

# HP Virtual Server Environment for HP Integrity and HP 9000 servers



## Overview

- Double resource utilization
- Maintain continuous service levels
- Pay only for what you use

## Optimize server utilization in real time.

Your business is dynamic. Faced with unpredictable market pressures and limited resources, you must be faster, better, and more efficient than your competition. This is a challenge in today's typical IT environment where the IT infrastructure cannot easily be changed when business needs change. So, enterprises provision

more servers and storage than they need, to handle the forecasted peak workload for each application. As a result, these servers are largely underutilized, and millions of dollars in server resources lie idle most of the time.

You need an Adaptive Infrastructure that mirrors your business—one that responds to demand by dynamically supplying computing resources when and where they are needed. By virtualizing your IT resources, you can make more effective use of them. Virtualization involves pooling and sharing IT resources so IT supply can automatically meet business demand. The HP Virtual Server Environment, HP's virtualization solution for HP Integrity and HP 9000 servers, gives you the flexible capacity you need to increase the return on your IT investments and be more agile at the same time.

## Double your resource utilization.

Traditionally, data centers have dedicated servers for each application, with each server configured to handle the peak load of the application it hosts. In these environments, most server capacity goes unused most of the time—and average utilization rates of less than 25% are common.

By virtualizing your server resources, the HP Virtual Server Environment (VSE) reduces the need for you to configure servers with excess capacity. By allowing several applications to run on one server without interfering with each other, you can consolidate underutilized servers. By reducing the number of servers in your data center, you can dramatically reduce your hardware acquisition and server management costs.

## Maintain continuous service levels.

The HP VSE makes it easier, faster, and less expensive to provide additional server capacity when needed. It can automatically assess when your servers need additional resources and then automatically adjust server capacity within minutes or seconds—as opposed to hours, days, or weeks.

Because server resource allocation is dynamic, based on business priorities, no human intervention is required. HP VSE lets you be confident that your servers will respond automatically as opportunities arise and the business ebbs and flows.

With HP VSE, your IT team can confidently meet their service-level objectives. They won't be struggling to balance processing demands across static, inflexible server configurations.

## Pay only for what you use.

If your business should ever need additional server capacity, HP VSE can draw from spare capacity that is available on a pay-per-use basis. By drawing on server capacity that is paid for only when it is used, you can scale your IT environment without depleting your budget or wasting valuable time waiting for servers to be configured, shipped, and installed. The HP VSE can trigger these resources automatically, or, for more control, you can manually authorize use of pay-per-use capacity.

## Intelligent control

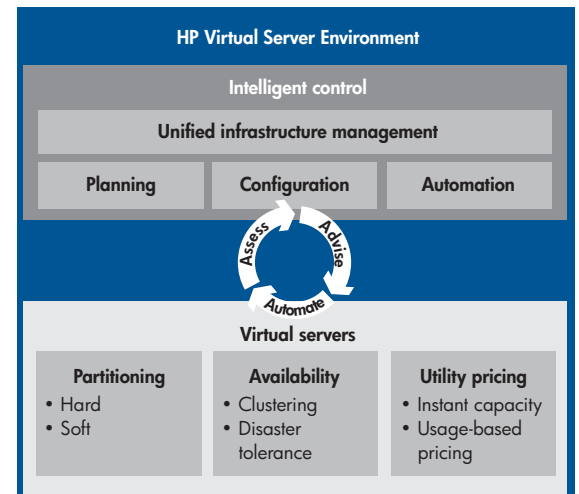
The HP Virtual Server Environment provides intelligent, simplified control of your virtual servers through a fully integrated software suite.

Control starts with HP Systems Insight Manager (SIM), a unified infrastructure management platform that provides common fault, configuration, performance, and asset management across all HP Integrity, HP 9000, and HP ProLiant servers and HP StorageWorks storage. The VSE management tools plug into SIM for a central point of administration for consistency and enhanced efficiency.

To make the most of your shared and pooled servers, planning is vital to ensure you are assigning the right application workloads to the right servers. With HP Integrity Essentials Capacity Advisor, you can do just that. This intuitive capacity-planning tool simulates various workload scenarios, so you can choose the one that best meets your business needs.

Next is ongoing management and configuration. HP Integrity Essentials Virtualization Manager is the first comprehensive, easy-to-use virtualization management tool. It allows you to instantly see the relationship between physical and virtual resources and easily perform configuration management tasks for all your VSE resources.

Finally, server resources can be directed to the highest business priorities via intelligent policy engines that monitor service levels in real time and automatically adjust server resource allocation when needed.



From our perspective, it's all about ensuring fast, reliable access to information, so our internal users can do their jobs more effectively. With the HP Virtual Server Environment, we can deliver on that goal and do it with greater efficiency within IT. With HP, we can get more out of the technology—more performance, more scalability and availability, at lower cost.

—Thomas G. Corner,

Senior Storage Analyst and UNIX Administrator, PepsiAmericas

## Seamless integration

Through integration with partitioning, high-availability solutions, and utility pricing, the HP VSE provides intelligent control for a broad range of virtualized resources.

- **Partitioning:** The HP VSE controls the full HP Partitioning Continuum, letting you isolate operational environments for application security and uptime while giving you the highest degree of flexibility. This unique portfolio provides a choice of hard partitions and soft partitions, including HP Integrity Virtual Machines, Virtual Partitions, and Secure Resource Partitions.
- **High availability:** By linking with HP Serviceguard and HP's disaster-tolerant solutions, the HP VSE can provide near-continuous availability. That's because when HP Serviceguard redirects an application, the VSE adjusts server resources automatically, even when they are spread across cities or continents.
- **Utility pricing:** HP's flexible utility pricing portfolio makes environments with fluctuating or rapidly growing IT needs more cost-effective. The HP VSE can automatically trigger spare capacity on a pay-per-use basis. And it can shut down capacity too, helping you control your expenses.

## Mission-critical virtualization for HP-UX 11i

For the most demanding mission-critical workload, the HP VSE for HP-UX 11i is unmatched. For example, the VSE for HP-UX 11i is integrated with HP disaster-tolerant solutions for continuous application availability whether within a single data center or across continents.

### Simplified application deployment—another advantage of VSE

To simplify deployment of your IT projects with VSE, HP has developed HP VSE Reference Architectures for HP-UX 11i. HP VSE Reference Architectures are best practices and pre-tested configurations of HP VSE components with key applications such as Oracle® application and database servers, mySAP, BEA Weblogic, SAS, and IBM Websphere. They are based on real customer IT deployments and are customizable to suit your environment. HP VSE Reference Architectures help you significantly reduce time to solution deployment.

## HP VSE for multi-OS HP Integrity servers

To help increase flexibility and systems administration efficiency, the HP VSE supports all operating systems that run on the HP Integrity server platform: HP-UX 11i, Microsoft® Windows® Server 2003, Linux, and OpenVMS. To allow you to choose the operating system that best meets your business needs, many of the components of the HP VSE, such as HP Systems Insight Manager and HP Integrity Virtual Machines, were designed specifically for a multi-OS environment.

## HP Financial Services—put the power of the HP portfolio to work for you

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, please contact your HP sales representative or find us on the Web at:

[www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices)

### Getting started

If you're considering using virtualization to improve server utilization levels, increase the agility of your IT infrastructure, and cut costs, you're already headed in the right direction. As you take the next steps and investigate specific solutions further, keep the following in mind:

- Virtualization is not just about improving server utilization levels—it's about increasing IT agility so your business can respond quickly and effectively to changes in the marketplace.
- The most effective virtualization solutions include comprehensive management software for capacity planning, configuration management, and automation.
- Utility or "pay per use" pricing can be enormously helpful in your efforts to control expenses.
- Virtualization solutions designed for a multi-OS environment will give you increased flexibility for the future.

### For more information

To find out more about how the HP Virtual Server Environment can help you double your resource utilization, maintain continuous service levels, and pay only for what you use, contact your local HP sales representative or authorized HP partner, or visit:

[www.hp.com/go/vse](http://www.hp.com/go/vse)

## HP Services

HP Services' end-to-end expertise in delivering solutions helps you gain more value from your virtualized environments. From initial assessment and design to ongoing support, HP Services is your single point of contact and accountability. With more than 69,000 services professionals and over 4,000 ITIL-certified professionals operating in 170 countries, HP Services has an extensive track record of helping customers support their changing business needs.

Our services offerings include:

- Consulting and Integration services: a portfolio of IT Shared Services, IT Consolidation, Virtualization, Business Continuity and Availability, and other infrastructure, industry, and business applications services
- Support services
  - Deployment Services: for risk-reducing installation, implementation, and integration
  - Mission Critical and Availability Services: to help reduce downtime and meet service levels in mission-critical environments
  - ITSM Services: to continually improve service levels using service management best practices
  - Performance Services: to assist you in analyzing and improving system performance and planning for successful growth and change
  - Data Center Services: to help you evaluate and use your data center resources efficiently
- Education: classroom courses with self-paced curriculum and online instructor-led courses
- Managed services: a portfolio of sourcing solutions, including strategic outsourcing and utility pricing solutions

For more information, visit: [www.hp.com/services](http://www.hp.com/services)

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