

Oracle's SPARC Enterprise M8000/M9000 Frequently Asked Questions

Overview

With mainframe-class features, the high-end SPARC Enterprise® M8000 and M9000 servers are Oracle's highest performance and largest multiprocessor Enterprise servers delivering massive scalability, up to 64 processors and 256 cores (M9000) to handle the largest workloads. Built on advanced SPARC64 VII, SPARC64 VII+ quad-core processors and Oracle Solaris 10 Operating System as its foundation, the SPARC Enterprise M8000 and M9000 servers are optimized for enterprise-class applications such as ERP, CRM, BIDW, large databases, HPC/ scientific/ engineering applications, and large-scale OLTP that require mission-critical RAS features

Customer Benefits

Unmatched Long Term Investment Protection

Oracle's SPARC Enterprise M8000 and M9000 servers provide unmatched investment protection. These systems offer a long term SPARC Enterprise roadmap of binary compatibility plus the ability to mix and match different speeds/generations of SPARC64 processors, providing levels of investment protection not offered by IBM or HP.

Highest Levels of Reliability

Mainframe-class RAS features come standard in the SPARC Enterprise M8000 and M9000 servers, including automatic recovery with instruction retry, up to 4-TB (M9000) of system memory error- correcting code (ECC) protection with extended ECC support, guaranteed data-path integrity, total SRAM and register protection, configurable memory mirroring, and many more. What's more, major system components are redundant and hot-swappable, for increased availability and serviceability. Advanced RAS capabilities include:

- No single failure can prohibit reboot/recovery (M9000)
- Redundant interconnect
- Redundant service processor

- System memory has Extended ECC and can be mirrored

Extreme System Utilization

SPARC Enterprise servers are among the industry's best consolidation virtualization platforms. The SPARC Enterprise M8000 and M9000 servers support as many as 24 dynamic domains, enabling massive server consolidation and virtualization. Each physical domain can be further optimized via Oracle Solaris Containers, supporting thousands of software partitions.

Highly Configurable and Modular System Design and Enclosures

The SPARC Enterprise M8000 and M9000 servers modular design allows for maximum flexibility for data center environments and adding additional resources as needed. The key configurable components include:

- Specialized system cabinets offering multiple power source options and dual feed power (RAS)
- Modular CPU/memory units (CMUs) containing system processors and memory DIMMs
- Modular I/O Units (IOUs) that contain PCI-E cards and boot drives

Massive Scalability

Huge processor and memory expansion for unmatched scalability for the largest mission critical workloads. The SPARC Enterprise M8000/M9000 servers can grow to meet the toughest compute needs with up to 64 SPARC64 VII or VII+ processors (256 cores), up to 4-TB memory, and I/O expansion up to 288 PCI-E slots (with external I/O expansion unit)

Oracle Solaris: The World's most Advanced Operating System

Oracle Solaris assures investment protection with 100% binary compatibility for 15 years and counting. The SPARC Enterprise servers are pre-installed with Oracle Solaris 10 OS

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which delivers revolutionary features including Dynamic Tracing (DTrace), Oracle Solaris ZFS, crypto- graphic infrastructures, IP filter, and User and Process Rights Management.

Frequently Asked Questions

What customers should be considering the M-series servers?

The SPARC Enterprise M8000/M9000 servers are high-end system solutions for the largest SPARC/Solaris workloads that require best in class performance with mission critical reliability. No other family of systems offers the ability to select a system from one to 64 processors utilizing the same system architecture and operating system. Additionally the SPARC Enterprise M8000/M9000 servers are ideal consolidation platforms by utilizing the large workload capacity and multiple virtualization technologies.

What are the typical customer application needs where the M-series servers excel?

The SPARC Enterprise M8000/M9000 servers are optimized for enterprise-class applications that benefit from the high performance SMP multiprocessor architecture and large shared memory image:

- large scale BIDW and OLTP databases
- ERP, SCM, CRM deployments
- HPC compute-intensive scientific/engineering applications
- Oracle DW applications

What are the operating systems supported by the SPARC Enterprise M8000 and M9000 Servers?

SPARC Enterprise M8000/M9000 servers come pre-installed with Oracle Solaris 10. Oracle Solaris 10 is the operating system for today's demanding enterprise providing technologies such as DTrace, ZFS, Containers and Predictive Self-Healing capabilities.

What are the system management options available for the SPARC Enterprise M8000/M9000 servers?

System management options available are the eXtended System Control Facility (XSCF) included in SPARC Enterprise M8000/M9000 servers which is a dedicated processor that runs the XSCF Control Package (XCP) software to provide remote monitoring and management capabilities. The XSCF monitors server environmental conditions, provides advanced warning of potential error conditions, and executes proactive system maintenance procedures as necessary. Additionally, Oracle Enterprise Manager Ops Center 11g offers a centralized platform for complete physical and virtual machine management and visibility in heterogeneous system (including ILOM-based systems) environments.

What is the minimum and maximum processor/memory configuration available for the SPARC Enterprise M8000/M9000 servers:

The minimum configuration for both the SPARC Enterprise M8000/M9000 servers is four processors and 64GB of system memory (over two system boards). The maximum configuration on the SPARC Enterprise M8000 server is 16 processors and 1-TB of system memory. The maximum configuration on the SPARC Enterprise M9000 server is 32 processors and 2-TB system memory on the single cabinet system and 64 processors and 4-TB system memory on the dual cabinet system.

Can the SPARC Enterprise M8000/M9000 servers support different speed processor options?

Yes. There have been four processor versions and counting introduced for the SPARC Enterprise M8000/M9000 servers. All versions can be supported within the same server cabinet together and most even within the same operating domain.

What virtualization and system consolidation technologies are available on the SPARC Enterprise M8000/M9000 servers?

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The SPARC Enterprise M8000/M9000 servers have a vast array of virtualization technologies including system partitioning to hardware isolated domains, partitioning to a single cpu, and Oracle Solaris Containers. The different domain technologies and Oracle Solaris Containers provide a high degree of granularity to maximize system utilization to customer workload requirements.

What are examples of effective domain or virtualization use on the SPARC Enterprise M8000/M9000 servers?

- Server consolidation by configuring separate domains to host workloads that would otherwise require hosting and administration on multiple servers
- Safely host development, production and test environments on a single server
- Migrate application or software updates using Dynamic Domains
- Isolate and share special functions to specific domains or departmental project teams/business functions
- Tier data applications (ie. Data warehouse) within the same system and dynamically allocate resources to individual tiers as needed

What are the service and support options?

Oracle offers tailored mission critical services and support options. Comprehensive product installation, configuration, optimization and on-going monitoring and tailored support are available from Oracle Advanced Customer Services. Oracle service professionals deliver the technical product expertise, tools, best practices and project management knowledge to help ensure a smooth and highly optimized implementation. For more information contact your Oracle representative, email acsdirect_us@oracle.com or visit oracle.com/acs.

Where can I get more information?

Product overview, specifications, whitepapers, and datasheets:

<http://www.oracle.com/us/products/servers-storage/servers/sparc-enterprise/index.html>

Product Documentation/Manuals from the Oracle documentation website:

<http://docs.sun.com/app/docs/prod/servers.high#hic>



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