

## A Simplified Solution for Product Lifecycle Management —MSC SimManager on a SPARC T5-4 Server



### Overview

Oracle's SPARC T5-4 server running MSC SimManager and Oracle Database 12c consolidates the work of multiple x86 servers for an automotive design workload while delivering better overall performance.

### Challenge

Market demands and competitive pressures continue to drive product design and development teams to innovate rapidly, while keeping costs low. Engineering simulation solutions have taken the center stage in helping companies design and develop innovative products while reducing physical prototyping costs, and exploring a larger design space, resulting in more design possibilities. The most important aspect of simulation technologies is providing a reliable and fast data access platform, with scalability and longevity that is standards compliant, quick to implement, and cost effective to support.

### The Joint Oracle and MSC Software Solution

MSC Software's SimManager is a system for managing simulation processes, resources, and information across an engineering enterprise. SimManager relies on Oracle Database as the foundation for this simulation process and data management system. MSC developers and their Oracle counterparts have devised an integrated system that functions in a seamless manner and serves to simplify the installation, configuration, and maintenance of the simulation solution.

For this joint solution, a single SPARC T5-4 server running Oracle Solaris 11 was deployed to consolidate the MSC SimManager server, the Oracle Database 12c server, and the web application server onto a single platform. An automotive design workload was deployed to demonstrate how the SPARC T5-4 server can be used to consolidate the work of multiple x86 servers and deliver better overall performance while reducing complexity and achieving optimal product designs. The result is a very reliable, high-performance simulation solution in which the entire stack—SPARC T5-4 servers and storage, Oracle Solaris operating system, and Oracle Database—are designed to work together for maximum performance, reliability, and manageability. MSC Software, the worldwide leader in multidiscipline simulation, tested and tuned SimManager on the Oracle platform to prove the solution exceeded customer requirements.



SPARC is the #1 server platform for  
Oracle Database

## Highlights

- Performance: Oracle's SPARC T5-4 stack outperformed a multiple Linux/x86 server configuration in all 12 workload simulations considered. (See benchmark description below.)
- Scalability: Oracle's SPARC T5-4 server running Oracle Solaris 11 is optimized to accelerate Oracle database in large-scale simulation applications and enterprise-wide consolidation projects, delivering massive system throughput and storage capacity.
- Manageability: Utilizing the designed-in virtualization capabilities of Oracle Solaris Zones, a feature of Oracle Solaris, the SPARC T5-4 server is able to run MSC SimManager with Oracle Database 12c in a single system environment, seamlessly managed by Oracle Enterprise Manager Ops Center with a single console.
- Time to Production: Oracle Database 12c combined with MSC SimManager dramatically reduces the amount of work required to manually set up analysis of design scenarios, while helping to expedite decisions for optimal product design.
- Reduced Complexity: The SPARC T5-4 server running Oracle Solaris with built-in server, network, and storage virtualization technologies offers a more simplified solution versus commodity Linux/x86 server solutions..
- Support: Single-vendor sourcing of this solution with Oracle Premier Support for Systems provides a single point of contact should any problems arise with the system, hardware, or software. And, it ensures high system availability through problem prevention and rapid issue resolution.

## Benchmark Summary

An internal benchmark study was conducted as a performance evaluation of the hardware and software that form the infrastructure for computer-based product design.

The system included a SimManager server, a database server with storage, a web application server, and a cluster of compute nodes to run the simulations. The benchmark test was comprised of 12 simulations, each consisting of an assembly of a model, an analysis phase, and post-processing of the results, all components running concurrently. The performance comparisons in this study were based on the individual total elapsed times to complete each of the 12 simulations.

In every case, the Oracle solution outperformed the commodity Linux/x86 configuration.

## A Commitment to the Entire Platform

Oracle's SPARC servers are engineered to deliver record-breaking performance, simplified management, and high availability, and they include built-in virtualization and security at no additional cost. Oracle Solaris 11 takes advantage of Oracle's SPARC architecture—and is specifically optimized for Oracle Database to greatly increase performance and scalability of the solution.

The SPARC T5-4 server is ideal for engineering simulation applications like MSC SimManager, which require high performance and mission-critical availability to manage all simulation data and processes from project initiation through final report generation. Oracle's goal is to produce an integrated system that functions in a seamless and optimal way for customers.

## CONTACT US

For more information on Partners Support Oracle Systems, visit us at:

<http://www.oracle.com/technetwork/server-storage/solaris11/partners-1544236.html>.

**ORACLE®**