Solaris™ 10 Operating System: Platform Choice

Run the same OS across SPARC®, x64, and x86 platforms.

The Solaris™ 10 Operating System (OS) offers wide-ranging platform support, which means it runs in a variety of roles and application areas across your IT organization. In the data center, the Solaris 10 OS delivers robust, around-the-clock support for leading enterprise infrastructure applications. It serves as a highly scalable platform for Web services, providing an ideal foundation for the Sun Java™ Enterprise System, and open source Web 2.0 technologies. On the desktop, along with the fully integrated Sun Java Desktop System, the Solaris 10 OS enables power users and developers to take advantage of advanced features and value-added office productivity and developer tools.

Highlights

Ideal platform for open source and enterprise infrastructure applications, Web services, and developers

- Feature and API parity for the Solaris™ OS on SPARC®, x64, and x86 processor-based systems
- Support for a wide range of Sun™ and third-party servers, workstations, laptops, and peripheral devices
- End-to-end optimization for x86 platforms — from kernel and libraries to Java™ Virtual Machine and developer tools
- Integrated, fully supported, open source packages — Samba, Apache, GCC, Webmin, IP Filter, PostgreSQL

Single source code base

When it comes to different platforms, Solaris is Solaris. Whether the Solaris 10 OS is run on SPARC® processor- or x86-based systems, it provides the same features and functionality. From update to update the Solaris 10 OS provides support for all of its key features on both platforms simultaneously, including Dynamic Tracing (DTrace), Solaris Containers, ZFS and the optimized TCP/IP stack.

Familiar tools

Many popular open source packages — such as Samba, BIND, the "AMP" stack, GNU Compiler Collection (GCC), Webmin, IP Filter, and Secure Shell (SSH) — are fully supported as part of the Solaris 10 OS. This means that Linux system administrators have a familiar tool set available, pretested, and integrated with their operating system.

Enterprise applications

Top-tier application providers have embraced the x64 platform, leveraging years of experience with the 64-bit SPARC platform to deliver a growing range of enterprise applications. In addition to key infrastructure applications from partners such as Oracle, Symantec, and BEA, thousands of developers are developing products that provide rich solution sets for key markets such as finance, HPC, and communications.

Comprehensive device support

Significant engineering investment continues in developing device and peripheral support for the fabric within the data center. These devices include high-speed networking (to 10-Gb per second), Fibre Channel and SCSI storage support, and InfiniBand connectivity. Solaris updates now provide new frameworks and drivers for Serial ATA (SATA) and PCI Express devices, plus continuous improvements in network driver performance. Support for enterprise storage also continues to grow with expanded RAID and iSCSI capabilities. Where Solaris is used on laptop and desktop PCs, developers and system administrators can benefit from a stream of improvements which deliver 3D graphics, USB 2.0, Firewire, and wireless networking.

Cost-effective licensing and support

The Solaris business model comprises entitlement (at no cost) and a competitively priced range of service offerings covering everything from single systems to large IT installations. Sun support pricing is typically lower than that of other open operating systems.

Deployment flexibility

The modular architecture of the Solaris 10 OS allows drivers to be loaded dynamically, with no need to rebuild the kernel. The kernel itself supports single-processor and multiprocessor environments and is, for the most part, self-tuning. These features make it easy to define a single, optimized, security-hardened OS image for volume deployments. This design efficiency works equally well, whether you are manufacturing embedded systems or provisioning a compute farm. This means the Solaris OS is well-suited for use in demanding environments such as telecommunication, network security, and health care, as well as offering an ideal platform for deployment in enterprise infrastructures. Also, in addition to providing a great platform for virtualization, Solaris also runs very well as a guest OS under third party hypervisors.

The SPARC advantage

Sun continues to innovate around the open SPARC architecture with UltraSPARC® T2 based products delivering new levels of performance for throughput-oriented workloads that are typical of commercial applications, while fundamentally changing data center economics in terms of space and compute efficiency per Watt. The features of Solaris 10, coupled with Chip Multithreading (CMT) architecture, provide significant opportunities to consolidate Web-tier and ERP applications in the data center.

The x64 advantage

Sun is shipping the industry's broadest line of x64 systems, powered by the AMD Opteron™ or Intel® Xeon® processors. These systems offer top performance, scalability, power efficiency, manageability, and longevity benefits and are available preinstalled with the Solaris OS to address high performance computing, server consolidation, and web infrastructure applications.

Performance

The Solaris 10 OS outperforms the competition on customer applications, as well as industry-standard benchmarks on both SPARC and x64 processor-based platforms. Without changing your existing Solaris applications, you can immediately benefit from a turbocharged TCP/IP stack, radically improved kernel, advanced tracing technology, and special optimizations for memory allocation and CMT. Additionally, the Solaris OS has benefited by almost 20 years of multiprocessor tuning and optimizations, and today offers near-linear scalability from single-CPU platforms to systems with hundreds of cores.

Learn More

To find out if Solaris is supported on your x64/x86 system, visit the hardware compatibility list at sun.com/bigadmin/hcl.

For additional information, please see sun.com/solaris/features.

Investment protection

By choosing the Solaris 10 OS, customers can deploy and manage a single operating system across an enterprise — on the desktop by leveraging the Java Desktop System and Sun Ray™ based VDI solutions, and then across the entire spectrum of x86 systems to large SPARC systems running hundreds of cores.

Because Solaris 10 provides compatibility at the source-code level, applications can easily be deployed across both architectures. Customers can reprovision existing Microsoft Windows or Linux servers with the Solaris 10 OS, protecting existing hardware investments and often gaining better throughput and performance. Just as Sun has already demonstrated with the SPARC platform, the Solaris OS offers a risk-free growth path to 64-bit computing, with guaranteed compatibility for existing 32-bit, x86-based applications.

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