large, dynamic academic environment, acquiring and supporting technology that increases total costs by requiring additional staff and other resources for ongoing management can easily offset the benefits of increased fees or greater operational efficiency.

How Identify Management Benefits the Digital Campus

With its role- and rule-based user and access management functions and its directory-driven technology foundation, identity management is uniquely capable of enabling an effective and cost-efficient technology infrastructure for the Digital Campus. Identity management specifically provides for several key enablers of the successful virtual campus.

Interoperability

Identity management solutions that support open standards make it possible to integrate disparate processes and support multiple technology platforms — capabilities that are essential to building the Digital Campus. This basis for interoperability can be found in identity management solutions that:

- Support open standards and provide cross-platform support
- Provide a standards-based, federated framework for managing identities within and across campus organizations
- Secure a services-oriented architecture (SOA) infrastructure for services delivery
- Are built on noninvasive architectures that work with schools' processes and work flows rather than requiring significant change

Consistent Delivery of High Service Levels

The same identity management capabilities that assist in keeping costs under control in the Digital Campus can also help deliver a high quality service level for users. For example, automated provisioning enables campus users to start accessing information more rapidly. Self-service functions empower users to manage their own accounts and processes without help from anyone. Single sign-on eliminates the need to learn and remember a multitude of passwords for a constantly changing set of available services and resources. It also enables users to access many different sites without being asked for identification at every step along the way.

“Inclusionary” Security

Unlike traditional exclusionary security models, security that leverages identity management can enable the Digital Campus to allow flexible access to any number of diverse systems and security policies — access in which policy determines who has access to which systems and at what level. Within this inclusionary model, identity management reduces risk by:

- Improving policy enforcement through automated and consistent application
- Eliminating security loopholes (such as accounts that remain active after students have graduated)
- Providing logging, auditing, and reporting capabilities that are essential for regulatory compliance
- Replacing one-off security models built into every application with one common security architecture that can be leveraged across all applications and services

Ability to Scale and Flex Cost-Effectively

Fully exercised process automation capabilities within identity management solutions enable flexible, cost-efficient responses to changes in the Digital Campus. These capabilities include:

- Automated provisioning services in which slow manual methods for adding or changing access privileges for students, faculty and staff, and administrators are supplanted by rapid, automated processes
- Self-service functions that allow users to perform functions such as resetting passwords and managing profiles themselves on an ongoing basis
- Single sign-on across applications, eliminating the need to create and manage new access mechanisms for every additional service or resource that is added to the Digital Campus
- Identity data synchronization — in which changes to information in one source of data are automatically propagated to other, integrated systems — to ensure data consistency, accuracy, and reliability

Sun Identity Management: Uniquely Suited to the Digital Campus

Sun identity management solutions are uniquely suited to meeting the challenges of the Digital Campus. Sun delivers a highly integrated set of solutions, and supports the highest levels of integration for academic environments and their multiple technology platforms.

Integrated, Comprehensive Approach

Sun offers innovative and highly integrated solutions for managing the Digital Campus, including an [identity management suite](#) with three high-value components:

- The [Sun Java System Identity Manager software](#) is the industry's first complete user provisioning and identity data synchronization solution. It efficiently and securely manages identity profiles and permissions throughout the entire identity life cycle.
- The [Sun Java System Access Manager](#) supports the leading industry standards for federated identity — Liberty and SAML — to provide a federated framework across trusted networks of students, faculty, and collaborators with open access control, including single sign-on.
- The [Sun Java System Directory Server Enterprise Edition](#) is a secure, scalable, highly available, easy-to-manage repository that stores and manages identity profiles, access privileges, and application and network resource information. Based on LDAP standards, Directory Server can provide password synchronization with Active Directory.



Sun identity management solutions address every aspect of identity management with a complete portfolio of products that together deliver comprehensive identity management that is both integrated and integratable. This provides the Digital Campus with the end-to-end infrastructure necessary to achieve extended reach and range securely, efficiently, and cost-effectively.

Open and integratable, these solutions are designed specifically to reduce integration cost and complexity in the Digital Campus.

Fully Integratable Set of Solutions

Diversity is a defining characteristic of the Digital Campus, making the ability to work with multiple platforms and technologies essential. This is why Sun has taken a leadership role in developing open standards, and why the company's identity management solutions are built on open standards. Sun solutions specifically support:

- Leading Web services standards such as the eXtensible Markup Language (XML), Simple Object Access Protocol (SOAP), and Java
- Liberty Alliance specifications for open, federated, single sign-on identity solutions
- The Lightweight Directory Access Protocol (LDAP) standard for accessing information directories
- The Security Assertion Markup Language (SAML) standard for single sign-on to multiple Web sites
- The Service Provisioning Markup Language (SPML) industry standard for exchanging and administering user access rights and resources information across heterogeneous environments

Sun solutions also provide an SPML toolkit that enables third parties to SPML-enable their applications and management platforms.

Federation: Open Standards in Action

Sun Microsystems has been at the forefront of industry efforts to implement a standards-based federated identity framework to enable seamless integration of service to students and their parents, faculty and staff, administrators, and alumni. Within such a framework, institutions could:

- Collaborate without cost-prohibitive proprietary approaches, which limit the ability to extend access to the entire virtual campus.
- Achieve interoperability across multiple security domains, application environments, and technology infrastructures.
- Leverage a well-defined framework for managing regulatory concerns associated with issues such as privacy and compliance.
- Reap the benefits of new offerings that result from collaborative efforts.

Open and integratable, Sun identity management solutions work with and protect existing technology investments. Since they are modular and scalable, these solutions allow you to start small and expand later. They make it possible to identify and closely track users and activities in the Digital Campus, a critical requirement for complying with auditing and reporting demands today. And they lead the industry in federated identity services, allowing identity information to be exchanged within and across traditional academic boundaries. As campuses as diverse as University of California — Merced, UCLA Medical Center and Universite De Corse-Pascal Paoli in France can attest, with Sun identity management solutions, virtually everything is possible.

For additional information on Sun Identity Management, visit <http://www.sun.com/software/products/identity/>, contact education_news@sun.com or click here to have your local Sun representative contact you.

University of Southern California — Integrated E-mail System Improves Service and Cuts Costs

IN THIS ARTICLE:

- [Strategic Plan Uncovers Issues](#)
- [Multiple E-Mail Systems Impact Communications](#)
- [Sun Solutions Improves Service and Cuts Costs](#)
- [USC At A Glance](#)

Strategic Plan Uncovers Issues

As the University of Southern California (USC) entered the new millennium, its Information Services organization underwent a rather significant self-introspection. Recognizing the need to prioritize in a world of finite resources, USC Information Services set about to create a strategic plan.



The University of Southern California's Strategic Plan on Library and Information Technology Services, based on extensive user discussion and feedback, uncovered a number of technology-related issues that needed to be addressed. Among the recommendations were:

- Implement a centralized email system with anti-spam security
- Establish an architecture which would allow a tiered approach to technology services
- Establish a suite of university-wide "baseline" services and resources
- Focus on Total Cost of Ownership (TCO), not just initial costs, of hardware and software, including people and support costs
- Focus on students, understand their needs, and deliver services to their high expectations

USC At A Glance

Undergraduate Students:	16,000
Graduate Students:	15,000
Alumni:	180,000
Full-time Faculty:	2,900
Part-time Faculty:	1,400
Employees:	7,800
Student Workers:	6,200
University Budget:	\$1.7 billion

Multiple E-Mail Systems Impact Communications

The report found that the university was balkanized by the existence of multiple electronic mail systems on campus. This resulted in an information dissemination issue that was found to have a profound impact on everything from communication among institutions on-campus to the faculty's ability to utilize email in their classes.

A common theme that emerged from discussion participants across the university spectrum was that a basic infrastructure of common services needed to be established so that people could pursue whatever strategic directions might be established. This ended up being a strategic direction in itself.

Sun Solutions Improves Service and Cuts Costs

Replacement of USC's piecemeal email system began with the issuing of an RFP in 2002 for an open-standards based centralized system. The [Sun Java System Identity Manager](#) software product was selected, not only because of its superiority as a fully-featured email system but, more

importantly, because of its role as a tightly-integrated component in the Sun Java Enterprise System (Java ES) stack.

USC has already reaped a number of benefits from using Java ES that point to its simplicity and tight integration. Since it is developed by the same team at Sun that developed other components of Java ES, the underlying nuts and bolts between components is very similar, and even the “tips” carry over from package to package. “We don’t have to relearn a new product each time we add a piece of functionality,” said Chet Burgess, Manager, Enterprise Collaboration Services, Information Services Division. “We just implement it. There’s even a common installer.”

With Sun Fire v240 servers, the Brightmail security software has been able to handle 3 to 5 million messages per day, significantly faster than the previous solution. The Sun Java Messaging Server has also increased security beyond what the Brightmail solution provides. “There are a lot of built-in tools to discern different types of messages,” Burgess explained. “The Java Messaging product has power. You can do with a message whatever you please.”

“ROI (return on investment) can’t be calculated in dollars and cents. The real ROI of the Sun Java Enterprise System is in the tighter integration, the increased control, and the enhanced reliability. Plus, (by automating some of the tasks) you get time back to be more proactive and to respond more quickly to problems and changes.”

Chet Burgess,
Manager,
Enterprise Collaboration Services,
Information Services Division,
USC.

Burgess also likes Sun’s direction of providing lots of opportunities for customers to get involved and interact with each other, such as the Sun Developer Network, user communities, and events such as the JavaOne conference, all venues where customers can discuss common issues among themselves, learning from others, and smoothing the process of project planning and implementation.

Sun’s understanding and focus on higher education allow it to assist institutions on a strategic level, not just provide hardware and software. “We value our relationship with Sun because they have helped us become strategically aligned to provide the next generation of enterprise applications,” said Michael Pearce, USC’s deputy chief information officer.

Since Java ES’s cross-platform interoperability between the Solaris, Linux, and Solaris x86 operating environments gives so many hardware options, USC is looking to deploy lower-cost servers, such as the AMD Opteron processor-based systems from Sun, to help manage costs.

The Java ES decision was recently re-evaluated and found to be the right one. “We do periodic reevaluations of all our services now,” said Burgess. “Just because we made a decision two years ago doesn’t mean it’s the right decision today. Our current extensible and scalable architecture allows us this ability, to reevaluate and change, and gives us a lot more choices in solving our service issues and reducing our costs.”

For more information on the USC ISD Strategic Plan, visit: www.usc.edu/isd/strategicplan/strategic_plan

For additional information on the Sun Java Enterprise System, visit <http://www.sun.com/software/javaenterprisesystem/>, contact education_news@sun.com or click here to have your local Sun representative contact you.

Solaris 10 Goes Open Source, Free Downloads

IN THIS ARTICLE:

- [Solaris 10: Free Downloads](#)
- [Extreme Performance With Solaris 10](#)
- [New Services and Support Now Available](#)
- [Open Source Code License](#)
- [Community Advisory Board](#)

Solaris 10: Free Downloads

Sun Microsystems recently announced that the Solaris 10 OS — the most advanced operating system in the industry — is now available for customers to download and deploy, free of charge from [Sun's Web site](#)



Customers will benefit from increased performance as demonstrated through world-record benchmarks, affordable new service and support models and 400 new ISVs supporting Solaris 10 OS. The Solaris 10 OS is a vendor-neutral operating system that is available on more than 340 different hardware platforms from vendors as diverse as Dell, Fujitsu, Fujitsu Siemens Computers, IBM and HP.

Extreme Performance With Solaris 10

World record benchmark results illustrate the advantages of running Java technology-based applications on Solaris 10 OS, by surpassing previous high marks achieved on the same server with a Linux OS. The SPEC JBB2000 benchmark (Standard Performance Evaluation Corporation Java Business Benchmark) measures the implementation of Java Virtual Machine (JVM) as well as the performance of the underlying operating system, scalability of processors and memory on Shared Memory Processors (SMPs) platforms.

New Services and Support Now Available

A comprehensive set of new services is now available for the Solaris 10 OS, including flexible subscription-based offerings, migration and education services.

Customers and partners can now download Solaris 10 OS free of charge for commercial use. Sun also offers service and support for the Solaris OS that is up to 40 percent less expensive than the leading Linux distribution. Similar to phone calling plans, the subscription-based Solaris Service Plans provide customers and partners with choice and flexibility to receive the level of support they need. Customers can choose Basic, Standard or Premium Solaris Service Plans, each with scalable and predictable pricing, based on the number of processor sockets. To date, more than 7,200 people have registered for the no-cost Web-based Solaris 10 education preview class, and more than 1,400 people have signed up for Early Advantage classroom courses. More information about the Solaris 10 Services portfolio is available at <http://www.sun.com/service/solaris10>.

Open Source Code License

Sun also announced that the source code for the Solaris 10 OS will be made available under the OSI

(Open Source Initiative) approved Common Development and Distribution License (CDDL). The company has established a community Web site at [opensolaris.org](http://www.opensolaris.org) [production note — link to: <http://www.opensolaris.org>]. Buildable source code for Solaris will be available at this site in the second quarter of 2005.

Sun is also releasing code — under the CDDL — for its Solaris DTrace technology, one of the most popular features of Solaris 10 OS. DTrace source code is immediately available for download from opensolaris.org.

“As an Independent Software Vendor, OpenSolaris provides a deeper understanding of the Solaris OS and a direct channel of feedback to the engineers. We now have deeper insight into the workings of production systems,” said Philip Beevers, a developer at royalblue. “Through the OpenSolaris pilot program, we’ve been able to do things with DTrace which we couldn’t do before. With access to the source code through CDDL, we hope to innovate more with DTrace and improve our own products.”

“Sun’s heritage has always been deeply rooted in open source and open standards-based software. OpenSolaris represents a significant milestone in the history of Sun, the Solaris community and larger open source community. We strongly believe the OpenSolaris community will help foster the innovation and collaboration needed to open up new opportunities for developers, customers and partners.”

John Loiacono,
Sun Executive Vice President,
Software

Community Advisory Board

Sun will also establish a Community Advisory Board to help oversee the evolution of OpenSolaris OS technology and the community development efforts. Initially, the advisory board will consist of five members — two will be elected from the OpenSolaris Pilot community, two will be Sun employees, and one member will be selected from the broader open source community. This advisory board will be finalized by March 2005 and will grow and evolve over time to meet the needs of the community.

For additional information on Solaris 10 OS, visit <http://www.sun.com/software/solaris/>, contact education_news@sun.com or click here to have your local Sun representative contact you.