

# Build a competitive multi-core computing foundation with AMD and Novell.

Beyond performance, your business demands long-term investment protection, exceptional energy efficiency, and advanced virtualization technology. AMD and Novell deliver.



**Novell.**

## Build a stable, long-term foundation

You're ready to invest in IT. Unfortunately, technology and business needs change faster than most IT budgets. So businesses like yours are looking for stable, long-term solutions that meet critical enterprise demands for exceptional energy efficiency, advanced virtualization technology, and unmatched computing performance. That's why they turn to solutions developed and marketed by AMD and Novell®.

AMD and Novell worked closely together to offer the best-engineered Linux foundation for secure enterprise computing. And because of this close collaboration, platforms based on AMD technology and Novell software give you a robust, scalable, and flexible infrastructure that optimizes the most advanced features of SUSE® Linux Enterprise Server and Quad-Core AMD Opteron™ processors.

## Innovating together, again

AMD and Novell share a history of collaborating to bring breakthrough technology to your enterprise. SUSE Linux Enterprise is consistently the first Linux distribution to enable advanced features in AMD processors. It was the first 64-bit

server operating system to support: AMD Opteron processors, optimization for dual-core processing, AMD PowerNow!™ technology, and AMD Virtualization™ (AMD-V™) technology.

With the launch of Quad-Core AMD Opteron processors, Novell is again leading the pack. SUSE Linux Enterprise Server 10 Service Pack 1 (SP1) is the first Linux distribution to support the latest key innovations from AMD, including:

- Enhanced AMD PowerNow! with Independent Dynamic Core technology allows processors and cores to operate at various voltages and frequencies, depending on usage and workload for better power management in the datacenter.
- AMD Rapid Virtualization Indexing can help increase the performance of virtualized applications through hardware-assisted memory management for faster switching between virtual machines.

Additionally, AMD processors have achieved YES Certification from Novell, further validating both companies' commitments to interoperability and customer-centric innovation.

## World's largest chipset provider slashes production time with AMD Opteron™ and Novell

QUALCOMM CDMA Technologies (QCT), the largest provider of 3G chipset and software technology in the world, is always looking for ways to build complete chipset solutions and bring them to market faster. That's why the company turned to AMD Opteron processors with existing 32-bit versions of the applications running on a 64-bit Linux OS. The overall improvements offered by the AMD Opteron processor gives QCT the ability to run more simulations in the same period, than with its previous systems.

According to Mike Broxterman, IT staff manager at QCT, "in head-to-head comparisons, we've seen 2X to 2.5X performance gains compared to competing systems. When you're talking about a single simulation taking as long as 17 hours, cutting that time in half is a very significant improvement."

“AMD must have put a lot of energy into optimizing the power usage for their products and it appears that AMD’s customers will now realize significant energy savings.”

—Neal Nelson, president, Neal Nelson & Associates, an independent computer testing firm

### Features that pack even more punch

When combined, Quad-Core AMD Opteron processors and SUSE Linux Enterprise Server 10 SP 1 help IT departments fully realize benefits such as:

- **Investment protection** — AMD’s common core strategy and same socket infrastructure enable seamless upgrades from dual- to quad-core processors and beyond, helping you minimize transition costs and maximize past investments in hardware, software, and personnel. AMD also offers a stable, long-term roadmap.
- **Enhanced power efficiency** — With features like Enhanced AMD PowerNow!, Independent Dynamic Core Technology, and AMD CoolCore™ technology, AMD advances its performance-per-watt leadership, helping businesses control power and cooling costs while enabling exceptional performance.
- **Optimal virtualization** — Hardware-assisted AMD-V technology provides a balanced approach to improve virtualization performance, enabling more virtual machines to run per server. AMD Rapid Virtualization Indexing can increase the performance of virtualized applications through hardware-assisted memory management for faster switching between virtual machines.
- **Unmatched performance** — Enhanced processing cores are designed to execute more instructions per clock cycle; AMD Wide Floating Point Accelerator allows each processor to simultaneously execute up to four times the floating-point computations of previous AMD Opteron processors; AMD Balanced Smart Cache with dedicated L1 and L2 caches and a new, large shared L3 cache improves performance of applications that work with large datasets; Dual Dynamic Power Management™ technology helps improve memory performance while allowing for decreased system power consumption.

### The optimum choice for AMD quad-core

When you use SUSE Linux Enterprise Server 10 SP1, you can take full advantage of Quad-Core AMD Opteron processors. That’s because AMD and Novell worked together to optimize the processor’s most advanced features for SUSE Linux Enterprise Server 10, including:

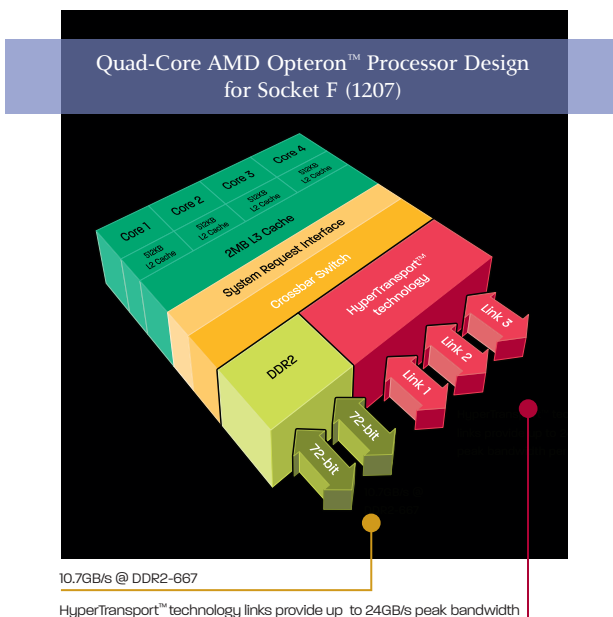
- **CPU scheduler** — Determines which processes run on each processor
- **Reliability, availability, and scalability (RAS) features** — Help reduce hardware failure that could corrupt data or bring down servers

- **48-bit physical addressing** — Enables servers to have more physical memory

### A comprehensive Linux solution

SUSE Linux Enterprise Server 10 SP1 features significant enhancements in virtualization, high-performance computing, security, interoperability, and systems management. It delivers important enhancements, such as:

- **Enhanced security features** — AppArmor 2.0 application security framework is integrated into the SUSE Linux Enterprise 10 Server and SUSE Linux Enterprise Desktop and now includes support for Apache Tomcat
- **Availability Storage Infrastructure** — Workloads such as SAP running on Oracle, DB2, and MaxDB garner improved support because of enhancements to key components of the infrastructure, including the cluster file system, volume manager, and cluster resource manager
- **Paravirtualized drivers** — A set of paravirtualized network, bus, and block device drivers enable unmodified, legacy SUSE Linux Enterprise guest operating systems to run with near native performance in virtual environments (Paravirtualized drivers for additional unmodified Windows and Linux guest operating systems are available through the SUSE Linux Enterprise Virtual Machine Driver Pack)



For more information, visit [www.amd.com/novell](http://www.amd.com/novell) or [www.novell.com/amd](http://www.novell.com/amd)

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