

ORACLE SOLARIS 10

KEY FEATURES AND BENEFITS

- **Investment Protection.** The Binary Compatibility Guarantee, the ability to consolidate Oracle Solaris 8, Oracle Solaris 9 and Oracle Solaris 10 Containers on one Oracle Solaris 10 system or Guest Domain, and the long support life all factor into the comprehensive Investment Protection story for Oracle Solaris 10.
- **Confidence.** Oracle Solaris 10 is integrated and tested with Oracle applications, middleware. Optimized Solutions minimize the effort to ensure successful deployments.
- **End to end Data Integrity – Oracle Solaris** ZFS provides file system end to end data protection as well as facilities to self correct data. It also offers a simplified management model that does not require a 3rd party volume manager. ZFS offers the scalability to grow to the largest data storage requirements.
- **Operational Safety Net.** ZFS snapshots create a low overhead safety net for reducing the risk when making any system software changes.
- **Decrease Downtime.** Unplanned downtime is minimized with through Oracle Solaris Predictive Self Healing. Planned downtime can be reduced through the ability to apply patches to a copy of the current boot environment prior to the scheduled maintenance window.

Oracle Solaris 10 has been the strategic platform for today's demanding enterprise applications since 2005, delivering proven results on everything from mission-critical enterprise databases to high-performance Web farms, and from the latest generation of SPARC systems and x86 systems. For customers facing challenging business and technical requirements—such as lowering costs, simplifying system administration, and maintaining high service levels—Oracle Solaris 10 is the ideal cross-platform choice. Oracle Solaris is integrated and tested with Oracle applications, middleware, and databases to ensure successful deployments.

Meeting the IT Challenge

Enterprises are under tremendous pressure to show stronger returns on their investment in IT, rolling out new business services faster, increasing processing and storage capacity while reducing space and power usage, and complying with new regulations. With Oracle Solaris, innovative built-in features deliver breakthrough virtualization and utilization, high availability, advanced security, and industry-leading performance.

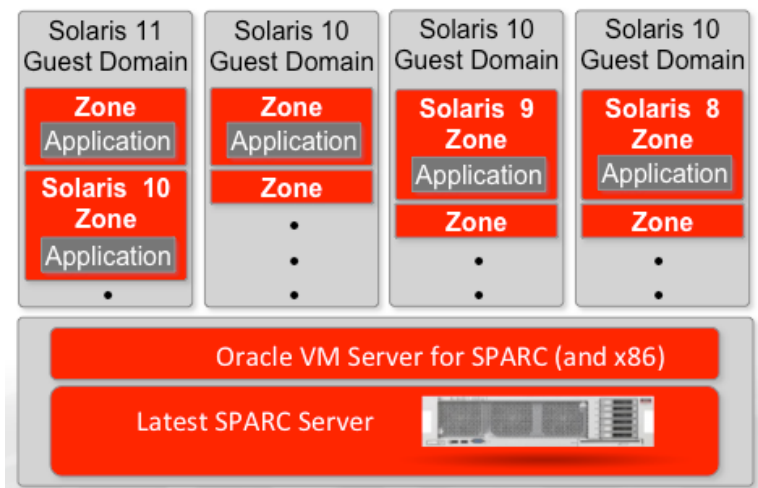
Designed for Virtualization

Oracle Solaris 10 offers the industry's most cost effective and integrated virtualization solution encompassing a range of technologies as well as management and support offerings without additional costs. The virtualization technologies include both Oracle VM Server and Oracle Solaris Containers. Oracle VM Server follows the industry model of placing independent guest environments on a hypervisor architecture that supports Live Migration of guests between systems. Oracle Solaris Containers provide a different approach by providing independent and isolated virtual environments within a single OS instance.

Virtualization management is delivered through Oracle Enterprise Manager Ops Center. See the Management section below for more information.

Investment Protection

Oracle Solaris guarantees binary compatibility from release to release and its architecture neutral programming interfaces ensure source code compatibility between SPARC and x86 systems. Oracle Solaris Containers take compatibility one step further. To assist in rehosting legacy applications, Oracle Solaris Legacy Containers can host Oracle Solaris 8 and Oracle Solaris 9 applications in Oracle Solaris Containers on Oracle Solaris 10. The latter approach provides both application compatibility and environmental compatibility to ensure rehosting success. Taken together, running applications in Oracle Solaris Containers and as Oracle VM Server guests is the most effective way to guarantee application compatibility, to run older applications on the newest hardware, and to move applications between systems. Add in Oracle Solaris 11 and it is possible to consolidate 4 generations of Oracle Solaris on a single hardware platform:



In the Oracle Solaris 10 Guest Domain it is possible to run any combination of Oracle Solaris 8, Oracle Solaris 9, and Oracle Solaris 10 Containers (Zones).

An additional investment protection element is the long service life of Oracle Solaris 10. See the Support section below. This allows running applications on the newest hardware platforms without the expense of migrations.

Secure Operation

The leading-edge security features in Oracle Solaris 10 help reduce the risk of intrusions, secure applications and data, assign the minimum set of roles and privileges needed by users and applications, and control access to data based on its sensitivity label. Oracle Solaris 10 has been independently evaluated at EAL4+ at three Protection Profiles, one of the highest levels of Common Criteria certifications. Oracle Solaris user management and process rights management and Oracle Solaris Containers together enable hundreds of applications and multiple customers to be hosted on the same system. Administrators can use features such as Secure by Default to harden Oracle Solaris from the moment it is installed on a system. In addition, Oracle Solaris with trusted extensions provides true multilevel security for the first time in a commercial-grade OS, where all of your existing applications can run without modification.

With Oracle Solaris 10, you can

- Reduce risk by granting only the privileges needed for users and processes
- Simplify administration and increase privacy and performance by using the standards-based key management and cryptographic frameworks in Oracle Solaris
- Secure your system using dynamic service profiles, including a built-in, reduced-exposure network services profiles
- Control access to data based on its sensitivity level by using the labeled security technology in Oracle Solaris with trusted extensions

Create isolated environments on a single system through Oracle Solaris Containers to enjoy the benefits of managing all system resources by a single OS instance, and yet provide applications with a secure, isolated environment that from the application's perspective appears to be a dedicated system.

Designed for High Availability

Predictive Self Healing is a key feature in Oracle Solaris 10 that helps increase system and service availability. It automatically detects, diagnoses, and isolates system and software

faults before they cause downtime. It spans the full range from diagnosis to recovery on Oracle SPARC and x86 systems.

To meet the highest application availability targets, Oracle Solaris Cluster is engineered to support a broad spectrum of Oracle technologies: applications, middleware, databases, systems, storage, and networking. It seamlessly connects all components and delivers orchestrated high availability and disaster recovery in traditional and virtualized IT environments, for local to geographically dispersed data centers.

Designed for Performance

Setting over 300 performance records since its release, Oracle Solaris 10 unleashes more power from existing applications. Developers can download the Oracle Solaris Studio compilers and developer tools to build applications incorporating the latest optimizations.

[Optimized Solutions](#) provide best practices guides to properly deploying and configuring Oracle applications, middleware and databases on Oracle Solaris.

Development Tools

Developers need integrated, ready-to-use tools that are compatible with all the environments in which they must deploy applications. With that in mind, Oracle includes popular software tools from the free and open source world, and complements them with access to key Oracle developer technologies like the Oracle Solaris Studio compilers and tools and unique Oracle Solaris 10 utilities such as DTrace.

Unparalleled Innovation: Oracle Solaris 10 Technologies

The demonstrated innovation of Oracle Solaris 10 pays off by delivering benefits that first and foremost deliver clear cost savings.

Oracle Solaris ZFS

Oracle Solaris ZFS is designed from the ground up to deliver a general-purpose file system that requires 'no additional cost' volume manager, provides end to end data protection with self healing data, and immense scaling capacity. Oracle sells Sun ZFS Appliance storage systems, but ZFS also has a very important role on the server. ZFS snapshots create a low overhead safety net for reducing the risk and decreasing downtime for any systems software changes. ZFS data compression reduces the amount of disk space used by employing selectable compression algorithms. This allows tradeoffs between the amount of CPU required for compression and the resulting compression efficiency. ZFS also offers facilities for data replication through send and receive operations.

Oracle Solaris Containers

Oracle Solaris Containers allows consolidating multiple work loads on a single system, SPARC or x86 for the well recognized gains that accrue from server consolidation. Containers are an OS-level virtualization technology built into Oracle Solaris 10 - no extra cost to procure, no extra cost to support. Using flexible, software-defined boundaries to isolate software applications and services, this breakthrough approach allows multiple private execution environments to be created within a single instance of Oracle Solaris 10. Each environment has its own identity, separate from the underlying hardware, so that it functions as if it's running on its own system—making consolidation simple, safe, and secure. The advantages of virtual environments running in a single OS are near-zero overhead, superior resource sharing, greater flexibility in resource sharing, and greater flexibility in setting hard limits for resource usage.

By dynamically controlling application and resource priorities, businesses can also define and achieve predictable service levels. System administrators can easily meet changing requirements by quickly provisioning new Oracle Solaris Containers, or moving them from

system to system or disk to disk within the same system as capacity or configuration needs change.

In addition to Oracle Solaris Containers, Oracle offers Oracle VM Server for SPARC (previously called Sun Logical Domains), a hardware partitioning technology that allows multiple instances of Oracle Solaris 10 to run on a single Oracle SPARC server. Similar capabilities are offered for guest Oracle x86 environments through Oracle VM Server for x86.

Oracle Solaris DTrace

System administrators, integrators, and developers can use the dynamic instrumentation and tracing capabilities in Oracle Solaris to see what's really going on in the system. Oracle Solaris DTrace can be safely used on production systems—without modifying applications. It is a powerful tool with over 30,000 probes within Oracle Solaris that gives a comprehensive view of the entire system, from kernel to application, even those running in a Java Virtual Machine. This level of insight can reduce the time for diagnosing problems from days and weeks to minutes and hours, and ultimately reduces the time required to fix those problems.

Oracle Solaris Predictive Self Healing

Predictive self healing is an innovative Oracle Solaris 10 feature that automatically diagnoses, isolates, and helps you recover from many hardware and application faults. As a result, business-critical applications and essential system services can continue uninterrupted in the event of software failures, major hardware component failures, and even software configuration problems.

- **Oracle Solaris fault management architecture** continuously monitors data relating to hardware and software errors. Automatically and silently detecting and diagnosing the underlying problem, it can automatically take corrective action on SPARC, Intel and AMD processor-based systems depending on the capabilities of the hardware. Easy-to-understand diagnostic messages link to articles in Oracle's knowledge base to help clearly guide administrators through additional tasks requiring human intervention such as replacement of failed components which can be carried out during periods of planned downtime.
- **Oracle Solaris service management facility** creates a standardized control mechanism for application services by turning them into first-class objects that administrators can observe and manage in a uniform way. These services can automatically be restarted if they're accidentally terminated by an administrator, fail as the result of a software programming error, or are interrupted by an underlying hardware problem.

Networking

Exponential growth in Web connectivity, services, and applications is generating a critical need for increased network performance. With Oracle Solaris 10, Oracle meets current and future networking challenges by significantly improving network performance without requiring changes to existing applications. Oracle Solaris 10 speeds application performance via the Network Layer 7 Cache and enhanced TCP/IP and UDP/IP performance. The latest networking technologies, such as 10-Gigabit Ethernet (GbE) and hardware offloading, are all supported out of the box.

In addition, Oracle Solaris 10 supports current IPv6 specifications, high availability, streaming, and Voice over IP (VoIP) networking through extended routing and protocol support—meeting the carrier-grade needs of a growing customer base.

Management

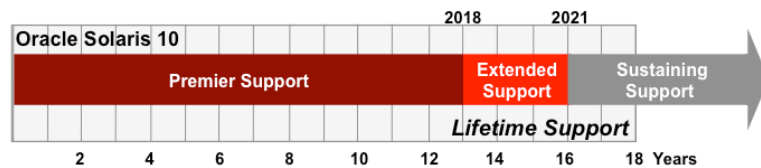
Oracle Enterprise Manager offers the full spectrum for managing all Oracle products. Oracle Enterprise Manager Ops Center provides a comprehensive solution for operating system, firmware and BIOS configuration, bare metal and virtual machine provisioning, hardware fault analysis, automatic My Oracle Support service request generation, performance management, all while leveraging integrated diagnostics with automatic server pool resource policies. Enterprise Manager Ops Center dramatically simplifies management as measured through a variety of metrics in the white paper [Realizing the Economic Benefits of Oracle Enterprise Manager Ops Center](#). The management toolset is also available at no additional cost and support is included the purchase of Premier Support. See below for support options.

Oracle Solaris Support

There are 3 ways to obtain support for Oracle Solaris

- [Premier Support for Systems](#)
- [Premier Support for Operating Systems](#)
- [Oracle Solaris Support Premier Subscriptions for Non-Oracle Hardware](#)

Customers investment in Oracle Solaris 10 is further protected by its long support life.



Premier Support does not end until 2018, and Extended Support continues to 2021 before Oracle Solaris 10 enters the indefinite Sustaining Support phase.

Training

Oracle University offers a full range of Oracle Solaris training and certification courses.

Contact Us

For more information about Oracle Solaris 10, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

 Oracle is committed to developing practices and products that help protect the environment

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Hardware and Software, Engineered to Work Together