Frequently Asked Questions
Netra SPARC S7-2

Introduction

Telecommunications customers have to innovate rapidly, scale their infrastructures efficiently, bring services to market faster and grow their businesses quickly, while reducing their TCO with industry-standard technologies.

Oracle's Netra SPARC S7-2 is designed to address those needs optimally by offering the most secure, efficient, and reliable server for mission-critical cloud and on-premises deployments.

Customer Benefits

Oracle's Software in Silicon Features

Software in Silicon features -implemented initially in Oracle's SPARC M7 processor and extended in SPARC S7- are breakthroughs in microprocessor and server design. They enable databases and applications to run fast with exceptional security and reliability by implementing encryption, hardware security features, and software acceleration.

Efficiency and Performance

Oracle's SPARC S7 processor combines eight powerful cores, each handling up to eight threads using unique dynamic threading technology. The processor is designed to maximize efficiency by integrating most of the hardware interfaces on the processor, allowing the server to achieve unprecedented per-core utilization levels, which translate into optimal performance and minimum software licensing costs.

Security

The Silicon Secured Memory feature of Oracle's SPARC S7 processor provides the capability of detecting and preventing invalid operations to application data, through hardware monitoring of software access to memory. This can stop malware from exploiting software vulnerabilities, such as buffer overflows. The hardware approach of Silicon Secured Memory is much faster than traditional software-based detection tools, meaning that security checks can be done in production without significant impact to performance. In addition, each processor core contains the fastest cryptographic acceleration in the industry, allowing IT organizations to deliver end-to-end data encryption and secure transactions with near-zero performance impact. In summary: you can easily activate data protection and encryption security, by default, without additional hardware investment.

On Oracle Solaris 11, security can be easily set up and enabled by default, while single-step patching and immutable zones allow compliance to be maintained with simplicity. In addition, Oracle Solaris offers high-level security features, like time-based user control, activity-based delegation, and remote auditing, among others. Virtualization also enhances security, through Live Migration for Kernel Zones, a feature of Oracle Solaris that enables any user's session to be securely transferred between servers without interruption, with negligible performance impact.

Best-In-Class Manageability

Netra SPARC S7-2 provides best-in-class remote management via the Oracle Integrated Lights Out Manager (Oracle ILOM) standard service processor. Oracle ILOM helps you simplify network management, system configuration, and lifecycle management, as well as software provisioning and updates done locally or remotely. This is a powerful and full-featured service processor that also has power management and power capping capabilities to help reduce energy cost.

In conjunction with Oracle ILOM, Oracle Enterprise Manager Ops Center is a highly scalable management system that provides lifecycle management and process automation

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capabilities to help simplify consolidated platform management, compliance reporting, and system provisioning tasks for the network. It offers a complete cloud management solution.

Reliability

The ruggedized NEBS Level 3-certified Netra SPARC S7-2 provides a high level of system reliability that helps ensure that the server continues to operate under extreme environmental conditions. Redundant hot-swappable AC or DC power supplies and hot-pluggable disk drives further enhance the system's uptime.

Oracle's Netra portfolio continues to be the broadest portfolio of rack server and new innovative modular systems being deployed globally in carrier networks.

Investment Protection

Netra SPARC S7-2 supports Oracle Solaris 11. In addition, Oracle's Netra servers come with an extended product lifecycle, which lowers your total cost of ownership by reducing the number of platform qualifications.

Frequently Asked Questions

Q: What is Netra SPARC S7-2?

Netra SPARC S7-2 is a next-generation 2U Netra SPARC dual-socket carrier-grade rackmount server. The server is configured with one processor or two processors per server and offers up to eight 2.5-inch hot-swappable SAS hard disk drives (HDDs)/solid-state drives (SSDs), and up to four NVMe SSDs.

Q: What Does Netra SPARC S7-2 support DC power supplies?

A: Yes, we are introducing DC power supplies support on December 13th, 2016.

Q: What memory and I/O expansion features are supported on Netra SPARC S7-2?

A: Netra SPARC S7-2 includes 16 dual inline memory module (DIMM) slots, and it can be configured with 16 or 32 GB DDR4 DIMMs (64 GB will be offered after release). Four onboard 10GBase-T ports are included with the server, and six low-profile PCIe 3.0 slots are available for configuring a number of Ethernet, InfiniBand, and Fibre Channel option cards.

Q: What are Software in Silicon features?

A: Software in Silicon features place software functions directly into the processor chip, implemented as coprocessors or offload engines. Since specific functions are performed in hardware, a software application runs much faster. Also, because the cores of the processor are freed to perform other functions, overall operations are speeded up as well.

Q: What are some of the key features and capabilities of the SPARC M7 and SPARC S7 processors?

The **cryptographic acceleration** capability is the fastest in the industry. The **In-Memory Query Acceleration** is implemented through accelerators specifically designed into the chip's silicon to handle SQL primitives, such as those used by Oracle Database In-Memory in Oracle Database 12*c*. The accelerators operate on data at full memory speeds, taking advantage of the very high-memory bandwidth of the processor. This produces extreme acceleration of in-memory queries while processor cores are freed up to do other useful work. In addition, the ability of these accelerators to handle compressed data on the fly means that larger databases can be kept in memory, or that less server memory needs to be configured for a given database size.

The Data Analytics Accelerator (DAX) feature provides additional on-chip accelerator engines that offload both In-Memory Query Acceleration and the In-Line Decompression feature from the processor cores.

Q: What are the target markets for Netra SPARC S7-2?

A: It is designed for telecommunications, public sector, defense, industrial embedded/OEM, on-premises, and cloud infrastructure users.

Q: What operating systems are certified to run on Netra SPARC S7-2?

A: The Netra SPARC S7-2 runs Oracle Solaris 11 OS for secure and compliant application deployment through single-step patching and immutable zones.

Additionally, binary compatibility is guaranteed and supported for legacy applications that run under Oracle Solaris 10, 9, and 8

Q: Does Netra SPARC S7-2 support virtualization technology?

A: The server comes with built-in, no-cost virtualization technology with Oracle Solaris Zones.

Q: What system management options are available for Netra SPARC S7-2?

A: Netra SPARC S7-2 ships with comprehensive server management tools at no additional cost. Oracle Integrated Lights Out Manager (Oracle ILOM) utilizes industry-standard protocols to provide secure and comprehensive local and remote management, including power management and monitoring, fault detection, and notification. Oracle Premier Support customers have access to My Oracle Support and multiserver management tools in Oracle Enterprise Manager Ops Center, a system management tool which, in conjunction with Oracle Enterprise Manager, coordinates servers, storage, and networking for a complete cloud infrastructure as a service (IaaS).

Q: What is the automated service request support for Oracle Premier Support customers?

A: Automated service request is one of the features available in Oracle Enterprise Manager Ops Center, whereby potential issues are detected and reported to the Oracle support center without user intervention, ensuring maximum service levels and simplifying support.

Q: What is included with Oracle Premier Support for Systems?

A: For more information, please visit Oracle Premier Support.

Q: Can the server configuration options be customized?

A: Netra SPARC S7-2 can be customized to the specified configuration through the Oracle factory's assemble-to-order (ATO) process.

Q: What are the power requirements for Netra SPARC S7-2?

A: The online power calculator provides an estimate of the idle and operating power level of the server.

Q: Where can I obtain more information?

A: Contact your Oracle sales representative directly or call 1-800-Oracle1. Additional information about Oracle's Netra servers can be found on oracle.com.

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