

HP Virtualized Infrastructure Solutions for mySAP™ Business Suite

A roadmap to increased flexibility and manageability
of your SAP landscape



hp

The ability to swiftly adapt to ever-changing business requirements is the key success factor in today's business environments – and this implies an adaptive SAP® landscape. The HP solutions enable you to overcome the boundaries of yesterday's SAP infrastructures. Instead of working in inefficient silos, your simplified IT will grow in flexibility and scalability, enabling you to respond to changes in demand more quickly. And better still: Improved overall manageability provides substantial reductions in costs of operation.



HP Virtualized Infrastructure Solutions for mySAP Business Suite in a nutshell

Traditionally, SAP applications needed to be assigned to dedicated servers. In a typical SAP 3-tier installation with several SAP applications in use, this tended to result in a considerable number of servers and attached storage technologies. When the SAP application was not being used, the servers were idle, and resources were wasted.

The HP solutions provide the virtualization and separation of SAP applications from the underlying IT infrastructure resources, thus increasing the utilization of resources by pooling, sharing and allocating them as needed. Your business becomes more flexible and agile, and the computing needs of every part of your company are met. Business and IT are synchronized to capitalize on change.

The HP Virtualized Infrastructure Solutions for mySAP Business Suite combine hardware, software and service deliverables, dynamically allocating computing power, storage and network resources according to the SAP application's demand.

The solutions provide certified deployments of adaptive computing infrastructure landscapes for SAP® NetWeaver™, enabling organizations to pool and share IT resources for mySAP Business Suite.

The solutions dynamically supply computing resources as needed, enabling companies to flexibly responding to changes in business demand.

The IT manager's dilemma

Making the SAP landscape more adaptive to change while reducing costs

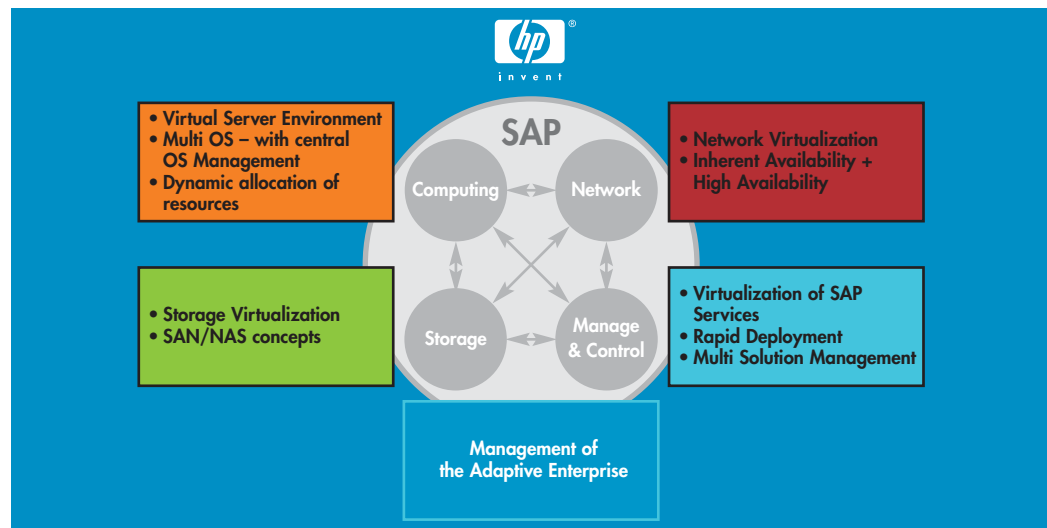
SAP has steadily grown in your organization over the past years and its extensive functionalities support all major business processes. Having a modular, yet integrated ERP solution proved to be a major advantage. At the same time the complexity of the underlying SAP infrastructure has grown dramatically.

Typically, a wide range of resource types for SAP are statically allocated and managed within silos. Consequently, average utilization of infrastructure resources may be as low as 25%. The deployment of new applications may be complex, time-consuming and costly. Personnel costs have skyrocketed due to the complexity that needs to be managed.

In view of this familiar scenario, the requirements for the evolution of your SAP landscape are:

- Increased flexibility and reduced complexity to improve the speed and responsiveness in adapting the SAP landscape towards rapid changes in demand.
- Simplifying and streamlining the operation of the SAP application and IT infrastructure landscape
- Optimizing the utilization of IT resources.
- Reducing costs.

Most of today's IT departments are not in a "green-field" situation that would enable them to radically start "from scratch." Existing SAP landscapes call for a clearly defined and guided evolutionary approach towards an optimized, adaptive IT landscape and IT management.



Business and IT synchronized to capitalize on change

Building an Adaptive Enterprise

The Adaptive Enterprise is the HP vision of an organization in which business and IT are synchronized to capitalize on change. An Adaptive Enterprise enables you to tightly couple business and IT, allowing you to quickly and easily respond to change, helping you to maximize return, mitigate risk, improve performance and increase agility.

Creating an Adaptive Enterprise is a journey – an ongoing series of planned improvements to your business and IT environment.

The HP approach to building the Adaptive Enterprise is based on four key design principles. Our strategy is to **simplify, standardize, modularize, and integrate** your IT environment and business processes. All four of these fundamental design principles are crucial to ensuring a tight link between your IT infrastructure and your business. You need to apply these principles consistently across your business processes, applications and infrastructure.

SAP enabling Adaptive Computing infrastructures

HP and SAP share the vision of elevating IT from being an enabler of work to an enabler of change.

With its Enterprise Services Architecture – enabled by SAP NetWeaver as the open integration and application platform – SAP has created a blueprint for services-oriented, enterprise-scale business solutions delivering greater adaptability, flexibility, and innovation opportunities.

With the Adaptive Computing capabilities included in SAP NetWeaver, SAP provides a concept to virtualize application services, empowering customers to be able to run any service any time on any server.

An Adaptive Computing infrastructure for SAP allows the dynamic assignment of a pool of dedicated infrastructure resources for computing, storage, network, and system control to serve defined virtualized application services.

HP and SAP – enablers of change

SAP's Adaptive Computing approach seamlessly fits into the HP Adaptive Enterprise strategy which delivers the potential for unprecedented synchronization between your business and your IT investments.

The HP Virtualized Infrastructure Solutions for mySAP Business Suite provide the infrastructure components, management tools, and best practice methodologies to implement and operate SAP's Adaptive Computing infrastructure.

The HP solutions fully reflect SAP's Adaptive Computing approach and its building blocks:

Computing

- Virtualized server environment
- Centrally deployed, managed and & monitored operating system, providing a single virtual view
- Support of multiple operating systems

Storage

- Virtual and flexible allocation of storage resources

Network

- Unified transport layer for virtualization

Manage & Control

- Virtualization of SAP services
- Provide performance as required
- Effective and efficient deployment

Simplified, flexible infrastructures and improved manageability

The capabilities of the HP solutions extend SAP's Adaptive Computing concept and its building blocks:

- Applying an integrated set of management tools to automate the dynamic link between business and IT, covering the full IT stack – from infrastructure to complete application management of SAP and non-SAP applications
- Utilizing an industry-leading service offering for SAP with consistent use of standards and best practices in SAP systems and application management.

The HP solutions leverage a unique portfolio of virtualization technologies and follow the design principles for building an adaptive enterprise: simplification, standardization, modularity and integration. The benefits are compelling:

Harmonized and simplified SAP infrastructure landscape

- Dynamic use of computing power and storage as shared resources are utilized in step with business needs
- Free up capital for innovation

Increased flexibility and scalability for greater responsiveness to changes in demand

- Shorter deployment times of new applications & systems for enhanced responsiveness
- Greater customer satisfaction and retention through higher service levels
- Improved availability and reliability

Reduced cost of operations due to improved overall manageability

- Simpler, less complex operations based on industry best practices
- Improved productivity and efficiency in administration and maintenance, freeing up existing IT resources for innovation
- Ease of change through high level of automation

Evolutionary approach

- Flexibility and investment protection by support for existing multi-operating system IT infrastructures, supporting HP-UX, Linux and Windows.
- HP does not limit companies to a single operating system landscape or narrow storage choices.

Double your server resource utilization

The HP solutions provide a flexible computing environment, helping you to maximize the utilization of your server resources.

The relevant operating systems are centrally deployed, managed and monitored, thus providing a single virtual view of your server landscape. HP utilizes standard deployment tools provided with HP server technology and supports heterogeneous combinations of architectures.

Multiple operating systems can be used with the HP solutions. Currently, the SAP Adaptive Computing Controller supports HP-UX and Linux; comparable functionality is provided through HP technology for Windows based systems.

Leading HP Integrity and HP ProLiant server technology provides scale-out and scale-up capabilities. HP offers the broadest choice of partitioning techniques, including hard, virtual and resource partitions.

HP Virtual Server Environment consists of a pool of multi-operating system, dynamically sizeable servers. Each can grow or shrink based on service level objectives and business needs. An automated, goal-based policy engine handles the organization and management of hardware resources on a physical and virtual layer, and supports dynamic provisioning of server capacity.

Benefits of HP virtual server technology for SAP

- Fast, efficient distribution, configuration & management with integrated deployment tools across operating systems and platforms
- Existing server technologies and operating systems can be integrated into the overall solution
- Updates and patches can be tested without taking servers out of production and can be made available to all servers within seconds
- A single virtual view ensures inherent availability
- Reduced workload for system management



Range of virtualization offerings

Virtualization is an approach to IT that pools and shares your IT resources so utilization is optimized and supply automatically meets demand. This allows you to reduce costs, while increasing your business agility. By creating a virtualized environment, your people, business processes and technologies are focused on providing IT service based on business demand. Capacity is allocated dynamically, resources are optimized, and your entire infrastructure is simplified and flexible.

The HP range of virtualization offerings encompasses three levels of virtualization, representing increased business value and strategic importance:

Element virtualization – Streamline the utilization of your server, storage, networking or other resources within a single application environment or business process, leveraging e.g. HP StorageWorks Enterprise Virtual Array (EVA) and HP Clustering Technology.

Integrated virtualization – Tune multiple infrastructure elements with the HP Virtual Server Environment (VSE) to automatically comply with service level agreements.

Complete IT utility – Take control of all heterogeneous resources so supply meets demand in real time.

Gain additional flexibility from **HP Financial Services**, offering a portfolio of solutions that align costs with usage, based on three acquisition models – Instant, Metered, or Managed. HP Financial Services offers a complete array of leasing and financial life-cycle management services in over 50 countries around the world.

Flexible allocation of storage capacity

Utilizing industry leading HP StorageWorks Enterprise Virtual Array and HP StorageWorks SAN technology, the HP solutions flexibly allocate storage capacity.

With HP StorageWorks SAN technology, your data is viewed and managed as a centralized IT resource with a single point of administrative control. The solution is available for multiple operating systems, vendors and platforms. NAS products provide complementary functions for specific use cases.

HP StorageWorks is the first multi-vendor network-based storage virtualization solution with powerful management and replication capabilities. HP provides a virtualization layer for the specific storage used by the SAP application. In addition, a broad portfolio of storage solutions for SAP is supporting the HP business continuity & availability offering.

Benefits of HP virtual storage technology for SAP

The HP solutions meet SAP application specific needs for consistently high transaction I/O and MB data rate performance, seamless capacity expansion, instant replication, simplified storage administration, and high availability.

Improved storage utilization and scalability can be achieved through tiered storage – overcoming the time, space & cost boundaries of traditionally architected storage.

By pooling and sharing storage assets, the HP solutions allow you to:

- Simplify resource management,
- Boost storage resource utilization,
- Meet service-level agreements,
- Become more agile and focus resources on innovation.



Enhanced efficiency and manageability from virtualized networks

Networking storage greatly enhances storage efficiency and manageability. The HP StorageWorks SAN is a key component of the HP Virtualized Infrastructure Solutions for SAP. It is the network element of the entire storage architecture, providing the infrastructure platform for complete, open network storage solutions.

HP provides highly available, flexible enterprise network solutions that use virtualization to link and allocate IT resources automatically according to demand. Unlike other vendors, who simply resell third-party network technology, the ProCurve Networking by HP technology gives customers 100% HP technology with full choice and flexibility, perfectly synchronized to achieve maximum performance and adaptability.

Benefits of HP virtual network technology for SAP

- Centrally managed – Fully integrated with HP OpenView Storage Area Manager framework to provide the ability to control/manage a heterogeneous fabric environment.
- Highly available – Ability to provide 99.999% or higher availability levels through director-class products and redundant-fabric SAN designs.
- Secured – Authentication, authorization, access control and zoning provide added level of security.
- Interoperable – Extensive HP testing to ensure seamless performance.

HP provides **solutions for mission critical business processes with custom service levels**, when your business can not tolerate major SAP system downtimes:

- HP ServiceGuard Extension for SAP protects mission critical SAP applications from a wide array of hardware and software failures.
- For Microsoft cluster environments, HP provides unique capabilities with the new HP Competent Cluster Service for SAP.

Single point of control for the virtualized IT landscape

HP provides all components for optimized, central and homogeneous management of the overall SAP IT landscape.

SAP's Adaptive Computing Controller (ACC) allows service virtualization by separating the SAP modules from the servers:

- Run modules on any server at any time depending on demand.
- Configure IT infrastructure as flexible as the supported business process.

The HP Systems Insight Manager is the central console for standard infrastructure management, providing a single point of control for the virtualized IT landscape. No extra "add-on" management tools are needed to operate a virtualized HP server landscape and the HP solutions are fully integrated into the SAP ACC.

The HP Rapid Deployment Solutions provide automated, policy-based, end-to-end management of resources, performance, availability, security and metering/billing.

Benefits of HP management and control technology for SAP

- Standardized service virtualization based on the SAP NetWeaver technology platform.
- More stability and efficiency through common and comprehensive management across hardware platforms and key operating systems.
- More control and flexibility through modular, extensible, and standards-based management that is adaptable to your environment.
- More IT alignment around processes rather than just hardware platforms. HP Systems Insight Manager allows administrators to standardize on a single tool for managing their hardware assets.

IT service management

Establish an application management and implementation based on best practices

By combining the toolsets and methodologies from the HP Adaptive Enterprise strategy and SAP's adaptive business service strategy, HP delivers a unique solution for more effective and more efficient management of heterogeneous IT environments.

This new solution – **HP ITSM (IT Service Management) for SAP applications** – includes a growing number of methodologies, software and services that specifically focus on the needs of SAP landscapes, all based on ITIL, the de-facto standard.

HP has developed and will further enhance the Application Management Implementation Best Practices for SAP. These best practice guides provide ITIL/ITSM process steps, best practices, and realistic customer examples to deliver consistent quality of services to customers, and specifically include work instructions, operational scenarios, templates, and guides.

The HP ITSM for SAP applications solution provides enterprises with in-depth, end-to-end information about their IT landscape, it fosters seamless and pro-active communication between people, technology, and processes, and it delivers the management capabilities for the company's entire IT-landscape – spanning infrastructures, applications and services.

As a result, companies are able to better identify and initiate optimization activities and to reduce IT complexity. The reduction of disconnects, incidents and downtimes enhances service quality and boosts the company's productivity. Due to its alignment with business processes, your IT is able to respond much faster to change requests and new business requirements. IT adaptability delivers to the bottom line by enabling your company to reduce the total costs of IT operations and to achieve the agility needed to successfully adapt to today's changing business challenges.

Dynamic link between business and IT

Management for the Adaptive Enterprise dynamically links business and IT to achieve breakthroughs in efficient IT operations, increase the performance of applications and quickly enable IT support of critical business decisions.

HP management solutions provide the active knowledge and control required to continually measure, assess and optimize IT's contribution to the business.

HP solutions elevate the business value of IT through efficient management that delivers service levels at the agreed upon cost and quality. It's a management discipline that uses best practices to integrate business and IT operation processes by streamlining the linkages between people, process and technology.

HP helps you evolve your IT organization from technology-focused silos to a business-focused service organization.

Benefits of HP Management of the Adaptive Enterprise for SAP

- HP enables you to manage and support IT landscapes across a mix of operating systems, a mix of SAP releases, even a mix of SAP and non-SAP applications.
- Your SAP landscape will be dynamically sized, based on the continuous monitoring of resource demand.
- Complex SAP environments are kept highly available, performing to expectations, and aligned with business priorities, at reduced costs – with HP OpenView, the industry-leading, SAP-certified solution for customers running their core business on SAP.
- You are able to establish a business driven IT operation, by building it all on standard technology and following best-practice standards in application and infrastructure management (ITIL/ITSM).

With the HP solutions, you benefit from the tight alliance between SAP and HP – two leaders, whose solutions are uniquely integrated and complementary, thanks to over 15 years of experience working together. We can help you align your people, processes and technology for maximum advantage.



To learn more about how HP can support you in building virtualized infrastructures for SAP, visit www.hp.com/go/sap or contact your local HP sales office for more details.

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