

Cisco Unified Computing System: Reliable, High-Performance, Scalable Platform for All Oracle Environments

Cisco Unified Computing System and Oracle Solutions

Proven Information Platform

Companies rely on real-time accurate information to increase business success. However, IT departments are inundated with multiple database solutions, applications, and hardware platforms, creating greater complexity in the data center. Standardizing on the Cisco Unified Computing System™ running Oracle solutions provides a scalable, reliable, and high-performance information platform crucial for business. This proven and radically simplified platform, together with Oracle solutions, quickly and consistently secures corporate data assets with less risk and at a lower total cost of ownership (TCO).

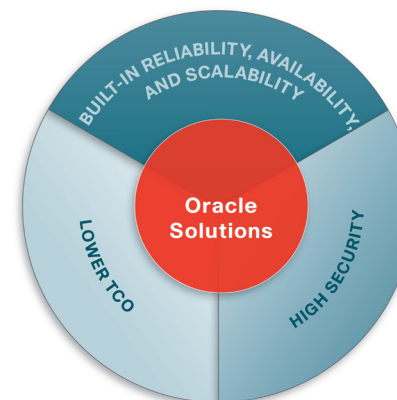
Built-In Reliability, Availability, and Serviceability

For companies to be truly competitive, information must be accessible at any time by multiple users. The loss of access to data due to software or hardware failures could impede important decisions and cause loss of revenue. This possibility makes the reliability and availability of the information platform critical. Additionally, when failures do occur, the ease of serviceability is vital to reducing outages and making data quickly available. Together, Oracle and Cisco solutions are easily configured to have no single point of failure, helping ensure continuous access to important corporate data resources by business-critical applications. The Cisco Unified Computing System is a wire-once, integrated, redundant system that includes optimized computing nodes, networking resources, and storage access. The Intel Xeon processors, powering high-performance computing, allow detection and handling of hardware anomalies so that databases and applications can be rehosted quickly on an alternative server, using Cisco service profiles, with little or no downtime. Alternatively, high availability is achieved with a combination of Oracle software and Cisco Unified Computing System hardware design and capabilities. Moreover, business continuity is simplified with Cisco service profiles quickly loaded onto the recovery-site platforms for immediate replication of the main site configurations.

A Single Cisco Unified Computing System Powers All Oracle Environments

IT departments can greatly reduce the complexity of implementing information delivery systems by standardizing on the high-performance, Cisco Unified Computing System for all Oracle environments. Whether running on bare metal or on a virtual server, Oracle solutions can be sized appropriately on a single, scalable Cisco Unified Computing System platform. The Cisco Unified Computing System gives Oracle database instances the power they require to perform at optimal levels. By consolidating multiple Oracle applications on virtual servers running Oracle VM, the Cisco Unified Computing System increases efficiency, cost savings, and resource utilization (Figure 1).

Figure 1: Cisco Unified Computing System: Proven, Reliable, High-Performance, Scalable Platform for Running All Oracle Solutions with Lower TCO



High-Performance Cisco Unified Computing System
Based on Intel Xeon Processors

High-Performance Platform

Information is power, and time is money. The faster information is made available, the faster decisions can be made. This combined solution provides businesses with high-performing Oracle databases and applications to keep information updated and available supporting a broad range of strategic, financial, and operational decisions. This performance has been demonstrated for Oracle workloads by running industry-standard benchmarks and benchmarks specific to Oracle on the Cisco Unified Computing System. Specifically, the Cisco Unified Computing System with Intel Turbo-Boost Technology adapts to workloads by boosting processing power automatically as needed. Intel Hyper-Threading Technology helps speed multiple complex queries in parallel. Cisco Extended Memory Technology supports the largest memory footprint (up to 384 GB) of any two-socket server, allowing more data to be cached in memory for faster response. The lossless, low-latency, high-bandwidth 10 Gigabit Ethernet unified fabric supports high I/O transactions on individual databases or database clusters, scaling to easily handle large workloads. This support enables excellent interconnect capabilities, providing high cache fusion performance between nodes in a cluster and reducing the risk of lost data.

Easily Scales to Support Business Needs

Every business has its cycles. Together, Oracle and Cisco provide a data center solution that easily scales, on demand, to handle these spikes efficiently. When the need for resources recedes, the solution quickly scales down so that resources can be turned off to conserve power or reallocated to other areas of the business. This dynamic resource allocation and just-in-time hardware provisioning is enabled with Oracle templates and Cisco



Unified Computing System Manager service profiles, which together allow simple and efficient management of resources in support of business needs. The radically simplified Cisco Unified Computing System architecture reduces complexity with its stateless computing and wire-once model. After wiring, every resource, including computing, storage access, and networking resources, can be provisioned once or many times. If more I/O resources are needed, Cisco Unified Computing System Virtual Interface Cards (VICs) provide just-in time provisioning of virtual network interface cards (NICs) and host bus adapters (HBAs) to meet application needs with increased performance and secure, segregated network traffic. When Oracle workloads require more resources, simply provision another Cisco Unified Computing System server to add to a virtualization or Oracle Real Application Clusters (RAC) implementation for scale-out simplicity. If more processors are required to get the job done, scale up from a two-socket Cisco Unified Computing System server to a four-socket server, all within the same chassis, quickly and efficiently.

Lower TCO When Deploying and Managing Oracle Workloads.

Internal IT departments are constantly challenged to remain competitive while budgets continue to be restricted. The unification of industry-standard computing based on Intel Xeon processors, industry-standard networking based on 10-Gbps unified Ethernet fabric, and industry-standard storage access using Fibre Channel over Ethernet (FCoE) significantly reduces the number of components and associated cables required by at least half. There are fewer components to purchase, configure, power, cool, and manage, thereby reducing both the capital and operational costs associated with implementing the Cisco Unified Computing System and Oracle solutions. The Cisco Unified Computing System has a single point of management that spans the entire system: computing, networking, and storage access resources. The role-based and policy-based management simplifies the deployment and ongoing management of the entire infrastructure, giving administrators more time to focus on strategic business initiatives.

The use of stateless resources enables dynamic provisioning of computing, networking, and storage access resources as needed, reducing the need for advance purchases of assets that remain unused until needed. The Cisco Unified Computing System can be provisioned or reprovisioned in minutes, increasing the utilization of current resources and reducing the need to expend more capital on computing and network resources. Additionally, Cisco Extended Memory Technology supports the use of lower-cost memory to reach desired capacity levels, reducing the need to spend a premium for high-capacity memory. The Cisco Unified Computing System also provides exceptional support for virtual environments, with Intel Virtualization Technology, easing virtualization implementations and enabling high consolidation ratios drastically reducing capital costs.

Highly Secure Data Platform

Business information systems give companies an advantage, providing easy access to highly competitive data. Securing this data is one of the high-profile tasks of IT departments. Cisco's

experience in implementing secure Oracle solutions is integrated into the Cisco Unified Computing System. Cisco Unified Computing System Manager provides consistent provisioning of network characteristics and security profiles on Cisco Unified Computing System VICs. When running in a virtual environment, these characteristics move with the virtual machine, helping ensure a secure environment regardless of the host that is running the application. Complete data segregation is achieved within a single Cisco Unified Computing System platform using Cisco Unified Computing System VICs, enhancing both virtual and multi-tenancy configurations.

Make the Move Today

Reduce risk and data center complexity with the proven combination of the Cisco Unified Computing System and Oracle solutions. This high-performance combination, with built-in reliability, availability, and serviceability, securely delivers the information a business needs, when it is needed, at a remarkably low total cost of ownership.

Why Cisco and Oracle?

Industry leaders Cisco and Oracle have a long-term relationship. Based initially on the creation of secure networking solutions for Oracle environments, this relationship now extends to the overall data center and beyond, including development of industry-specific solutions.

With Oracle Solution Centers around the world using the Cisco Unified Computing System, the companies have tested and documented best practices for configuring and running Oracle solutions running on the Cisco Unified Computing System, including Oracle Database, RAC, Partitioning, Applications, WebLogic Middleware, VM, and Enterprise Linux. Cisco offers unified computing support and warranty services as well as fixed-price, fixed-scope Cisco Unified Computing System Services. Additionally, Cisco and Oracle have a comprehensive partner ecosystem that includes technology, channel, and systems integration partners to provide complete, standards-based solutions.

Cisco is the worldwide leader in networking, transforming the way that people connect, communicate, and collaborate. Together, Cisco and Oracle provide differentiated, scalable, and secure end-to-end solutions while reducing deployment risks, complexity, and TCO. Cisco and Oracle are uniquely positioned as global leaders in technology, providing innovations for many shared customers. Oracle and Cisco locations around the world stand ready to help educate your staff and customers about how the Cisco Unified Computing System represents the next generation in computing evolution and why you should take a serious look at the benefits that the Cisco Unified Computing System can offer your business.

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