

Sun™ x86 AMD Opteron™ Systems for Database Solutions

Powerful, Efficient Data Management. Fewer IT Dollars.

AMD



IHV Overview

AMD: Providing microprocessors, flash memory devices, and silicon-based solutions for customers in the computer and communications industries worldwide, and featuring the AMD Opteron™ processor

Key Business Needs

- Reduced data center complexity
- Lowered Total Cost of Ownership (TCO)
- Increased computing performance, utilization, and throughput for maximum Return on Assets (ROA)
- Reliable data management for internal use and customer support
- Investment protection and room for growth
- Choice of solutions and operating systems

Business Results

- Simplified infrastructure
- Low capital investment and maximum resource utilization for lower TCO
- Horizontal scalability for investment protection
- Reliable, available computing resources for data management
- Higher performance and more efficient workload management
- Flexibility to run Solaris™, Linux, Windows, or choice of databases

Whether it's customer relationship management or data warehousing, data analysis or technical data processing, managing data is simpler than ever with affordable, flexible Sun™ x86 systems to streamline the process.

A Powerful System for Maximum Resource Utilization

IT managers know how challenging it can be to balance the need for robust capabilities with the need to control costs. Database management is a particular challenge, especially at the enterprise level, where data centers and database technologies become increasingly complex. As workloads such as customer relationship management, data warehousing, and data management have grown more complex along with the data center, administrators often find themselves struggling to coordinate components to manage the workload and maintain smooth operations. To implement a successful management strategy, enterprise database administrators need to deliver and manage data for business processing, decision support, and departmental customer support. Maximizing resource utilization is a key component of data center efficiency in environments where demands on resources constantly increase amid budget constraints.



Sun Fire™ V40z



Sun Fire V20z

Leverage Sun's expertise in building total solutions for comprehensive, reliable database management.

"We are committed to providing customers with choice and flexibility when it comes to Grid Computing. Our work with Sun around Oracle® Database 10g continues to focus on delivering solutions that maximize asset utilization and decrease overall IT costs — a value proposition that resonates with organizations of all sizes, in all industries."
— Prem Kumar, Vice President,
Server Technologies, Oracle Corporation

Solution Overview

Sun x86 systems deliver the world-class performance of the AMD Opteron processor. The record-setting AMD Opteron processor powers the affordable Sun x86 systems for maximum performance. Sun x86 systems performed 76-percent better than Intel Xeon systems, according to the Standard Performance Evaluation Corporation (SPEC) benchmark for integer computation. In addition, companies with pressing needs to manage input and output can take advantage of the system's incremental bandwidth when adding processors.

Sun x86 systems run industry-standard applications on Linux and Windows, as well as the secure, enterprise-class, high-performance Solaris 10 Operating System (OS). This flexibility means you can expand on existing resources within tight budget constraints. The flexible, scalable architecture means you can seamlessly scale up to thousands of processors and systems within the same infrastructure. In addition, Sun Storage Area Network products and support for high-speed interconnects such as Infiniband and Gigabit Ethernet to ease workload management, with Sun™ Services available for planning, design, and deployment of your infrastructure as well as subsequent maintenance and operational support.

Power on Demand to Grow with Your Needs

Sun x86 systems for database management can employ Sun's Grid Computing technology, which allows separate systems to be pooled and managed as a single computing resource. Grid technology scales horizontally, allowing you to add server nodes as needed to keep up with increased computing demands. Multiple servers act as one, distributing the workload to available computing power for maximum efficiency and resource utilization. Grid Computing brings the ability to expand incrementally, so your system can grow with your business. You can start small at low cost and build the data-management infrastructure as you grow — no need to start out with a large investment.

Grid technology provides a flexible, scalable architecture so the entire computing infrastructure is managed as a single, unified resource. The grid infrastructure uses a fast network to connect computers and storage devices, managing them with distributed management software. Grid Computing facilitates ERP, data warehousing, and technical data management by coordinating the sharing of distributed and dynamic resources, including hardware and software, data archives, and remote components.

Your Data Is Your Business: Be Safe with Oracle® on Sun x86 for Reliable Database Management

Oracle Corporation has fine-tuned database management in its state-of-the-art Oracle 10g Real Application Clusters (RAC). And Sun x86 systems deliver optimal performance of RAC's robust features. Sun x86 systems are ideal for supporting Oracle's grid pools, which use standard nodes and modular disk arrays to distribute the workload. Sun x86 systems enhance the high availability of the cluster and support Oracle 10g RAC's built-in failover feature by speeding the redistribution of the load. If any one node fails, the system re-directs the work and keeps running.

Sun's scalable systems facilitate Oracle 10g RAC's dynamic provisioning of nodes, storage, CPUs, and memory, seamlessly maintaining service levels and improving utilization and efficiency. The Oracle 10g RAC automates workload and resource management, and eases monitoring through a single system image. The speed and power of Sun x86 AMD Opteron processor-based systems optimize the 10g RAC's data integration, for fast disaster recovery. In addition, Sun x86 systems boost the performance of the 10g RAC cluster verification and diagnostic tools.

The Sun/Oracle combination translates into cost savings by maximizing both the efficiency of database management and the utilization of resources. Sun/Oracle helps you trim database management from an unwieldy process that relies on substantial capital investment in components that render separate islands of computation, to an integrated system of enterprise Grid Computing with

unified management. Oracle 11i Business Suite, SAP, Siebel, or Java™ Web Services can also be run as a grid for optimal synchronization of applications. Rather than maintain high costs and configure cumbersome, disparate components for peak use, managers can deliver capacity on demand through shared servers and add resources as needed.

Sun Has the Solutions for Your Data Management Needs

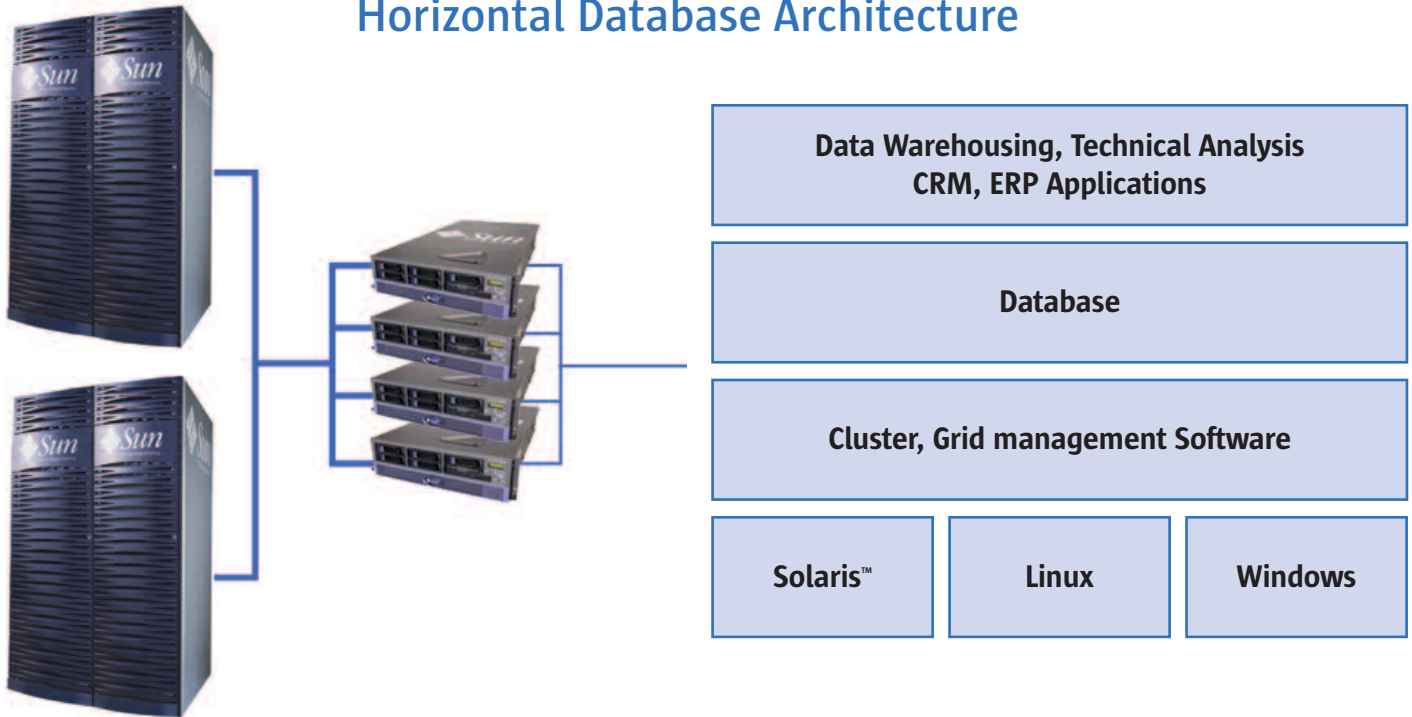
As technologies evolve, many companies are considering x86-based, industry-standard systems for their enterprise computing and database management needs. What sets Sun apart is expertise in building entire systems, and the commitment to building them to meet the specific needs of the customer. In addition to the base hardware, OS, and database, Sun has many ISV partners and service deployment partners who can put together the entire solu-

tion to solve data warehousing, CRM, ERP, technical data management problems.

Sun begins with a thorough analysis of the data center environment and specific customer needs to configure a total, perfect-fit system that can grow with the customer's business. Sun combines hardware, software, and services to create a unified, manageable system for database management.

Sun's experience building reference architectures uniquely qualifies them to assess and meet customer-computing needs. Sun Reference Architectures define recommended sets of applications, storage, and server configurations for functionality tailored to your business needs. The Grid Reference Architecture from Sun and Oracle, for example, provides a robust, scalable ERP/database platform running on Linux geared to reduce cost and improve service levels.

Horizontal Database Architecture



Reliable data storage on Sun StorEdge™ systems

Redundant, high-performance database running on Sun Fire V40z servers with InfiniBand

Sun can build a customized architecture that harnesses the power of the AMD Opteron processor and Sun x86 systems for a perfect-fit solution. System options also include running Solaris 10 OS for x86 for optimal 64-bit performance, or taking advantage of Sun's agreement with Microsoft promoting interoperability between Windows and Solaris. Sun systems can ease the transition from 32-bit to 64-bit applications, and the AMD Opteron processor can deliver simultaneous 32-bit and 64-bit computing.

Client Solutions

Sun understands that each customer faces unique challenges, needs, and demands. Sun's Client Solutions Group is an organization dedicated to working with you and gaining an understanding of your specific business and technical needs. Sun aligns the right products and services to those requirements and delivers an optimal, perfect-fit solution.

Sun Makes IT Simple

Not all database management systems boast the same results. With Sun x86 AMD Opteron processor-based systems, the possibilities are endless for a custom-made, high-performance system that can increase efficiency and ROI, and translate to cost savings, no matter what your business needs.

Learn more about Sun's x86 systems featuring the AMD Opteron processor. Visit sun.com/amd, or talk to your local Sun representative about scheduling a half-day session to learn more.

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