ORACLE AND SAP
ENTERPRISE SOLUTIONS

Oracle Infrastructure: The Right Foundation for SAP Deployments

When companies need to better manage the business with SAP, they turn to Oracle. Deploying Oracle's complete infrastructure stack helps enterprises to accelerate SAP system performance, simplify SAP landscape management, and ensure business continuity—all at a compelling price point.

Highlights

- Accelerate performance with hardware and software that is engineered to work together

- Virtualize SAP landscapes at no extra cost

- Grow the SAP environment without forklift upgrades using extremely scalable Oracle servers and storage

- Perform critical maintenance operations without disrupting SAP applications

- Optimize SAP landscapes with the technology innovations in Oracle's integrated stack

- Save with built-in virtualization technologies that are fully supported by SAP

In today's hyper-competitive economy, companies around the world depend on feature-rich SAP applications to run the business and make informed decisions. As these applications grow in sophistication, IT infrastructure must provide sufficient compute and I/O resources for optimal performance. With scalability, flexibility, agility, resilience, and performance so critical for demanding SAP workloads, IT organizations are looking to optimize the underlying infrastructure and leverage technology advancements to support business priorities.

Refresh SAP Landscapes with Oracle's Integrated Stack

Oracle's integrated infrastructure stack—servers, storage, operating system, database, virtualization, and infrastructure management software—provides the right foundation for SAP landscapes. Optimized by Oracle, the stack is designed, engineered, and tested to ensure all components work together. Taking advantage of technology innovations at every layer, Oracle's technology stack provides high performance, reliability, availability, and scalability, resulting in infrastructure that is fast to deploy and less prone to configuration issues.

Oracle's SPARC Servers

Offering a comprehensive line of powerful, cost-effective systems that scale from one to hundreds of processors, thousands of cores, and terabytes of main memory, Oracle's SPARC servers provide the scalability, flexibility, and performance IT organizations need to handle a broad spectrum of SAP workloads (Figure 1). Within the product portfolio, Oracle's SPARC Enterprise M-Series and SPARC T-Series servers deliver high performance, best-in-class availability and unmatched scalability at a competitive price point.

Designed with compute- and memory-intensive SAP applications in mind, SPARC T4 servers offer up to four SPARC T4 processors, 32 cores, and 256 threads in a compact footprint. With up to 1 TB of

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memory and a new processor core design, these servers deliver a 5x improvement in single-thread performance over the previous generation processor. This performance boost enables SAP systems to process more workloads at less cost.

As companies consolidate more infrastructure and move to the cloud, system administrators can utilize cloud management, systems management, and built-in virtualization features that are optimized for SPARC T4 servers. With the ability to support up to 128 virtual machines and thousands of Oracle Solaris Zones on a single server, SPARC T4 servers provide a solid foundation for server consolidation, virtualization, and cloud deployments.

Virtualize SAP Landscapes

As SAP landscapes grow, many systems are reaching their upper capacity limits or end of service life, and can no longer scale and meet service-level agreements (SLAs) for SAP-related services. Oracle's built-in virtualization technologies provide powerful, innovative tools to help IT staff react quickly to changing user demand and manage SAP environments that constantly require additional capacity. Indeed, these technologies (domains, zones, and resource management) are fully supported by SAP and can be used with SAP applications.

Replacing older systems with SPARC T4 servers enables IT organizations to leverage important virtualization advancements that are built into the server hardware and Oracle Solaris. The result is high-density SAP landscapes running on fewer systems—with greater flexibility and utilization rates—that can perform more SAP tasks with greater operational efficiency.

Share Resources and Save

Variations in application tuning, patch levels, operating system versions, and security requirements often prevent SAP consolidation projects from moving forward. Oracle's virtualization technologies can mitigate these variations and facilitate the consolidation of disparate SAP deployment environments.

Oracle VM Server for SPARC provides highly efficient, enterprise-class virtualization capabilities for Oracle's SPARC T4 servers. A built-in hypervisor subdivides hardware resources to create partitions, called *domains*, that can host multiple operating system instances on a single server. This functionality enables applications from multiple servers to be consolidated on a single platform while retaining isolation, configuration, and resource control. IT staff can run different Oracle Solaris versions on the same server simultaneously, accommodating special SAP application requirements and preserving legacy environments while using more cost-effective, modern hardware.

By enabling dynamic changes in domain resources, Oracle VM Server for SPARC supports full server utilization and accommodates sudden changes in demand. Ideal for SAP application development and test systems, this functionality supports development and testing in isolated environments while sharing server resources, saving the cost of buying dedicated servers for each test environment.

Increase Uptime

Oracle VM Server for SPARC gives SAP landscape administrators the ability to securely migrate an active domain from one system to another—even if the systems use different processors—while the domain continues to run. With this capability, administrators can move virtual environments from one machine to another, and eliminate the time-consuming and error-prone process of re-deploying entire software stacks.

Useful for SAP administrators when performing system maintenance, hardware upgrades, software patching, and system consolidation, live migration enables developers and QA engineers to clone the

Figure 1. Oracle's server portfolio provides a broad selection to suit virtually any IT requirement. For the ultimate in extreme scalability, Oracle offers pre-integrated, engineered systems, shown on the right.

environment and perform testing tasks within a domain before implementing changes. Once configuration and testing is complete and the changes are validated, the test domain can be moved onto the production system. The same procedure works whether applying and testing patches or performing system upgrades and modifications. Live migration gives IT staff the ability to work within stringent time constraints, transparently completing tasks without impacting production systems or SAP application availability.

Streamline Storage Deployment

Oracle's storage systems enable SAP users to capture, store, and analyze more information than ever before. With the ability to mine large data sets, enterprises gain visibility into the information needed to plan business initiatives, focus marketing efforts on the right customers, and uncover previously hidden insights. Oracle's Sun ZFS Appliance family and Pillar Axiom 600 storage systems deliver linear, independent scalability of performance and capacity for growing data volumes, as well as predictable performance for dynamic multi-application workloads.

Large DRAM capacities and a Flash cache built into Sun ZFS Appliances accelerate SAP environments, and Hybrid Storage Pool capabilities enable the most frequently accessed data to be kept on fast media. In addition, industry-leading analytics in the ZFS Storage appliance provide the ability to quickly analyze and tune workload performance.

Capable of integrating multiple storage tiers within a single system, Oracle's next-generation Pillar Axiom 600 storage system eclipses traditional solutions, eliminating isolated storage islands and under utilization. These modular systems scale to 1.6 PB and deliver high performance and extreme efficiency for industry-leading storage consolidation. Support for multi-technology RAID pools ensures efficient utilization of solid-state and hard disk drives, delivering the right device for the right workload.

Axiom Application Storage Profiles specifically built for SAP applications running Oracle Database enable IT staff to rapidly provision storage for SAP infrastructure. The patented Axiom Quality

of Service (QoS) architecture, combined with Axiom Domains, enables SAP performance to be isolated from other workloads. This enables IT organizations to provide consistent, low-latency, high-performance storage to the SAP environment and effectively support multiple applications with different business priorities and storage profiles.

Oracle's Pillar Axiom 600 storage systems enable IT staff to deploy only what is needed. The storage infrastructure can start small and scale to meet growing requirements. Unlike solutions from other vendors, there is no need to change storage platforms as data volumes grow.

Accelerate SAP Performance and Increase Availability

Oracle Database takes advantage of optimizations in Oracle's server and storage components to deliver peak performance for SAP applications. In fact, Oracle Database is the pre-eminent database choice for SAP users. More than two-thirds of midsize to high-end customers in every industry entrust their mission-critical SAP deployments to Oracle Database.

Oracle offers built-in and add-on clustering technologies that can be used separately or in combination to increase the availability of SAP deployments. Also optimized as part of the Oracle stack, these technologies contribute the resilient infrastructure needed for mission- and business-critical SAP landscapes and form the foundation for any highly available deployment.

Manage the Entire Infrastructure

When managing SAP data centers, Oracle Enterprise Manager Ops Center makes it easy to manage and operate complex, underlying infrastructure platforms.
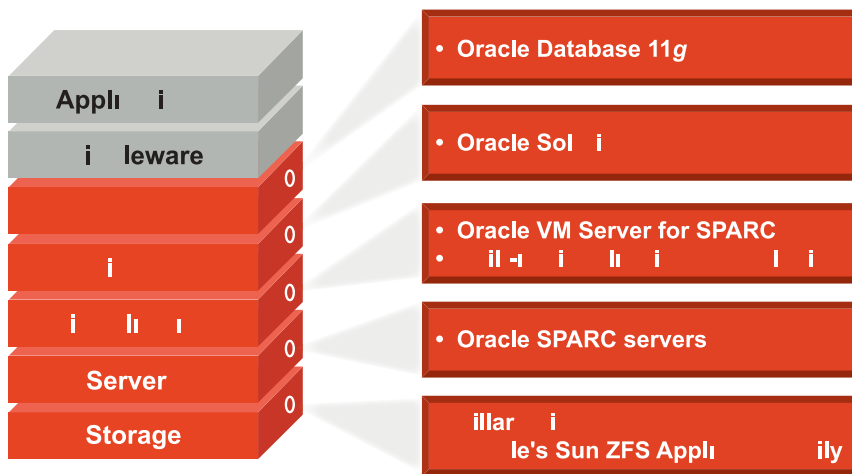

Figure 2. Oracle's infrastructure for SAP deployments.

Spire Healthcare

"The new system environment with Oracle infrastructure components is the ideal tool to help build on our position as a leading healthcare provider and efficiently support our business processes with flexible, future-proof, and high-performance IT."

— Phil Peplow, Head of IT Service Delivery and Infrastructure, Spire Healthcare

Integrating hardware management across the infrastructure stack, Oracle Enterprise Manager Ops Center helps organizations simplify administration and streamline operations, reduce system downtime, eliminate management silos, and increase productivity. This includes remote monitoring, phone home, and remote advanced support capabilities.

Oracle Enterprise Manager Ops Center enables IT staff to provision bare metal and virtual machines, configure BIOS and firmware, and manage performance of multiple systems within a single, comprehensive solution. It includes automated features that can free staff for more strategic work. For example, integrated diagnostics generate automatic service requests on behalf of administrators. In addition, Oracle Enterprise Manager Ops Center can respond automatically to changing demand for server resources according to pre-set thresholds and business-driven policies.

Customers Agree

Spire Healthcare, a leading U.K. private healthcare provider with 37 hospitals and 7,600 employees nationwide, needed a new patient administration solution. The company chose SAP applications, but wanted a one-stop shop for infrastructure components and support. While seeking the greatest value for their money, they also required flexibility, ease of use, high availability, and high performance using state-of-the-art technologies.

The Oracle solution utilizes Oracle Database and eight Oracle SPARC T4 servers that are clustered for high availability and optimum load and power distribution. Two Pillar Axiom 600 storage systems offer high performance and unlimited capacity in flash-aware, tiered storage pools. The system is designed to handle three times the current capacity utilization without having to upgrade the storage hardware. Indeed, the Oracle components enable the customer to easily extend the environment as business needs evolve.

All of the company's hospitals are tied to the central system, and the new infrastructure replaces various siloed solutions. It also integrates a number of non-SAP systems, including a separate workflow solution, an HR system, and highly specialized industry-specific applications. This gives hospital administrators greater visibility into the entire hospital network, streamlines workflow, and improves patient administration. The result is a modernized, high-performance IT infrastructure that fully satisfies current and future application requirements and enhances business processes.

SAP and Oracle—Delivering the Ultimate Decision Support Platform

When companies turn to SAP applications to increase strategic insight, productivity, and flexibility, and create competitive advantage, choosing the right infrastructure platform is key to reaching goals. Only Oracle is positioned to develop, integrate, and optimize best-of-class technologies throughout the infrastructure stack. With Oracle's server, storage, and software components, companies can support SAP environments with high-performance, flexible, stable, and highly available infrastructure. By using the right elements, companies can optimize data center resources and greatly improve the performance and quality of SAP landscapes.

Partners for 22 years, Oracle and SAP deliver innovation and provide an ongoing commitment to joint customers that includes continuous optimization of Oracle Database and Oracle's infrastructure stack with SAP applications. Long-standing reseller and customer support agreements provide customers with enhanced access to Oracle technology and world-class customer support.

CONTACT US

Oracle's complete technology stack provides an optimal platform for SAP applications. To learn more, call **+1.800.ORACLE1** to speak to an Oracle representative or visit **oracle.com/sap**

Outside North America, visit oracle.com/corporate/contact to find the phone number for your local Oracle office.

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