

# Performance and Energy Efficiency for SAP Solutions

The Solaris™ 10 Operating System on Sun's Intel® Xeon® processor-based systems



## Highlights

- Strengthen SAP solutions — deploy SAP Business Suite on an enterprise-class platform
- Be ready for the future — Solaris 10 on x64 platforms supports 64-bit SAP versions, to help migrate to new SAP applications and the SAP NetWeaver platform
- Increase reliability — with Solaris Predictive Self Healing on servers that include high-end availability features
- Increase flexibility — deploy a single OS end-to-end across all back-end SAP tiers, consolidate and dynamically manage resources
- Enhance security — with security features such as secure execution and Solaris Process Rights Management
- Lower support costs — support for the Solaris 10 OS is typically less than for Linux support
- Optimize performance for SAP applications — the Solaris OS is known for its scalability and is optimized for Intel Xeon processors



In a time of intense global competition and relentless cutbacks, IT managers struggle to contain expenses while at the same time trying to improve service levels and security for 24 x 7 business-critical SAP solutions. To help drive down costs, commodity x64 systems are often deployed in the SAP infrastructure. However, reliability, security, and manageability issues with Windows or Linux systems belie the true cost-effectiveness of these platform decisions.

In addition, SAP is no longer supporting SAP NetWeaver on 32-bit Windows and Linux systems and in the near future, all new applications are expected to be Unicode, so anyone still running 32-bit should start the process of migrating to 64-bit platforms.

Sun and SAP offer an economical enterprise-class alternative. SAP supports SAP Business Suite on Solaris™ 10 Operating System (OS) for x64 platforms (registered customers can view SAP support for Sun platforms at [www.sap.com/pam](http://www.sap.com/pam)). Combining the scalable Solaris 10 OS and Sun's power, energy-efficient Intel® Xeon® processor-based systems creates a mission-critical platform that can cost-effectively deliver manageability, flexibility, security, and reliability. In fact, in an announcement on September 5, 2007, Intel endorsed the Solaris OS as the only mission-critical UNIX® OS for the Intel Xeon processor.<sup>1</sup>

## An enterprise-class solution from Sun Microsystems

Now companies can deploy SAP Business Suite on the Solaris 10 OS and Intel Xeon processor-based servers — a combination that offers unparalleled enterprise-class functionality, as well as performance, density, and energy efficiency.

### Price/performance

Solaris 10 on x64 platforms is ideal for applications that require x86 compatibility or the economies of scale of x86 systems, as well as the large memory addressing capabilities of 64-bit computing, which are needed for Unicode and new versions of SAP applications.

Sun works closely with Intel to optimize the Solaris 10 OS to take advantage of processor architecture features, especially multi-core functionality and power efficiency. As a result, tests show scalability of SAP Unicode to be

nearly linear when adding CPU/cores on Solaris on x64 platforms. In addition, databases are often smaller after migrating to Unicode.

The Solaris 10 OS comes with a free right-to-use license, and annual support pricing is generally less than for comparable Linux systems. Sun also offers free AMP software (Apache, MySQL, and PHP) that is specifically optimized for the Solaris 10 OS.

### Flexibility and manageability

The Solaris OS offers end-to-end enterprise scalability and reliability. Binary compatibility enables IT managers to deploy and scale a single OS across the enterprise — on desktops (with the Sun Java™ Desktop System, StarOffice™ software, and Sun Ray™ Ultra-Thin Clients), Sun x64 systems, and Sun servers based on SPARC® technology.

Multi-core aware Solaris Containers enable secure consolidation of applications and help increase the utilization of system resources by up to 80 percent. Solaris ZFS (zettabyte file system) enables file systems to grow dynamically to virtually any size, without additional volume managers. And, Sun N1™ Advanced Architecture for SAP Solutions virtualizes applications running on top of the Solaris OS, enabling applications to run on a dynamically managed pools of resources. All of these features create an environment that can quickly scale and adapt to changes in demand or business processes.

### Enhanced security

As more people (employees, customers, suppliers, and partners) access the very collaborative environment enabled by SAP NetWeaver, the need for security increases, especially considering governmental regulations concerning data

integrity. Sun intrinsically understands this and continues its 20-year commitment to building security into the OS with features such as Solaris User and Process Rights Management, secure execution, and an integrated firewall.

To secure the OS, Solaris User and Process Rights Management defines fine-grained process privileges. Users and applications are granted the minimum set of privileges needed to perform tasks, which helps to protect critical system resources. Solaris Secure Execution makes it possible to configure a system to allow only valid, signed executables from a list of trusted authorities to run. Rogue applications, Trojan horses, and viruses can not execute. Finally, SunSM Network Services for SAP Solutions provides a comprehensive set of identity services and secure access that make it possible to reap the benefits of collaborative business while maintaining security and costs.

### Rock-solid reliability and availability

Sun's Intel Xeon processor-based servers running the Solaris 10 OS feature hot-swap, redundant components, Solaris Predictive Self Healing and Solaris Dynamic Tracing (DTrace). Solaris Predictive Self Healing automatically diagnosis, isolates, and recovers from many hardware and application failures. DTrace helps operators quickly debug performance issues and systemic problems. In addition, planned downtime for SAP upgrades can be minimized by combining Solaris Containers and Solaris ZFS. High availability and disaster recovery are possible with Solaris Cluster software and Sun™ Cluster Geographic Edition software.

### Energy-efficient Sun Intel Xeon servers

Sun' Intel Xeon servers are extremely energy-efficient, utilizing features within the Intel

### Learn More

To learn more about the Solaris 10 OS on x64 platforms for SAP solutions, see:

- [www.sun.com/sap](http://www.sun.com/sap)
- [www.sun.com/intel](http://www.sun.com/intel)
- [www.sun.com/solaris](http://www.sun.com/solaris)

Xeon architecture to create systems that produce significantly less heat and require less cooling than other systems in the same class. Furthermore, at 2 RU, they require less space in the datacenter and offer more features compared to similar competitive systems.

### More choice

The Solaris 10 OS is supported on Sun platforms and on commodity servers from HP, IBM, Dell, and others. To guarantee a certain level of quality and scalability, SAP and Sun define a hardware certification process for servers based on Intel Xeon processors. Hardware vendors can certify their servers for the Solaris 10 x64 platform and publish certification on [www.saponsolaris.com](http://www.saponsolaris.com).

### Conclusion

Some of the world's most complex and large SAP installations are running on the Solaris platform. With the availability of Solaris 10 for x64 platforms for SAP, Sun is bringing the most advanced OS on the planet to the x64 server world. Innovative Sun x64 servers offer choice, price/performance, reliability, and power efficiency to help lower data center costs. With the full stack of SAP Business Suite (Unicode) available on the Solaris 10 OS for x64 platforms, enterprises of all sizes can take advantage of both worlds — implementing cost-effective, robust solutions that can help meet the challenges of a global economy, today and into the future.

1. [www.sun.com/aboutsun/pr/2007-09/sunflash.20070905.1.xml](http://www.sun.com/aboutsun/pr/2007-09/sunflash.20070905.1.xml)

