



Leading solutions for enterprise computing

Datacenter innovation from industry
leaders AMD, HP, Microsoft, and Oracle



CLOSE COOPERATION FOR BETTER SOLUTIONS

To reach the highest levels of success, companies today must meet the challenges of constantly evolving technology and rapid-fire change that impact the datacenter, while maximizing productivity and profit. It's a daunting task. Fortunately, the chance of success for any business grows exponentially when global technology leaders join forces to deliver world-class solutions for the datacenter.



Industry leaders AMD, HP, Microsoft, and Oracle have the engineering expertise and trusted business relationships to provide proven, customer-centric solutions that deliver the high performance, reliability, and scalability essential in today's computing environment. Providing optimal solutions based on AMD's native multi-core technology, the combination of Quad-Core AMD Opteron™ processor-based HP ProLiant servers running Oracle Database and Real Application Clusters (RAC) on Microsoft® Windows Server® 2003 x64 Edition can turn your datacenter investments into a powerful competitive advantage.

Microsoft®

ORACLE®



AMD, HP, Microsoft, and Oracle deliver innovations that help drive datacenters to new levels of efficiency. With this powerful combination of technologies, your organization can realize benefits such as:

- **Optimal virtualization** — Hardware-assisted AMD Virtualization™ (AMD-V™) technology with Rapid Virtualization Indexing helps accelerate the performance of many virtualized applications, enabling more virtual machines to run per server. AMD-V can also increase the responsiveness of virtualized applications through hardware-assisted memory management for faster switching between virtual machines.
- **Enhanced performance-per-watt** — With energy-efficient DDR2 memory, Enhanced AMD PowerNow!™ technology, Dual Dynamic Power Management™ and AMD CoolCore™ technology, Quad-Core AMD Opteron™ processors advance AMD's performance-per-watt leadership, helping businesses control power and cooling costs while enabling exceptional performance.

→ **Long-term investment protection** — AMD's common-core strategy and same socket technology enable a seamless upgrade from dual- to quad-core processors and beyond to help you minimize the cost of transitions and maximize past investments in hardware, software, and personnel. AMD also offers a stable, long-term roadmap.

→ **Outstanding performance** — The Quad-Core AMD Opteron processor is loaded with features designed to improve performance on multi-threaded applications. Native quad-core, AMD Memory Optimizer Technology and AMD Balanced Smart cache all help multi-threaded applications from Microsoft and Oracle run at peak efficiency and throughput.

→ **Proven, tested solutions** — Using Quad-Core AMD Opteron processors and running Microsoft® Windows Server® 2003 x64 Editions, HP reference architectures for Oracle Database and Real Application Clusters are validated configurations designed to deliver high availability and ease of manageability while eliminating the guess-work associated with determining the best solution for your datacenter infrastructure.

DESIGNED FOR LONGEVITY AND ENERGY EFFICIENCY

Quad-Core AMD Opteron processors with Direct Connect Architecture offer a stable, long-term solution based on trusted consistent technology — the AMD64 core architecture. This powerful, highly efficient architecture lets IT departments deploy a single industry-standard architecture across an entire organization. So you can grow, adapt, and respond more effectively in a dynamic business environment.

With energy-efficient DDR2 memory, AMD Virtualization™, and native multi-core processing, Quad-Core AMD Opteron processor-based HP ProLiant servers provide the high performance, energy efficiency, and open versatility that translate into simpler IT systems and consolidated resources — keys to reducing your infrastructure costs and conserving your IT budget.

POWERFUL YET AFFORDABLE BUSINESS SOLUTIONS

At the foundation of critical datacenter resources is proven technology from the industry alliance of AMD and HP. For years, AMD and HP have worked closely together to design technology that meets the demand for powerful yet affordable enterprise computing, today and well into the future.

HP, building some of the most-trusted, best-selling servers in the world, is a leading provider of servers based on AMD Opteron processors. That's because AMD64 technology with AMD's revolutionary Direct Connect Architecture delivers the innovation and value advantages to simplify business. HP has leveraged that technology, deploying the AMD Opteron processors in its new C-class BladeSystem and its current ProLiant servers for powerful multi-processor performance and energy efficiency in the datacenter.

With a broad portfolio, HP delivers superior choice that can reliably support any need, from basic infrastructure to the most demanding business applications. So you can find the right product at the right price to fit your precise business requirements and put complete control into your hands. From the growing small business and remote office to the largest datacenter, businesses of all sizes rely on ProLiant servers and the HP BladeSystem to deliver the consistent manageability, high performance, and superb reliability that is expected from the ProLiant brand.

HIGHLY AVAILABLE DATABASES MADE TO SCALE-OUT

Optimized for AMD-powered HP ProLiant servers running on Microsoft Windows Server 2003 x64 Editions, Oracle Database and Real Application Clusters support the most demanding transaction processing and business intelligence applications. Clustering database applications on a grid of Quad-Core AMD Opteron processor-powered HP servers provides you with exceptional performance and high availability on a Windows® platform that can incrementally scale-out at an affordable cost.

Oracle Real Application Clusters (RAC) is an option to the award-winning Oracle Database Enterprise Edition. Oracle RAC supports the deployment of a single database across a cluster of servers — providing outstanding fault tolerance and scalability with no application changes needed.

With Oracle Database optimized for AMD, HP, and Microsoft, your organization can:

- Achieve high availability and on-demand scalability with Oracle Real Application Clusters
- Protect sensitive data and help meet compliance requirements with Oracle's advanced security options, with further enhanced capabilities available in the Oracle Database 11g release.
- Take the risk of change in your datacenter with Oracle Real Application Testing

TECHNOLOGY IN THE RIGHT COMBINATION

As business computing transitions beyond 32-bit technology, AMD, HP, and Microsoft are working together to transition the server world to x86 64-bit computing. Microsoft® Windows® x64 Editions, including Windows Server 2003, bring industry-standard platforms combining the power of 64-bit processing with a large application base to the mainstream. With Windows Server® 2003, the result is high-performance, highly reliable, security-enhanced computing that can help users to cost-effectively do more — faster and safer than ever before.

Realize all the benefits of Windows Server 2003 x64 Editions including:

- **Scalability** — Support for vastly greater physical memory and virtual memory space enables new scenarios not possible before
- **Reliability** — Windows x64 Editions benefit from the same, solid source code as x86 versions of Windows
- **Security** — New features in x64 processors enable protection from malicious code
- **Compatibility** — The unprecedented compatibility of x64 processors with existing 32-bit applications will enable a controlled transition to 64-bit computing

IT'S A SMART BUSINESS INVESTMENT

In today's demanding, increasingly complex computing world, reliable and scalable database performance can often mean the difference between success and falling short of business goals. It's why delivering proven, leadership technology from world-class technology partners to the datacenter can be a business's smartest investment.

Quad-Core AMD Opteron processor-powered HP ProLiant and BladeSystem servers running Oracle Database and Real Application Clusters (RAC) on Microsoft Windows Server 2003 x64 Editions unleashes a powerful combination of leading technology for outstanding performance in the datacenter.

About AMD

Advanced Micro Devices (NYSE: AMD) is a leading global provider of innovative processing solutions in the computing, graphics, and consumer electronics markets. AMD is dedicated to driving open innovation, choice, and industry growth by delivering superior customer-centric solutions that empower consumers and businesses worldwide. For more information, visit www.amd.com

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