

## ORACLE SOLARIS 11.1

### KEY BENEFITS

- **First OS for clouds.** Server, storage and network virtualization. Fast, intelligent provisioning capabilities for rapid service setup and maintenance.
- **Built-in virtualization.** Lowest overhead, lowest latency solution on the market. Software defined networking drives network virtualization into the network infrastructure. Secure live migration with Oracle VM for SPARC and x86.
- **Scalable data management.** Oracle Solaris ZFS, the default file system in Oracle Solaris 11, brings advanced storage features such as built-in deduplication, encryption, and thin provisioning to enterprise servers. Very low overhead Oracle Solaris ZFS snapshots tightly integrated with the IPS software packaging systems to deliver boot environments that allow fail-safe updates.
- **Advanced protection.** Fully integrated security for users, applications, and devices while simplifying administration with fine-grained delegated management, implementing the latest security standards and continuing Oracle Solaris' leadership position as a highly secure operating system

*Oracle Solaris, the industry's most widely deployed UNIX™ operating system, delivers mission critical cloud infrastructure with built-in virtualization, simplified software lifecycle management, cloud scale data management and advanced protection for public, private and hybrid cloud environments. Engineered together with Oracle Database, middleware, applications and, Oracle Solaris 11 delivers unique features to increase performance, streamline management and automate support for Oracle deployments.*

### Best UNIX™ for Oracle Deployments

Oracle Solaris is co-engineered with the Oracle's software and hardware to run Oracle's enterprise applications, scalable systems, high-performance interconnects and optimized data center storage to achieve the highest performance and the best efficiency. To get the most out of your UNIX-based Oracle deployments Oracle recommends Oracle Solaris 11. This integrated design approach has led to many advances for Oracle environments on Oracle Solaris 11.1:

- Performance boost for Oracle RAC with Kernel Mode Acceleration that improves throughput by up to 17% and provides more predictable performance.
- Lower memory utilization and better application performance through memory prediction technology which analyzes application needs to assign appropriate memory resources.
- Online resizing of Oracle Database System Global Area (SGA) enabled by the new optimized shared memory model.

Oracle rigorously tests the entire Oracle stack so that customers with Oracle environments save time deploying and maintaining systems and reduce ongoing operational risk.

Oracle Enterprise Manager consolidates the enterprise-wide management of traditional and virtualized IT deployments providing views into Oracle applications, middleware, database, Oracle Solaris, virtualization technologies on Oracle Sun servers, network and storage infrastructure. For example, Oracle Enterprise Manager monitors application network performance and identifies network bandwidth issues so system administrators can set network bandwidth priorities with Oracle Solaris 11 and restore network resources to critical applications.

Oracle offers a number of Optimized Solutions to help you rapidly deploy and efficiently operate a range of Oracle environments. Designed, tested and tuned for optimal performance and availability, these solutions use Oracle's engineered systems,

servers and storage, Oracle Solaris, virtualization, database, middleware, and enterprise applications to deliver the most cost effective architectures for your data center.

Oracle Solaris 11 is at the heart of Oracle's Engineered Systems – SPARC SuperCluster, Exadata and Exalogic Elastic Cloud and ZFS Storage Appliance – for ultimate reliability, fastest deployment and lower cost for Oracle deployments.

### Mission Critical Cloud Infrastructure

Oracle Solaris brings together mission critical operating system (OS) capabilities with cloud management technologies to deliver mission critical cloud infrastructure.

Oracle Solaris is the first fully virtualized OS with full server, storage and network virtualization built in. Using Ops Center, administrators can seamlessly configure, deploy and manage secure, flexible multitenant application environments where system resources are efficiently shared. This allows large enterprise applications to be deployed as cloud services, with flexible allocation of compute capacity, network bandwidth and storage.

Oracle Solaris 11.1 continues to enhance cloud capabilities with:

- Reduced administrative effort in balancing workloads with Oracle Solaris Zones on shared storage.
- Seamless enterprise-wide data access from any client through a unified filesystem namespace – the Federated File System
- Data Center Bridging and Edge Virtual Bridging to augment OS network virtualization and provide control across all network resources, improving utilization and allowing critical services to operate network-wide without degradation.

The tight integration of installation, packaging and filesystem technologies in Oracle Solaris 11 radically simplifies software lifecycle management. Services can quickly and safely be developed, deployed and replicated. With Oracle Solaris 11.1, parallel updating of Oracle Solaris Zones makes software maintenance up to four times faster.

The unique security capabilities in Oracle Solaris mitigate risk by providing application containment, hardware assisted cryptography, definable administrator powers, and policy enforced cloud environments. New features in Oracle Solaris 11.1 include remote audit collection, application behavior sandboxing, ASLR (Address Space Layer Reallocation), along with a reporting tool for security control compliance reporting.

Oracle Solaris Cluster enables extreme availability for enterprise clouds, where Oracle Solaris Zone Clusters securely consolidate multiple virtualized Oracle Solaris 10 and Oracle Solaris 11 environments. The Oracle Solaris Cluster Geographic Edition provides disaster recovery, allowing highly available Cloud services to span data centers in several locations.

Oracle Enterprise Manager unifies management of Oracle Software, Oracle Solaris, system and storage across cloud infrastructure. Oracle Enterprise Manager Ops Center addresses hardware, Oracle Solaris, Oracle VM on both SPARC and x86 platforms. Self-service, provisioning, management and chargeback can be achieved with Enterprise Manager 12c Cloud Control.

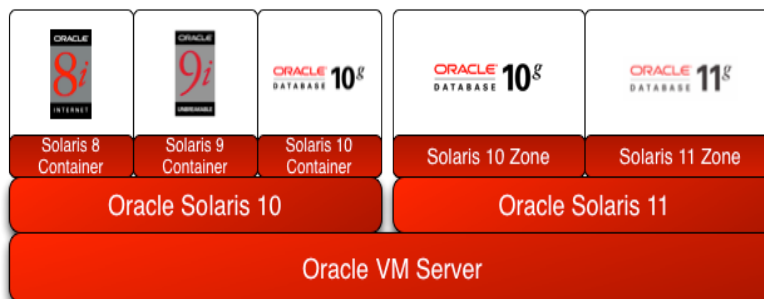
This combination of capabilities makes Oracle Solaris an ideal base for deployment in public, private and hybrid clouds where it can provide the basic Infrastructure as a Service (IaaS) support or host applications in a Platform as a Service (PaaS) or

Software as a Service (SaaS) model.

### Investment Protection for Enterprise Application Environments

Customers running enterprise application environments are focused on reducing risk and cost in their data center. Oracle Solaris addresses this to reduce the risks and save significant maintenance, space, power and licensing costs through deploying the latest systems.

Through the unique Binary Compatibility Guarantee, applications developed on previous OS releases will run unmodified on the latest version of Oracle Solaris. This helps remove the cost and risk of having to migrate applications when the OS is updated. If an older environment with multiple applications and scripts needs to be moved forward, the virtualization capabilities of Oracle bring older environments onto more scalable, energy-efficient current generation hardware. The Oracle VM server can support native Oracle Solaris 10 and Oracle Solaris 11 guests as shown below. For further efficiency, Oracle Solaris Zones can be deployed in each guest OS. Simple transition from older environments is achieved using the included P2V (Physical to Virtual) tools, such as Pre-Flight Checker.



This diagram shows how four generations of OS can run in a virtualized system.

IT groups in Finance, Telecommunications and Government sectors rely on Oracle Solaris to satisfy their needs for an OS with broad application support, scalability and security built in. Such customers have application lifecycles spanning many years, and make full use of the stability and compatibility of Oracle Solaris going from release to release.

To maximize uptime, Oracle Solaris incorporates comprehensive self healing and serviceability features which can diagnose and often automatically correct hardware and software failures without downtime. For the highest possible availability, Oracle Solaris Cluster is recommended.

Thousands of enterprise applications are available on Oracle Solaris and continue to be supported on the latest release. Many new applications are being developed and certified on Oracle Solaris 11. The Oracle Partner Network (OPN) provides a range of services to developers including access to software and tools. The Oracle Solaris Studio tools are recommended for building and tuning applications to run on Oracle Solaris. With optimizations for both SPARC and x86 CPUs in the latest tools, code can run up to three times faster.

## Support and Training

Support for Oracle Solaris provided through the following support offerings: Oracle Premier Support for Systems, Oracle Premier Support for Operating Systems, and Oracle Solaris Premier Subscription for Non-Oracle hardware. The OS is also available from the Oracle Technical Network (OTN) at no cost for development purposes under the terms of the OTN license.

Oracle University offers Oracle Solaris 11 Training and Certification programs to help customers and partners quickly obtain the skills needed to manage mission critical cloud deployments. These programs address all skill levels for administrators and developers and cover all aspects of development, deployment and management of Oracle Solaris.

## Contact Us

For more information about Oracle Solaris, visit [oracle.com/solaris](http://oracle.com/solaris) or call +1.800.ORACLE1 to speak to an Oracle representative.

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