

Overview and Frequently Asked Questions

Oracle SPARC SuperCluster T4-4

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The Oracle SPARC SuperCluster T4-4 is a general purpose engineered system for running a wide range of enterprise applications with the highest levels of performance and mission critical reliability. The SPARC SuperCluster T4-4 utilizes high performance technologies from Oracle Exadata Storage Servers and Oracle Exalogic Elastic Cloud combined with new SPARC T4-4 servers, ZFS Storage Appliance, and InfiniBand technology, and Oracle Solaris 11. With the addition of the SPARC SuperCluster, Oracle continues to set the standard for engineered systems: maximizing customer value with leading performance in a complete and tested package.

Customer Benefits

Optimized for Mission Critical Enterprise Applications

The SPARC SuperCluster T4-4 server is a general engineered system that delivers high performance, availability, scalability and security across a wide range of enterprise applications, including Oracle and custom enterprise applications, database and middleware. Oracle has tested, tuned and optimized the integrated hardware and software configurations, resulting in a shorter deployment time and better utilization. Core system capabilities include:

- **Versatile Design:** SPARC T4-4 servers provide high performance on both single threaded and highly concurrent workloads
- **Extreme Performance:** Realize performance benefits of up to 10x for query, data compression and OLTP response time
- **High Availability:** High application up time through hardware redundancy, multiple I/O paths and advanced clustering technologies provide mission critical levels of availability

- **Integrated Virtualization:** Enhance security, increase utilization and improve reliability through Oracle VM Server for SPARC and Oracle Solaris Zones
- **Flexible, Feature Rich ZFS Storage Appliance:** Simplified storage that is 50% faster to diagnose than leading competitors
- **High Speed InfiniBand:** Up to 63% higher Transactions per Second for Oracle Real Applications Cluster (RAC)
- **Innovation Led Performance with FlashFire:** Delivering up to 10x better service times than the fastest hard drives
- **Data Security:** Built in, hardware acceleration of encryption to provide enhanced data security and privacy without the performance penalty
- **Tremendous Performance Scalability:** Connect up to 8 racks of SPARC SuperCluster and Exadata Storage Expansion Rack
- **Robust Management** made easy with Oracle Enterprise Manager Ops Center
- **Designed, Tested and Delivered by Oracle**

Frequently Asked Questions

What is the SPARC SuperCluster T4-4?

Oracle SPARC SuperCluster is a general purpose engineered system incorporating Oracle's SPARC servers, Oracle Exadata Storage Servers, ZFS Storage Appliances, InfiniBand technology, and Oracle Solaris to provide a versatile infrastructure solution for running a wide range of enterprise applications. The high degree of software and hardware optimization and integration results in better performance than with standalone systems, and the fully-redundant hardware when combined with Oracle Solaris Cluster offers higher levels of availability. The SPARC SuperCluster T4-4 is also shipped preassembled, with Oracle engineers completing the software installation before handing over the system. The end result is unprecedented savings in both the time and effort required to bring a system to production.

How can SPARC SuperCluster be deployed in my existing data center?

The Oracle SPARC SuperCluster T4-4 is an excellent choice for consolidation of multiple tiers as well as dynamically resizing databases and applications during different periods. The SPARC SuperCluster T4-4 will be installed as a complete and integrated hardware and software engineered system in its own rack. Connectivity to other systems in the customer's existing data center can be achieved over the supplied 10GbE Ethernet NICs included in each SPARC SuperCluster T4-4 node. It also allows for a gradual migration to Oracle engineered systems by supporting connectivity to an existing SAN infrastructure. Optional Fiber Channel connectivity is available to facilitate migration of data from legacy storage subsystems to the Exadata Storage Servers integrated with the SPARC SuperCluster T4-4.

What type of applications can run on the SPARC SuperCluster T4-4?

Any applications supported on Oracle Solaris 11 or Oracle Solaris 10 will run on SPARC SuperCluster T4-4; additional certification is not required unless an ISV routinely requires certification for all new platforms. In addition, applications running on Oracle Solaris 8 and Oracle Solaris 9 can be deployed on SPARC SuperCluster using Oracle Solaris Legacy Containers on Oracle Solaris 10. Access to the Exadata

Storage Servers included with SPARC SuperCluster requires a minimum of Oracle Database 11gR2 (11.2.0.3)."

What versions of Oracle Solaris and virtualization technologies are supported on the SPARC SuperCluster T4-4?

Using Oracle VM Server for SPARC multiple application stacks can be deployed on both Oracle Solaris 11 and Oracle Solaris 10 fully supported side by side. Additionally individual Oracle Solaris 11 and Oracle Solaris 10 instances can be virtualized with Oracle Solaris Zones for optimal utilization and application performance. Even applications running on Oracle Solaris 8 and Oracle Solaris 9 can be virtualized on Oracle Solaris Legacy Containers on Oracle Solaris 10 on SPARC SuperCluster.

Is the new solution the right choice for all Oracle Database deployments?

The Oracle SPARC SuperCluster T4-4 is well suited for many database deployments. Some examples include, consolidation of smaller database servers into a single cluster, as a database backend for read-intensive applications, or as a turnkey development and test platform for customers moving to Oracle Database 11g Release 2. For high-end database deployments requiring maximum scalability or extreme performance, Oracle's SPARC Enterprise M-series servers or Oracle Exadata may be the most appropriate solutions.

How does the Exadata Storage work with SPARC SuperCluster T4-4? What if I don't use Oracle Database 11gR2?

The full capabilities Oracle Exadata Storage Servers will be included with every SPARC SuperCluster T4-4. Exadata Storage Servers are specially optimized for Oracle Database 11g Release 2 operations and will provide outstanding performance for both transaction-based and decision support workloads. An optional external storage rack can be configured for additional performance and capacity. The minimum Oracle Database release required for Exadata and the Storage Servers is 11gR2 (specifically 11.2.0.3). Applications that are dependent on earlier releases of Oracle Database will need to be migrated to enjoy the benefits of the Exadata Storage Servers.

What are some of the other unique capabilities?

The SPARC SuperCluster T4-4 incorporates high-speed on-board encryption engines for data security, low latency QDR InfiniBand or 10 GbE networking for connection to application infrastructure, integrated server, network, and storage virtualization through Oracle Solaris Zones and the mission critical, Oracle Solaris operating system.

What benefits are there for running Oracle applications on SPARC SuperCluster T4-4?

The SPARC SuperCluster T4-4 provides a highly optimized and performing solution for mission critical applications that has been fully tested from software through to the hardware. SPARC SuperCluster provides the opportunity for significantly lower costs in deployment and operation of Oracle applications.

We run smaller databases, will this fit my needs?

The SPARC SuperCluster T4-4 currently includes the newest SPARC T4-4 servers that are suitable for consolidating smaller Oracle databases and comes with virtualization capabilities that allow you to run smaller applications in secure Oracle Solaris Zones or virtual machines supported by Oracle VM Server for SPARC.

Are Oracle Solaris Zones supported on the SPARC SuperCluster T4-4?

Yes, Oracle Solaris Zones are a great way to deploy applications on SPARC SuperCluster.

What are examples of application solutions that can benefit from the SPARC SuperCluster T4-4 high availability infrastructure?

The SPARC SuperCluster T4-4 is the best building block for Oracle Optimized Solutions for Oracle WebCenter Content and Oracle Optimized Solutions for PeopleSoft HCM. Its built in availability features address customer uptime requirements through hardware availability delivered via hot-swap capabilities and system partitioning options, through the Oracle Solaris operating system with predictive self-healing and fault management, and through the optional use of Oracle Solaris Cluster that provides even higher levels of availability by offering built-in, automated failover of virtual environments and applications across SuperCluster T4-4 servers as well as disaster recovery capabilities.

Why should I use Oracle Solaris Cluster on SPARC SuperCluster ?

The SPARC SuperCluster is a highly optimized and reliable platform. However, some applications require an additional level of availability which can only be obtained by tightly coupling multiple server units through an advanced OS based clustering solution. Oracle Solaris Cluster is the clustering solution designed for Oracle Solaris and optimized to leverage the SPARC SuperCluster redundancy and reliability features. It provides built-in support for a large portfolio of applications and databases, with a wide range of options for virtualized deployment based on Oracle VM for SPARC and Oracle Solaris Zone which are compatible with the SPARC SuperCluster configurations. With SPARC SuperCluster you get the perfect environment for deploying high availability clustering: pre-integrated hardware cluster and pre-tested platform: no errors in cabling, no issues in hardware compatibility; built-in redundancy for network, storage, server and connectivity; seamless integration and thorough testing with operating system and clustering software. Together SPARC SuperCluster and Oracle Solaris Cluster delivers the highest service level for mission critical applications across all tiers of the data center.

How can SPARC SuperCluster T4-4 be managed effectively?

Oracle Enterprise Manager 11g Ops Center is included to manage all aspects of hardware and virtualization configuration, maintenance and provisioning.

Where can I find more information about Oracle Solaris, Oracle Solaris Cluster and Oracle Enterprise Manager Ops Center?

Visit the following web pages:

<http://www.oracle.com/technetwork/server-storage/solaris/index.html>

<http://www.oracle.com/technetwork/server-storage/solaris-cluster/index.html>

<http://www.oracle.com/technetwork/oem/ops-center/index.html>



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