The AMD/SAP relationship is driven by a mutual desire to provide customers straightforward technology solutions for complex business problems. Through our joint efforts, SAP customers can benefit from AMD’s leading-edge multi-core, 64-bit x86-based processor technology now and into the future, to assure that AMD-based servers and blades offer a viable platform for SAP deployment in data centers worldwide. AMD works in cooperation with its hardware partners to focus resources on the SAP development labs in Walldorf and elsewhere around the world to ensure that SAP technical teams have access to AMD processor technology and technical resources. This knowledge, combined with AMD support helps the development community leverage AMD technology into SAP’s existing and future products. SAP is a critical technology partner in AMD’s software ecosystem, and the global support for AMD-based systems by SAP illustrates that we have a relationship based upon technical collaboration with a focus on customer choice. As our working relationship grows, AMD plans to continue working with SAP and its customers to highlight our joint success in providing scalable, reliable solutions to complex business problems on a global scale.

Linux Alliance Overview

AMD and the SAP LinuxLab Walldorf have a working history that pre-dates the April 2003 launch of the AMD Opteron™ processor. Working with our major Linux partners Red Hat and Novell, AMD and SAP work to ensure that kernel-specific enhancements for AMD Opteron™ processors can be supported by the SAP applications optimized for Linux. AMD continues to support effort to drive enterprise-class functionality into Linux through its efforts with SAP Linux engineering teams, with Linux engineers at commercial distributions, and with the Linux kernel community worldwide. This optimization work remains a key driver in our development efforts as we continue to jointly provide SAP customers with best of breed enterprise-class business solutions.

Key Customer Benefits

Industry standard servers powered by AMD Opteron™-based processors offer you a cost-effective, yet powerful computing platform for your SAP landscapes running on Linux®. Customers can choose from a broad range of SAP-certified servers from HP, IBM, Fujitsu-Siemens Computers, egenera, and Sun as they make their SAP on Linux landscape implementation decisions. Built from the ground up for 64-bit and multi-core
capabilities, AMD Opteron™ processor-based technology makes it possible to improve responsiveness to changing business needs:

- **Direct Connect Architecture** can increase the performance and scalability of SAP applications
  - Directly connect the CPUs, memory and I/O to optimize system performance and balance throughput
  - Provides separate high bandwidth paths for memory, for I/O and for CPU to CPU traffic
  - Hypertransport™ technology and integrated memory controller to improve memory and I/O access
  - Customer benefits of direct connect architecture can include:
    - Lower end user application response times
    - Outstanding application performance due to optimized memory throughput
    - Reduced batch processing times

- **Dual-Core AMD Opteron™ processors** provides enhanced SAP application performance while offering low system total cost of ownership (TCO)
  - Dual-core technology places two powerful computing cores on a single processor
  - The Dual-Core AMD Opteron™ processor delivers high performance, when compared to single-core processors, to allow for the purchase of fewer servers
  - Customer benefits of dual-core technology include:
    - Run applications simultaneously on the same server
    - Efficiently run application threads simultaneously across multiple cores
    - Support additional users and applications without having to increase server investment

- **AMD64 technology** natively supports 32-bit and 64-bit SAP applications at outstanding price/performance. With AMD64, you can:
  - Keep costs low by running 32-bit applications while you run new 64-bit SAP applications on the same system
  - Save time and money by migrating from 32-bit to native 64-bit environments at your own pace
  - Avoid the need to replace your server hardware when migrating to 64-bit versions of SAP

- **Performance per Watt** design to reduce power consumption and heat generation that can help optimize data center resources
  - AMD has taken a leadership role in developing power efficient processors by introducing dual-core processors to help increase server performance and to decrease overall server power consumption.
  - AMD PowerNow! technology with Optimized Power Management (OPM) helps lower energy consumption during idle times
    - Reduce power at idle by up to 75%
- Optimize platform power consumption to help keep servers cool and quiet
- Provide performance on demand by dynamically adjusting performance based on CPU utilization
  - AMD processors offer low overall power consumption.

Capabilities and Industry Expertise

We develop technology specifically to address customer needs. That's why AMD is known as an industry leader in developing crucial enterprise technologies like power management, and 64-bit and multi-core computing that are driving data centers to new levels of efficiency while helping to meet the demands of today's complex business environment.

AMD64 technology

AMD64 is the world's first 64-bit, fully x86-compatible computing platform designed to handle the growing data and compute demands of our global, digital economy. In AMD64, we offer a world-class processor family to run today's software without compromising performance, and can also provide a 64-bit insurance policy for the time when 32-bit solutions are a distant memory. The AMD64 product family includes:

- AMD Opteron™ processor — servers and workstations
- AMD Athlon™ 64 processor — clients and notebooks
- AMD Turion™ 64 mobile technology — notebooks

Multi-core technology

We designed AMD64 from the ground up for multiple core computing, and in 2005 we delivered on this promise by introducing the world's first x86-based multi-core processors.

The Dual-Core AMD Opteron processor is setting impressive performance standards. Available in systems from leading enterprise vendors such as HP, Fujitsu-Siemens Computers, IBM, and Sun, the Dual-Core AMD Opteron processor is among the world's highest performing x86 servers and workstations, and with the same CPU power requirements as our single-core processors.

The AMD Athlon 64 X2 Dual-Core processor shatters the hourglass on desktops and clients, delivering breakthrough performance for users who need to run multiple applications to be productive as well as for users who are running computationally intensive tasks.
Emerging technology

AMD is focused on meeting core enterprise needs of better consolidation and management of data center resources by driving technology innovations in such emerging areas as Multi-core processors, Virtualization, Power Management, and Security.

Our goal is to develop technologies to meet enterprise challenges of today, tomorrow, and beyond.

SAP Testimonials or other (customer)

Dr. Karsten Lienau, I/T Director arvato systems
“We chose to migrate our SAP landscape from Unix to Linux to help us achieve a significant cost reduction within our operations and improve the performance, availability, and stability of the environment that our customers depend on us to provide. AMD Opteron-powered servers provide us with significant performance advantages when compared to competing x86-based servers, and have allowed us to improve the quality of our service while at the same time lowering the overall TCO associated with our SAP landscape.”

Alliance Focus Areas

Technology

- Linux kernel support for AMD Opteron™ running SAP applications tuned for Linux
- Enhanced performance optimizations in response to specific customer/end-user findings & requests
- Joint-identification of SAP feedback to AMD design process

Business

- Public Sector and Administration
- Manufacturing
- Small and Medium Enterprise
- Finance, Banking, and Insurance

AMD / SAP on Linux References

arvato systems, a division of Bertelsmann AG
Others in development
About AMD

Founded in 1969 and based in Sunnyvale, California, AMD designs and produces innovative microprocessors and low-power processor solutions for the computer, communications, and consumer electronics industries.

Since the beginning, our focus has gone beyond integrated circuits and transistors. AMD is committed to helping our customers—and their customers—use silicon to add value and help differentiate their offerings. After all, our customers' success is our success. That’s why AMD products are always developed with customer needs in mind and not for the sake of innovation alone. We provide real solutions for real customer problems that exist in the real world today. It’s a philosophy we refer to as “customer-centric innovation,” and it represents the guiding principle behind everything we do.

At AMD, we never rest on our laurels. Our determination and passion for what we do compels us to keep looking for the next opportunity to succeed. With corporate locations in Sunnyvale, California and Austin, Texas; and global operations and manufacturing facilities in the United States, Europe, Japan, and Asia, we’re one of the world’s leading integrated circuit manufacturers. We’re also among the market leaders in each of our core businesses: microprocessors, flash memory devices, and low-power processor solutions for the computer, communications, and consumer electronics industries.

Because our customers’ needs are ever-changing, AMD understands the value of looking towards—and keeping pace with—the future. To help ensure we meet our customers’ needs today and tomorrow, AMD invests in state-of-the-art technology research many years in advance of first commercial use. In fact, we’re well underway in developing high-performance technologies targeted at the second half of the decade.