Frequently Asked Questions
Oracle SuperCluster

Overview

Oracle SuperCluster is a secure cloud enterprise infrastructure for Oracle Database and application consolidation. It is an integrated server, storage, networking, and software system providing maximum security for end-to-end database and application performance, minimal initial and ongoing support and maintenance effort, and minimal complexity at a low TCO. The system is ideal for Oracle Database and Oracle Applications customers who need to maximize return on their software investments, increase their IT agility, and improve application usability and overall IT productivity.

Customer Benefits

Oracle SuperCluster is ideal for database and application consolidation. It provides unique database, data warehouse, online transaction processing (OLTP) performance, real-time analytics, storage efficiency enhancements, unique middleware and application performance enhancements. The system is engineered and preintegrated for easy deployment, it minimizes overhead, and it is backed by the most aggressive support service-level agreements (SLAs) in the industry.

Core system features and benefits include the following:

- It is a **complete Oracle engineered system** that speeds time to deployment by up to 5x compared to build-it-yourself system architectures.

- As an **advanced security platform**, it provides end-to-end network and data encryption with near-zero impact on performance and efficiency, as well as automated protection from corruption, attacks, and human errors.

- **Out-of-the-box security controls** ensure a fast and easy path to compliance, and it provides secure multitenancy that complies with the Payment Card Industry Data Security Standard (PCI DSS).

- It is **designed for database and application consolidation** and enables the consolidation of up to hundreds of Oracle Database instances together with applications on a single system.

- **Automated provisioning of database and infrastructure as a service** accelerates database provisioning by 32x.

- **Zero-overhead virtualization for multitenancy** optimizes system utilization by avoiding virtualization overhead and improves consolidation ratios by up to 50 percent.

- It includes **integrated Oracle Exadata features.** For example, the Exadata Smart Scan feature increases database performance by offloading processing to intelligent storage servers, and the Exadata Smart Flash Cache feature improves response times and throughput. Exadata Hybrid Columnar Compression lowers database response times and throughput. Integrated flash enables extreme performance.

- **Superfast, low latency, secure InfiniBand networking** avoids network performance limitations.

- **Oracle Solaris support** protects and seamlessly migrates software applications running on Oracle Solaris.

- **Comprehensive applications-to-disk management provided by Oracle Enterprise Manager 13c** enables proactive monitoring, management, and troubleshooting of the entire hardware and virtualization environment.

- **Fibre Channel connectivity** protects your investment in legacy SAN storage and enables gradual migration to Oracle Database 11g Release 2 or later.

- **Oracle Optimized Solutions** dramatically reduce your time, effort, and risk when deploying Oracle and third-party applications.

- **Oracle Platinum Services** provide enhanced support for certified Oracle SuperCluster engineered systems with patching, 24/7 fault monitoring, and faster response times—all included at no extra cost with Oracle Premier Support.

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Frequently Asked Questions

Q: What is Oracle SuperCluster?

A: Oracle SuperCluster is a secure enterprise cloud infrastructure for Oracle Database and application consolidation. Oracle SuperCluster is an integrated server, storage, networking, and software system that provides maximum security for end-to-end database and application performance, minimal initial and ongoing support and maintenance effort, and minimal complexity at a low TCO. It is ideal for Oracle Database, Oracle application and 3rd party application customers who need to maximize return on their software investments, increase their IT agility, and improve application usability and overall IT productivity.

Oracle SuperCluster M8 offers customers the best price and performance in an engineered system for running Oracle Database and applications. With up to 16x 32-core SPARC M8 processors and 16 TB of memory, Oracle SuperCluster M8 customers can start small with elastic configurations and grow horizontally in-rack and scale vertically to meet data center workload demands now and in the future. Powered by the most advanced microprocessor featuring second-generation Software in Silicon technology, Oracle SuperCluster M8 delivers advanced security and extreme performance at a low cost for a secure cloud enterprise infrastructure solution.

Q: How can Oracle SuperCluster be deployed in my existing data center?

A: Oracle SuperCluster is an excellent choice for the consolidation of multiple database and application tiers. Oracle SuperCluster is installed as a complete and integrated hardware and software engineered system. Connectivity to other systems in an existing data center can be achieved over the 10 GbE NICs included in each Oracle SuperCluster node. Oracle SuperCluster also allows for a gradual migration to Oracle engineered systems by supporting connectivity to an existing SAN infrastructure. Optional Fibre Channel connectivity is available to facilitate migration of data between legacy storage subsystems and the Oracle Exadata Storage Servers that are integrated with Oracle SuperCluster.

Q: What type of applications can run on Oracle SuperCluster?

Oracle SuperCluster is best for running Oracle Database and applications on a single engineered system. Applications supported on Oracle Solaris 11 will run on Oracle SuperCluster.

In addition, applications running on Oracle Solaris 10 can be deployed on Oracle SuperCluster using Oracle Solaris 10 Branded Zones. Access to the Oracle Exadata Storage Servers included with Oracle SuperCluster requires a minimum of Oracle Database 11*g* Release 2 (11.2.0.4). Additional certification is not required unless an independent software vendor (ISV) routinely requires certification for all new platforms.

Q: Can I run in-memory applications on Oracle SuperCluster?

A: The large 16 TB memory footprint of Oracle SuperCluster M8 allows many applications to run entirely in memory. Running in-memory applications from Oracle on Oracle SuperCluster provides significant application performance benefits.

Q: What versions of Oracle Solaris and virtualization technologies are supported on Oracle SuperCluster?

A: Using Oracle VM Server for SPARC, multiple application stacks can be deployed on Oracle Solaris 11. Additionally, individual Oracle Solaris 11 and Oracle Solaris 10 instances can be virtualized with Oracle Solaris Zones for optimal utilization and application performance.

Q: Is Oracle SuperCluster optimized for Oracle Database?

A: Oracle SuperCluster preintegrates Oracle Exadata Storage Servers. For this reason, it is well suited for a wide range of high-performance database deployments ranging from scan-intensive data warehouse applications to highly concurrent OLTP applications. Because of its support for the latest version of Oracle Database, its built-in near-zero virtualization overhead, and its support of earlier versions of Oracle Database, Oracle SuperCluster is an ideal system for database consolidation. Additional Exadata Storage Expansion Racks from Oracle can be connected to Oracle SuperCluster using high-speed InfiniBand networking.

Q: Is Oracle SuperCluster the right choice for all Oracle Database deployments?

A: Oracle SuperCluster is an ideal system to consolidate both small and large numbers of databases, or to deploy complex, multiuser development, test, and deployment environments. Oracle SuperCluster is an excellent choice for all database workloads, ranging from scan-intensive data warehouse applications to real-time analytics to highly concurrent OLTP applications.

Q: How do Oracle Exadata Storage Servers work with Oracle SuperCluster?

A: The full capabilities of Oracle Exadata Storage Servers are included with every Oracle SuperCluster. Oracle Exadata Storage Servers are specially optimized for Oracle Database11*g* Release 2 and Oracle Database 12*c* operations and will provide outstanding performance for both transaction-based and decision-support workloads. Oracle SuperCluster uses a combination of scale-out storage, InfiniBand networking, database offload, and PCI flash to deliver extremely high performance rates from flash. Exadata Storage Expansion Racks can be added for additional performance and capacity.

Q: What if I don't use Oracle Database 11*g* Release 2 or higher?

A: The minimum Oracle Database release required for Oracle Exadata and the Oracle Exadata Storage Servers is Oracle Database 11*g* Release 2 (specifically, 11.2.0.4). Applications that are dependent on earlier releases of Oracle Database will need to be migrated to enjoy the benefits of Oracle Exadata Storage Servers.

Q: How can I use the Oracle ZFS Storage Appliance integrated in Oracle SuperCluster?

A: The primary function of Oracle ZFS Storage Appliance is to provide iSCSI LUNs for infrastructure storage—including domain boot disks and zone root file systems—and you are also able to use the storage appliance to host NFS-based shared storage for these and other such purposes.

Q: What are some of its other unique capabilities?

A: Oracle SuperCluster incorporates high-speed on-chip encryption engines for data security, low latency QDR InfiniBand or 10 GbE networking for connection to application infrastructure, integrated compute servers, the network, and storage virtualization through Oracle Solaris Zones and the mission- critical Oracle Solaris operating system.

Q: My organization runs smaller databases. Will this system fit my company's needs?

A: Oracle SuperCluster is suitable for consolidating smaller instances of Oracle Database, and it comes with virtualization capabilities that allow customers to run smaller applications in secure Oracle Solaris Zones or virtual machines supported by Oracle VM Server for SPARC.

Q: Are Oracle Solaris Zones supported on Oracle SuperCluster?

A: Yes, Oracle Solaris Zones are a great way to consolidate databases and applications on Oracle SuperCluster.

Q: What applications can benefit from the Oracle SuperCluster high availability infrastructure?

A: Oracle SuperCluster is ideal for Oracle, ISV, and custom applications. Its built-in availability features address customers' uptime requirements through hardware availability, through the Oracle Solaris operating system with Predictive Self-Healing and fault management, through Oracle Real Application Clusters (Oracle RAC) for database high availability, and through the optional use of Oracle Solaris Cluster, which provides even higher levels of application availability by offering disaster recovery capabilities and built-in, automated failover of virtual environments and applications across Oracle SuperCluster.

Q: Are Oracle Optimized Solutions available for Oracle SuperCluster?

A: Yes. Oracle Optimized Solutions dramatically reduce deployment time, effort, and risk while maximizing performance by using tested and documented best practices. Customers can benefit from cloud services "out of the box" using Oracle Optimized Solutions. Oracle Optimized Solutions provide templates that customers can leverage to reduce operating costs on aging assets while delivering a more flexible service environment to internal application users. Customers can quickly deploy enterprise cloud services with 24/7 availability, secure multitenancy, and a radically simplified management, patching, and support model. The result is an agile database environment that is better able to support business needs by enabling higher end-user productivity, increased utilization, and reduced IT costs. For more information, see the following resources:

[Oracle Optimized Solution for Oracle E-Business Suite](#)

[Oracle Optimized Solution for PeopleSoft](#)

[Oracle Optimized Solution for SAP](#)

[Oracle Optimized Solution for Backup and Recovery](#)

Q: What are the benefits of using Oracle Solaris Cluster on Oracle SuperCluster?

A: Oracle SuperCluster is a highly optimized and reliable system. However, some applications require an additional level of availability that can be obtained only 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 it is optimized to leverage Oracle SuperCluster's redundancy and reliability features. It provides built-in support for a large portfolio of applications, with a wide range of options for virtualized deployment based on Oracle VM Server for SPARC and Oracle Solaris Zones, which are compatible with Oracle SuperCluster configurations.

With Oracle SuperCluster, customers get the perfect environment for deploying high availability clustering: a preintegrated hardware cluster and a pretested system, which means no errors in cabling, no issues in hardware compatibility; built-in redundancy for network, storage, server, and connectivity; and seamless integration and thorough testing with operating system and clustering software. Together, Oracle SuperCluster and Oracle Solaris Cluster deliver the highest service level for mission-critical applications across all tiers of the data center.

Q: How do I get Oracle Platinum Services at no additional cost for Oracle SuperCluster?

A: Oracle Platinum Services provides enhanced support for high availability and performance with remote patching services performed by Oracle up to four times per year, 24/7 remote fault monitoring, and accelerated response times.

Customers who purchase a Platinum-certified Oracle SuperCluster with Oracle Premier Support coverage are automatically eligible for Oracle Platinum Services at no additional cost if they maintain a Platinum-certified configuration and accept connectivity to Oracle. Oracle will enable the services at the time of system installation so customers can begin taking advantage of the services right away. Determine if your Oracle SuperCluster is Platinum-certified and learn more about Oracle Platinum Services at oracle.com/goto/platinumservices.

Q: How can Oracle SuperCluster be managed effectively?

A: Oracle Enterprise Manager 13*c* provides a complete cloud lifecycle management solution including self-service provisioning and integrated chargeback and capacity planning.

Q: Where can I find more information about Oracle SuperCluster and other Oracle products and services?

Visit the following web pages:

oracle.com/supercluster

oracle.com/technetwork/server-storage/solaris/index.html

oracle.com/technetwork/server-storage/solaris-cluster/index.html

oracle.com/technetwork/oem/ops-center/index.html

oracle.com/goto/platinumservices

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