THE SOLARIS™ 8 OPERATING ENVIRONMENT

KEY HIGHLIGHTS

- The leading UNIX operating environment, combining power, stability, and predictability with complete backwards compatibility

- Offers data center-class reliability, availability, and serviceability – at a fraction of the cost of a mainframe

- Assures superior availability through a smaller, more stable kernel design and increased load balancing across multiple processors

- Scales to handle heavy traffic, huge data sets, and compute-intensive problems

- Tightens an already secure environment with increased support for major security protocols as well as new technologies

- Offers a complete global solution with extensive support for 37 languages and 123 locales

- Provides the premier deployment platform for Java™ technology

- Enhances ease of use through simplified software installation and setup plus comprehensive integration capabilities

- Supports the latest networking protocols and adheres to all major industry standards

Today's explosive levels of growth — in terms of bandwidth, networks, and digital devices — have created the phenomenon known as the Net Effect. It's forcing organizations to rethink how they create, manage, extend, and ultimately deliver information technology (IT) services. Yet at the same time, it's creating massive opportunities for innovation with regard to service and functionality.

For more than 15 years, Sun has been telling the world that The Network Is The Computer™, and has led the way in helping our customers harness the transforming power of the Net Effect. As the foundation for Sun™ systems, the Solaris™ 8 Operating Environment enables your IT organization to deliver on the promise of massive scale, continuous real-time computing, and secure systems — while increasing service levels, reducing risk, and decreasing costs. With Solaris 8 software, you can efficiently manage resources and provide a higher level of service. It also helps reduce complexity by providing easy-to-use interfaces and comprehensive administration tools — all designed to help lower your IT risk. And by optimizing your resources and enabling them to scale to meet demand, the Solaris 8 Operating Environment helps you to minimize costs and lower your total cost of ownership.

SOLARIS IS AVAILABLE

When businesses operate around the clock and around the globe, downtime doesn't just affect the company — it affects the entire supply chain, from the largest to the smallest link. The need for near-zero system downtime is an absolute requirement for just about everyone. Your customers, suppliers, and employees expect your business to be online 24x7.

The reliable Solaris Operating Environment is acknowledged by the industry to be the premier UNIX® environment for SPARC™ and Intel Architecture systems. By minimizing planned and unplanned downtime, reducing administration errors, and simplifying troubleshooting, it keeps your mission-critical applications available, and ensures high-speed, reliable access to your data. Based on a smaller, more stable kernel, the Solaris platform delivers industry-leading load balancing across multiple processors.

To maximize uptime, Solaris software provides built-in features such as live upgrade, automatic dynamic reconfiguration, hot relief, hot diagnostics, dynamic system domains, IP network failover and balancing, UNIX file system logging, and remote console. These features enable you to maximize uptime and increase availability to services.

As with previous versions, the modular construction of the Solaris 8 platform allows installation of new feature updates as they become available — while your applications continue to run. Updates can be installed on a separate partition from the currently running environment. When installation is complete, a simple reboot enables the new version to take control. This enables you to reduce the amount of planned downtime needed and significantly decrease your risk — because the older version is simply a reboot away.

Sun Cluster 3.0 software increases the availability and capacity of the Solaris Operating Environment by enabling core services, such as devices, file systems, and networks, to operate seamlessly across a cluster. Sun Cluster 3.0 is integral to the SunPlex™ framework, which is an end-to-end, fully integrated application service delivery solution for tightly coupled environments that also includes servers, storage, interconnects, the Solaris Operating Environment,

applications, and support. Within the Sun Cluster environment, both failover and scalable services help you easily manage and maintain service levels. Nodes in a cluster can be used to automatically recover failed services, or dynamically add scalable services anywhere in the cluster to increase capacity. These capabilities are key to increasing delivered service levels, while decreasing costs and reducing administrative risk

SOLARIS IS SCALABLE

Designed for multiprocessing and 64-bit computing, Solaris software delivers a consistent environment — from smaller departmental servers to massive, clustered servers with more than 100 CPUs. When your enterprise outgrows its present system, there is no need to move everything to a larger computer running a different operating system. Solaris simply runs faster, and runs the same applications faster, when you put it on larger computers.

The multithreaded design of the Solaris environment also delivers much faster performance for key enterprise applications and core system functions. A built-in software component, the Solaris Network Cache Accelerator, increases Web server performance for many pages by as much as six times.

Unlike other operating systems, the Solaris Operating Environment scales almost linearly within a single machine. Additional CPUs mean additional compute power — application performance increases in almost a direct relationship to the number of CPUs added. This means Solaris software can easily handle heavy traffic, huge data sets, and enormously compute-intensive problems, for example.

However, scalability means more than just the number of servers — it means easy expansion in every direction. That is why the Solaris platform supports:

- One million simultaneous processes on a single system
- Up to 128 CPUs on a single system
- More than four billion network connections
- 32- and 64-bit applications
- Two-, four-, and eight-node clusters
- IPv4 and IPv6 network addresses
- Up to 512 CPUs in a clustered environment

SOLARIS IS MANAGEABLE

To improve ease of use and provide comprehensive system management tools, the Solaris Operating Environment includes several applications.

- Solaris Web Start Wizards™ software simplifies the installation, setup, and administration of applications written for both Solaris and Java™ technology-based environments with point-and-click ease of use. This ensures trouble-free configuration of new systems at installation time.

- With Solaris JumpStart™ software, the Solaris Operating Environment and applications can be placed on a central server, which can then be used to remotely set up a Solaris system anywhere on your network. For environments where IP addresses are centrally managed, Solaris JumpStart software also supports installation via DHCP.

- Through Web-based enterprise management (WBEM), companies can develop and deliver a set of standards-based management tools that leverage new technologies, such as XML and CIM, operating over HTTP.

- Administration is eased through the Solaris Management Console™ software and WBEM-compliant tools. Solaris Management Console software is a Java technology-based client/server application that integrates all GUI-based tools. The software takes advantage of common instrumentation in the Solaris Operating Environment.

- Integrated into the Solaris Management Console software, role-based access control (RBAC) enables superuser rights to be delegated to multiple users, and distributes system tasks. This not only frees the administrator's time for performing more proactive tasks, but also tightens the security of the network.

- To provide ease of management of a cluster platform, Sun Cluster 3.0 software presents a simple, unified management view of cluster-wide, shared system resources and services. All cluster resources appear as if they were on a single system.

- Sun Management Center software enhances application availability, optimizes performance and scalability, and simplifies management of your Sun hardware, the Solaris Operating Environment, and

applications. Hundreds of Sun systems can be managed at once through a Java technology interface or Web browser, enabling complex tasks to be performed with ease from virtually anywhere on the network.

- Disk volume management is becoming an intrinsic part of the Solaris platform with the integration of the Solaris Volume Manager (formerly known as Solstice DiskSuite™ software).

To ensure a consistent level of service to users, groups, and applications, the Solaris platform also supports a number of components, including Solaris Resource Manager™ software. This software provides fine-grained control of system resources. Together with Solaris Bandwidth Manager software, which enhances your ability to control and provision IP traffic priorities and bandwidth, it ensures network resource availability and manageability.

SOLARIS IS TRUSTWORTHY

As more and more mission-critical operations move online, security and predictability increase in importance. With Solaris 8 software, security is easy to deploy and manage — many frameworks and products are either incorporated or available via free download. These include:

- Kerberos
- IPSec for creating virtual private networks (VPNs)
- Smart card authentication compatible with the open card framework (OCF) 1.1 specification
- Role-based access control for distributing superuser authorizations
- Auditing features

Solaris 8 software helps decrease your IT risk by protecting your network from external and internal attack. Complementing the workgroup and enterprise versions of SunScreen™ Secure Net software, the SunScreen Lite version provides sophisticated stateful dynamic packet filtering — a firewall — for no cost.

Through 56-bit and 128-bit encryption routines, users can deploy sophisticated VPNs, file encryption, and protected login methods regardless of location. An LDAP client for naming services enables the highly scalable,

easily managed, and reliable iPlanet™ Directory Server to store userIDs, passwords, and host information.

For customers in government, education, finance, health care, and insurance industries, Solaris software's auditing capabilities are certified against the Common Criteria specification for Controlled Access Protection Profile at Evaluation Assurance Level 4 (CAPP at EAL4).

SOLARIS IS CONNECTED

More users than ever before are connected to the Net, using more types of devices — from PDAs and PCs to workstations and mainframes. With standards-based networking built into the software, the Solaris 8 Operating Environment offers proven interoperability and optimizes networking across a range of platforms. This means that it can simultaneously support hundreds of thousands of users across the globe — anytime, anywhere, with any device.

Because the Solaris 8 Operating Environment is universal, it supports a global set of languages that can be added or removed at any time. Globalization is enhance through extensive support for 37 languages, 123 locales, and complex text formats for Arabic, Thai, and Hebrew, along with support for the development of multilingual applications and euro currency.

In today's heterogeneous network, comprehensive interoperability is a must. Solaris PC NetLink software delivers native Windows NT network services, integrated with directory, authentication, and file and print services.

SOLARIS IS COMPREHENSIVE

To ensure as comprehensive a solution as possible, additional products are packaged in the Solaris Media Kit, such as:

- StarOffice™ productivity suite
- Forte™ for Java technology
- Forte Developer 6 tools
- iPlanet Web Server
- iPlanet Directory Server
- Oracle8i Enterprise Edition database with development license

Also, the Media Kit contains the Solaris Software Companion CD, which includes a broad array of popular freeware programs:

- Desktop environments
- Window managers
- Web services software
- Editors
- Utilities
- Tools, such as GNU compilers and Samba

EXTENSIVE LINUX COMPATIBILITY

In addition, many tools and utilities that ship with Linux distributions are on the Solaris Software Companion CD. This enables system administrators and developers to manage and develop for two platforms at once. A common look and feel means that users and developers familiar with one environment will feel comfortable with the other. And *lxrun*, a free utility shipped with the Solaris platform, enables Linux applications to run unmodified in the Solaris Operating Environment on the Intel Architecture platform.

JAVA TECHNOLOGY

For deploying Java technology-based applications, the Solaris Operating Environment leads the industry as the premier, mission-critical platform. It improves Java server-side performance and stability for large data center applications. Because Java technology is tightly integrated into the operating environment, it utilizes multithreading capabilities to deliver the scalability, performance, and stability needed for enterprise applications.

DESKTOP FEATURES

For Common Desktop Environment (CDE) applications, such as calendar, mail, memo, and address book, data synchronization from PDA devices is now included. CDE also features streaming video using MPEG1, MPEG2, QuickTime,

AVI formats, MIDI audio using the Java Media Framework APIs, Netscape™ application launcher, and hot-key editor.

As part of a continued commitment to interoperability and open source, Sun plans to adopt the easy-to-use GNOME user environment as the future desktop of the Solaris platform.

NETWORKING ENHANCEMENTS

With more than 15 years of support for networking-related protocols, the Solaris 8 Operating Environment offers one of the most mature networking stacks in the industry. By supporting the latest networking protocols and standards, Solaris 8 software is the ideal platform for the development of agile, dependable, leading-edge network applications.

Several new networking features are based on Internet Engineering Task Force (IETF) standards. Service location protocol (SLP) simplifies the discovery and use of network resources such as printers, Web servers, file systems, tape drives, mail servers, and so on. The Solaris 8 platform is also among the first major software environments to support IPv6, the standard that allows the Internet to scale and deliver a virtually unlimited number of connections. Built-in support for mobile IP, a proposed IETF standard, allows host mobility with continuous network connectivity. This enables a mobile node, such as a wireless device, to stay connected to the Internet regardless of its location.

ADOPTION

Because Solaris 8 software combines power, stability, and predictability with complete backwards compatibility, you can count on a smooth transition for your applications. In fact, it's so

straightforward that Sun offers a Solaris Application Guarantee compatibility program. For both SPARC and Intel Architecture platforms, existing applications written to the Solaris application binary interface will move to their respective Solaris 8 platforms without a recompile or rebuild, improving system reliability and saving time and money. No other operating system vendor can make this claim.

Through the Free Solaris℠ Binary License Program, the Solaris Operating Environment is available — without paying any license fee — for use on systems with eight or fewer CPUs.

STANDARDS:

Interface: X/Open® UNIX 98 . Graphics: X11, Adobe PostScript™, Display PostScript™, OpenGL®. Desktop: CDE, Motif. Object: Java IDL. Connectivity: ONC™, ONC+™, NFS, Web-NFS™, SMB, and optional NetWare IPX/SPX, SNA, AppleTalk, DECnet, and others. Internet: HTTP, FTP, Telnet, DNS, NTP, IMAP4, DHCP, SNMP, SMTP, IPv6, IPSec, Kerberos, SASL, OCF. Protocols: LDAP v3 IETF RFCs 1323, 1510, 1652, 1869, 1870, 1891–1894, 1985, 1996, 2018, 2136, 2045, and 2078.

SYSTEM REQUIREMENTS

SPARC (32- and 64-bit) or Intel Architecture (32-bit) platforms. Disk space: 600 Mbytes for desktops; one Gbyte for servers. Memory: 64 Mbytes minimum

FOR MORE INFORMATION

To learn more about the Solaris Operating Environment, visit www.sun.com/solaris. For additional technical and development information, please visit the BigAdmin℠ portal at www.sun.com/bigadmin.

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