E-BOOK

RELIABLE, SCALABLE, SECURE:

ORACLE SOLARIS 11.2

Engineered For Cloud
CONTENTS

INTRODUCTION  THE RIGHT TIME TO UPGRADE

CHAPTER 1  ORACLE SOLARIS 11.2: ENGINEERED FOR CLOUD

CHAPTER 2  OPTIMIZING PERFORMANCE FOR ORACLE’S SPARC AND X86 SYSTEMS

CHAPTER 3  SIMPLIFYING CONSOLIDATION AND VIRTUALIZATION

CHAPTER 4  THE FOUNDATION OF ORACLE OPTIMIZED SOLUTIONS

CHAPTER 5  EASIER UPGRADES AND INTEGRATED SUPPORT SERVICES

RESOURCES  FIND OUT MORE
Successful IT organizations are deploying more-efficient infrastructures and processes, and redirecting resources to deliver the innovations that drive competitive advantage. By simplifying IT, organizations can get maximum value from application investments, streamline management, optimize resources, and increase productivity across the enterprise.

A hardware and operating system upgrade can deliver immediate and ongoing benefits, including:

- Access to the latest technology advancements
- Improved application performance and availability
- Lower total cost of ownership
- Increased eco-efficiency for lower power and cooling costs
- Flexibility and scalability to accommodate future growth
Start attaining these benefits for your organization by moving to Oracle Solaris 11.2 and refreshing older server and storage hardware. With its latest generation of faster, more-efficient systems, Oracle offers integrated products and services to update your operating system and hardware affordably, securely, and without disrupting the business. And with Oracle Solaris Zones, organizations can continue to run existing application environments on this new generation of hardware, protecting investments in software and training.

Engineered alongside the Oracle hardware and software stack to optimize performance and efficiency, Oracle Solaris 11.2 works in conjunction with Oracle’s new generation of SPARC and x86 servers, storage, engineered systems, and Oracle Optimized Solutions to deliver the ideal platform for mission-critical enterprise applications.

What’s more, Oracle Solaris’s guaranteed application and development compatibility ensures that more than 11,000 third-party and customer-developed applications can take advantage of its record-breaking speed on SPARC and x86 systems. Organizations can move from previous versions to Oracle Solaris 11 without any changes or risk to existing applications.

This e-book is a brief introduction to simplifying IT by refreshing your operating system and hardware. Links to additional resources are listed on the final pages.

“By using the virtualization capabilities of Oracle Solaris 11 in combination with the flexible resource partitioning in Oracle’s advanced SPARC T4 CPUs, Mobile Tornado can consolidate its IPRS PTT Server and Oracle Database in a single machine, reducing TCO with higher levels of performance.”

Shlomo Birman, R&D Manager, Mobile Tornado

Did You Know?
The Oracle Solaris operating system has been at the heart of enterprise IT for 20 years, delivering the stability, flexibility, and world-class performance organizations need to stay secure, efficient, and agile, whatever the economic or business climate. Now discover the latest chapter in this exceptional history of innovation.

Learn about Oracle Solaris 11.2 here
CHAPTER 1: ORACLE SOLARIS 11.2 ENGINEERED FOR CLOUD
Cloud computing presents many opportunities to deliver better, faster services to users, but it also brings a number of challenges. Applications must roll out quickly and scale seamlessly to handle increasing demand, and information must be available to the people who need it, when they need it, while being protected from internal and external threats.

Oracle Solaris 11.2 brings the performance, reliability, security, and scalability of the #1 UNIX operating system to the cloud, helping speed application deployment, slash costs, and increase flexibility with virtualization built in at no additional cost.

Featuring innovative technologies to accelerate the adoption of enterprise-scale workloads in the cloud, Oracle Solaris 11.2 provides fast, intelligent provisioning capabilities, fully virtualized networking features, improved data management, and simplified administration with fully integrated security systems.

“[Oracle] Solaris 11 has a lot of new functionality that just wasn’t available from other vendors. Our company’s had a long history of using [Oracle] Solaris, and we have a lot of our platinum system running on [Oracle] Solaris. So we have a lot of confidence in the system.”

Rob Murray, UNIX System Administrator, Allied Irish Bank
Upgrading to Oracle Solaris 11 delivers:

- **Total protection** for data, applications, and users, with world-class security designed into the operating system, not bolted on afterward

- **High availability** with Oracle Solaris predictive self healing to diagnose, isolate, and resolve hardware and application faults

- **Simpler data management** with improved data integrity and near-zero administration with Oracle Solaris ZFS

**Oracle Solaris 11.2 Enhancements**

- Oracle Solaris 11.2 is fully integrated with OpenStack, an open source cloud management and service deployment platform, and an emerging industry standard for private and public clouds and for cloud interoperability.

- Oracle Solaris 11.2 integrates management tools familiar to UNIX and Linux administrators, so they will be more efficient. And Oracle Solaris already had some of the best security in the industry, and Oracle Solaris 11.2 makes it even better. Oracle Solaris 11.2 includes the ability to test against industry and de facto standards such as PCI, Oracle’s best practices, and Immutable Zones, so you can deploy protected environments for your organization’s most critically sensitive services.

- The latest release also offers superior cloud infrastructure capabilities with application-driven software-defined network enhancements and improved Oracle Solaris Zone update performance and mobility. And with Oracle Solaris 11.2, your existing Oracle Solaris applications are cloud-ready without the need for additional work.

- The built-in Oracle Solaris Zones virtualization technology now includes an integrated hypervisor feature. And along with Oracle Solaris Cluster 4.1, you can continue to enjoy exceptional price/performance and unmatched flexibility.
Designed For Cloud

Oracle Solaris 11.2 combines key computing elements—virtualization, security, deployment, availability, and performance—into a robust and flexible foundation for public, private, and hybrid cloud deployments.

The first enterprise operating system engineered for cloud, Oracle Solaris 11.2 delivers:

- **Virtualization in every dimension:** network virtualization, zero-overhead virtualization
- **Instant provisioning:** safe, intelligent provisioning and rapid update
- **Integrated hardware and software security:** data protection at line speed, secure live migration
- **Complete visibility:** safe pervasive observability of production workloads

*Oracle Solaris 11.2 Launch*
Watch the people behind the technology introduce the many new features and enhancements of Oracle Solaris 11.2
Oracle Solaris 11.2 has been developed in conjunction with Oracle’s SPARC systems as well as the Intel team responsible for the processors that power Oracle’s Sun x86 systems. This coengineering means that unlike other operating systems, Oracle Solaris 11 has been designed with tomorrow’s servers in mind, offering the scalability to meet rapidly increasing memory, CPU, I/O bandwidth, and networking demands. Tight integration with Oracle hardware systems also increases uptime significantly, with the predictive self healing feature analyzing, reporting, and correcting hardware components before they fail.

In addition, Oracle Solaris 11.2 optimizes the performance of specific functionality in Oracle hardware, including on-chip cryptographic acceleration and high-speed InfiniBand networking.

Because it is designed to optimize the performance, efficiency, and security of both SPARC and x86 platforms, Oracle Solaris 11.2 makes it easy to deploy an enterprise-class foundation across your data center and cloud infrastructure.

Oracle Solaris also delivers platform support for upcoming SPARC and x86 servers. The new virtual memory predictor, an addition to the Oracle VM 2.0 foundation introduced in Oracle Solaris 11, helps organizations take advantage of these new server platforms by delivering highly scalable memory operations for the most-demanding enterprise applications.
Oracle’s SPARC Servers

Oracle’s SPARC servers running Oracle Solaris are ideal for mission-critical applications that require best-in-class availability, scalability, and manageability. Upgrading to the latest Oracle SPARC servers running Oracle Solaris 11.2 can help you deliver:

- **Optimal performance across all application tiers**
  from highly concurrent web applications to complex enterprise applications and data warehouses

- **More than double the throughput performance**
  and better single thread performance for expanded application versatility

- **Unparalleled mission-critical reliability** at a fraction of mainframe costs
Oracle’s Sun x86 Servers

Oracle’s new generation of Sun x86 systems are optimized to run Oracle Solaris 11.2, delivering the industry’s best x86 performance at the lowest total cost of ownership. Upgrading to the latest x86 servers running Oracle Solaris 11.2 can help you deliver:

- **A complete, deployment-ready cloud infrastructure** with built-in virtualization for ultimate flexibility
- **Up to 52 percent lower TCO** compared to HP and IBM deployments using third-party operating systems and virtualization software
- **Superior scalability** for enterprise virtualization and consolidation with world-class performance
Spotlight on Oracle’s SPARC Systems

Oracle Solaris 11 is coengineered with Oracle’s new generation of SPARC systems, taking advantage of Oracle’s unique ability to optimize every layer of the IT stack to simplify data center operations, drive down costs, and accelerate business innovation.

- **SPARC T5 server**: building on the industry-leading price/performance of SPARC T4 systems to offer even greater reliability, availability, and security
- **SPARC M5-32**: consolidate large, complex or mission-critical workloads to improve utilization, increase deployment flexibility, and simplify management
- **Oracle SuperCluster**: our fastest and most scalable engineered system, with unprecedented price/performance for mission-critical databases and applications

“Thanks to Oracle’s SPARC servers running on Oracle Solaris, we gained the highest reliability, availability, and serviceability for our business-critical applications, enabling us to deliver 24/7 television service to our 12 million customers. We accelerated transaction-processing speed by 10x, slashed operating costs by 20 percent, and improved customer satisfaction.”

N. Ravishanker, CIO, Tata Sky Ltd.
Upgrading to new Oracle hardware systems running Oracle Solaris provides an ideal platform for consolidating large numbers of applications, databases, and middleware workloads, or for deploying complex, multiuser development, test, and production environments.

Oracle Solaris 11 includes Oracle Solaris Zones—one of the industry’s most widely used and proven virtualization technologies—built into the operating system. Oracle Solaris Zones enables existing applications to run unchanged in virtualized environments, accelerating and simplifying upgrades to faster, more-efficient servers from Oracle. Server utilization is increased by using Oracle Solaris Zones to run many applications in a single Oracle Solaris instance.
The Oracle Solaris Zones technology was first introduced as a core element of Oracle Solaris 10, and in Oracle Solaris 11 these unique, built-in virtualization capabilities were made even more central to applications and users.

Oracle Solaris 11 introduced a range of enhancements and new features in Oracle Solaris Zones, including:

- **Tight integration** with the new Image Packaging System feature and ZFS technology
- **Improved observability** at every layer of even the most complex IT environments
- **Increased control** over administration and unmatched ease of management
- **Ongoing support** for Oracle Solaris 10 Zones

Oracle Solaris 11.2 includes additional functionality to make Oracle Solaris Zones even easier to create and manage with independent and isolated Kernel Zones.

Video: IDC Discusses Oracle Solaris and the UNIX Market
IDC provides insights and views on the latest developments in Oracle Solaris, including key technical trends around cloud computing, virtualization, and security.
Oracle Optimized Solutions offer proven blueprints for improving performance, reducing costs and risks, improving user productivity, and accelerating ROI in Oracle software environments. These pretested, pretuned, and fully documented architectures are based on uniquely matched components from across Oracle’s comprehensive hardware, middleware, and software portfolio. Designed to be completely flexible, they can be deployed as complete solutions or easily adapted into existing environments.

CHAPTER 4:
THE FOUNDATION OF ORACLE OPTIMIZED SOLUTIONS
Oracle Solaris 11 is an essential part of why Oracle Optimized Systems work so well. Engineering systems to work together seamlessly across the IT stack means that Oracle can build solutions that enhance every layer. If an enhancement is identified in a hardware product, or in a particular configuration of hardware, Oracle tunes the operating system to ensure that the enhancement delivers its full effect right up to the application level.

Only Oracle has the capability to create solutions that optimize performance at every layer of the enterprise IT stack to deliver:

- Up to 11x faster user response times
- Up to 75 percent lower acquisition and operational costs
- Up to 6x faster deployment

See how UCF used Oracle Applications together with Oracle systems.
Current Oracle/Sun customers can save big (up to 20 percent in some cases) with trade-in discounts on Oracle’s servers, storage systems, desktops, microprocessors, and components.

Oracle’s trade-in program enables you to:

- **Improve eco-efficiency** with our no-cost Eco Returns Program
- **Reduce TCO** with lower costs for more powerful, efficient servers
- **Better plan for growth** with a clear and affordable upgrade path
- **Meet regulatory mandates** such as Sarbanes-Oxley

Oracle Upgrade Advantage Program

Upgrading to the latest systems from Oracle has never been easier—or more affordable. With the Oracle Upgrade Advantage Program you can get exceptional value for your trade-ins while boosting performance, utilization, security, and availability with new Oracle hardware powered by Oracle Solaris 11.2.

Podcast: Oracle Enterprise Manager Ops Center and Oracle Solaris 11

Hear how Oracle Enterprise Manager Ops Center enables you to design and manage mission-critical cloud environments and scale with Oracle Solaris 11, Oracle Solaris Cluster, SPARC systems, and Oracle VM Server for SPARC.
Support Services

With Oracle Premier Support for Systems, you can expect the highest level of fully integrated support for all your Oracle servers and storage systems. You’ll benefit from:

- **Award-winning, 24/7 service and support** to help you keep your Oracle systems running at peak performance

- **Comprehensive systems coverage**, including a single point of accountability for the complete Oracle stack, from applications to disk

- **Fast answers and prompt resolution** with around-the-clock access to Oracle product experts, hardware service, and self-help technical resources

- **Tools and resources** including Oracle Enterprise Manager Ops Center to proactively mitigate risk, simplify day-to-day IT operations, and maximize system performance

- **Access to operating system patches, security updates, and enhancements** without additional license or support fees
WEBCASTS

Oracle Solaris 11 webcasts – Watch on-demand webcasts on Oracle Solaris 11 to find out more about the innovative, built-in features that deliver breakthrough virtualization, high availability, and advanced security.

Oracle Solaris 11 online forum – Discover how the latest developments in Oracle Solaris 11 are revolutionizing cloud adoption.

The Best x86 Platform for Oracle Solaris: Learn how Oracle Solaris on Oracle x86 systems offers unique advantages in performance and reliability over third-party x86 systems.

RESOURCES

Find Out More

Deliver higher performance, tighter security, and simpler management in your data center with Oracle Solaris 11. Find out more here.

Stay Connected:

WHITE PAPERS


Oracle Solaris 11: Best for Enterprise Applications: See why the advances in Oracle Solaris 11 make it an ideal platform for business applications.

Oracle Solaris 11 System Software Management with Image Packaging System: Discover how a new approach to package management simplifies processes to help reduce the risk of operating system maintenance issues.
Oracle Solaris Timeline: Take a journey through 20 years of Oracle Solaris innovation, and get a glimpse of what the future holds.

Oracle SPARC Timeline: Walk through 25 years of SPARC innovation.

Oracle Solaris 11 and PCI DSS: Read detailed information on how Oracle Solaris 11 meets all applicable PCI DSS requirements.

Oracle Sun SPARC/Solaris Roadmap: Get a brief guide to Oracle’s plan for the future of enterprise IT.

Oracle SPARC T5-2 with Oracle Solaris 11 Versus IBM Power 750 Express with AIX 7.1: Read in-depth analysis to quantify cost differences between Oracle and IBM.

Oracle Solaris and SPARC Technology: Redefining Data Center Economics: Read how Oracle Solaris combines with the latest Oracle SPARC–based systems to deliver cost-effective, highly efficient cloud infrastructure platforms.

Oracle Solaris Operating System: Optimized for Sun x86 Systems in the Enterprise: Discover how Oracle Solaris can optimize the functionality of Intel’s new processor family in performance, reliability, security, power efficiency, and cost-effective virtualization.

Oracle Solaris 11: Upgrade Your Skills: Discover the many ways to upgrade your skills for Oracle Solaris 11.

Oracle Enterprise Manager Ops Center and Oracle Solaris 11: Learn how Oracle Enterprise Manager Ops Center helps you design and manage mission-critical cloud environments at scale with Oracle Solaris 11.

Oracle Solaris on the x86 Platform: Hear about Oracle’s strategy for further performance improvements in Oracle Solaris and x86 systems.

Oracle Solaris Virtualization: Hear how the advances in Oracle Solaris 11 allow organizations to realize the full benefits of virtualization.
GUIDES/DEMOS

> Get Started Creating Oracle Solaris Zones in Oracle Solaris 11: Learn how to create an Oracle Solaris Zone, install an application, and clone the zone to roll out multiple environments quickly and easily.

> Rapid Deployment with Oracle Solaris Zones: See how virtualizing with Oracle Solaris 11 can dramatically accelerate application deployment.

PRODUCT PAGES

> Oracle Solaris 11: Learn how Oracle Solaris 11 brings the performance, reliability, security, and scalability of the #1 UNIX operating system to the cloud.

> SPARC Servers: Learn why Oracle’s SPARC servers running Oracle Solaris are ideal for mission-critical applications.

> x86 Servers: See why Oracle’s Sun x86 systems are the best x86 platform for Oracle software and for providing an optimized hardware and software stack with virtualization software and cloud management tools.

RESOURCES

Stay Connected:
UPGRADES AND SERVICES

Oracle Upgrade Advantage Program: Discover how you can get superior discounts on new Oracle hardware when you trade in used equipment.

Oracle Premier Support for Systems: Learn how you can protect your technology investment and keep your business operations running effectively and efficiently.

Oracle Solaris Application Guarantee Program: See how binary compatibility between releases of Oracle Solaris helps protect your long-term investment in application development, training, and maintenance.

BROCHURES

Oracle Optimized Solutions: Taking the Guesswork out of Deploying Enterprise Applications: Discover how you can lower TCO, reduce risk, and create an IT infrastructure that boosts user productivity and business agility.

Accelerating Business Innovation with Oracle Hardware: Extreme Reliability, Simplified Management, and Lower Costs: See how Oracle’s optimized and integrated systems are helping create next-generation data centers.

DOWNLOADS


TRAINING

Oracle Solaris 11 Training – Learn more about Oracle Solaris 11 from Oracle’s experts. Stay ahead of the pack with leading-edge skills for deploying and implementing the industry’s #1 UNIX.