

Managing your HP Virtual Server Environment for HP Integrity servers and HP 9000 servers

Overview

- Match workloads to servers more precisely
- Improve server utilization
- Reduce the time, effort, and complexity associated with virtualization management
- Connect IT resources to real business needs through automation

Infrastructure that adapts to the real world

Your business needs to grow, increase profitability, and gain competitive advantage. To achieve this, you need an IT infrastructure that helps you reduce operational costs, accelerate the speed of IT change, and deliver higher quality of service to increase business efficiency. And that's where the HP Adaptive Infrastructure comes into play. Through the use of technology, you can achieve better business outcomes.

Virtualization is a catalyst in the transformation to an Adaptive Infrastructure. Virtualization is an approach to pooling and sharing IT resources so that supply always meets demand. With virtualization solutions from HP, you can reduce costs, increase agility, and improve the quality of your IT service delivery.

The HP Virtual Server Environment (VSE) for HP Integrity and HP 9000 servers allows you to optimize server utilization in real time. The VSE delivers additional resources to critical applications during peak times by creating virtual servers that automatically grow and shrink based on business priorities. Through tight integration of intelligent control with partitioning, high availability, and utility pricing, the HP VSE allows you to maintain service levels and pay for spare capacity on an as-needed basis.

The heart of the HP Virtual Server Environment is a fully integrated software family for planning, management, and automation that includes:

- HP Capacity Advisor
- HP Virtualization Manager
- HP Global Workload Manager

This management environment includes HP Insight Dynamics – VSE functionality that lets you analyze and optimize your physical and virtual infrastructure in the same way. It builds on HP Systems Insight Manager (SIM), HP’s unified infrastructure management platform. HP SIM provides a common management architecture that VSE applications use to discover and track server resources. It also gives a common look and feel to all menus, tabs, and basic commands—which means you can manage your Virtual Server Environment very efficiently, because it operates within a familiar environment common to all HP infrastructure, virtualized or not.

HP Capacity Advisor

HP Capacity Advisor is an easy-to-use tool that captures server utilization data and virtualization configuration scenarios so that you can perform ongoing capacity planning. It allows you to view historical utilization data based on more than a thousand data points, per server, per day, through an intuitive graphical interface—and to test various scenarios before you make changes to your critical applications. HP Capacity Advisor now includes groundbreaking Smart Solver technology. Developed by HP Labs, Smart Solver shows the best fit for your workloads, minimizing the number of physical servers you need. It’s like having a team of PhDs behind you, taking the tedious research and guesswork out of traditional capacity planning. And with metrics on energy utilization, administrators can rapidly make decisions to make their data centers more energy-efficient.

By running Smart Solver before updating your system, you can match workloads to servers more precisely and get more from your existing server resources. HP Capacity Advisor supports HP-UX 11i, Microsoft®

Windows®, and Linux for Integrity servers. Through Insight Dynamics – VSE, Capacity Advisor is now also available for HP ProLiant servers.

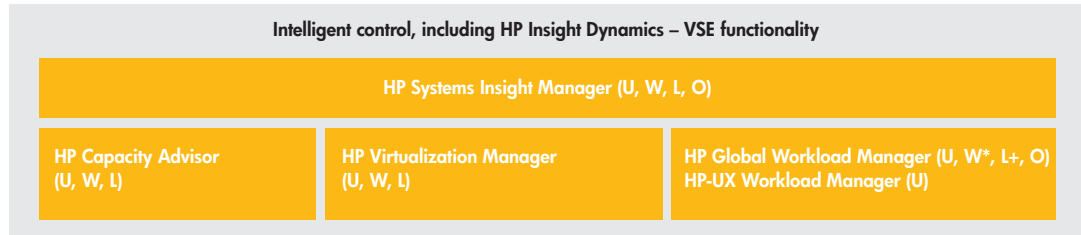
HP Capacity Advisor reduces the time, effort, and complexity of virtualization planning by:

- Automatically tracking and importing historical workload utilization data, saving multiple steps and helping to make sure data is accurate
- Finding trends within the data and allowing you to forecast typical usage patterns to more accurately model future needs
- Integrating with the rest of the HP Virtual Server Environment, so it is automatically aware of all real-time virtualization elements under consideration for scenario analysis
- Providing an easy-to-use interface, designed for the general IT administrator but also suitable for the specialized capacity planner

HP Virtualization Manager

HP Virtualization Manager provides a central point of control for managing all the resources in your Virtual Server Environment. It’s a powerful way to connect IT resources to real business needs.

HP Virtualization Manager includes an easy-to-use interface that lets you build a picture of your available virtual resources in seconds rather than taking hours or days to construct a picture of your virtual environment “manually.” It lets you see how virtual resources are being used and how they relate to your physical infrastructure and business applications in real time. HP Virtualization Manager can also be used to seamlessly configure new virtualization resources—and reconfigure existing ones—for high efficiency.



Legend U – HP-UX 11i W – Windows * For Integrity Virtual Machines (VMs) running Windows
 L – Linux O – OpenVMS + For Integrity VMs running Red Hat Linux

HP Virtualization Manager will soon offer logical server capability, which brings the flexibility of virtualization to physical Integrity blade servers. Logical servers are server profiles that can be easily created and freely moved across your physical and virtual infrastructure. HP Virtualization Manager supports HP-UX 11i, Windows, and Linux. It is also available for HP ProLiant servers through HP Insight Dynamics – VSE.

HP Virtualization Manager reduces the time, effort, and complexity associated with virtualization management by:

- Graphically representing the relationship between virtualized resources, applications, and physical infrastructure in real time
- Unifying management of the VSE by seamlessly integrating multiple management tools into a single, consistent framework
- Providing contextually appropriate views for managing complex virtualized and physical environments

HP Global Workload Manager

HP Global Workload Manager (gWLM) provides intelligent control for the HP Virtual Server Environment. It enables automated, dynamic allocation of server resources among applications according to predefined policies so that resource utilization is improved and service levels are maintained. HP gWLM makes it possible to:

- Manage the real-time resource allocation of soft partitions (HP-UX Virtual Partitions [vPars], HP Integrity Virtual Machines, or Secure Resource Partitions)

- Shift Instant Capacity licenses between hard partitions (nPars) or servers based on business priorities, or resizing within or across servers based on demand by activating or deactivating Temporary Instant Capacity
- Synchronize resource management policies to re-allocate server resources in the case of a failover

Choosing the right workload management software

HP gWLM is HP’s strategic workload management product, ideal for managing workloads on a single system or high availability cluster and for managing workloads across large-scale deployments with multiple servers. HP gWLM’s ease-of-use features include centralized policy administration, predefined policies, and reporting features that enable IT to easily set up, manage, and track resource usage. These benefits also make gWLM a suitable solution for many common types of IT environments where fine-tuned policies and specialized resource management are not typical.

HP also offers HP-UX Workload Manager. Designed to manage workloads on a single system or in a high availability cluster, it is recommended for IT environments where it is already in use.

Unified control of all your HP platforms

All VSE management software can now run on a Windows-based central management server (CMS) running on an HP ProLiant server. If you choose this configuration, you will also be able to visualize and plan capacity for HP ProLiant servers using the HP Insight Dynamics – VSE Suite. You can increase your systems administrators’ efficiency by managing physical and virtual platforms in the same way across both HP Integrity and HP ProLiant servers.

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

In addition to having the industry's strongest portfolio of products, services, people, tools, methodologies, and world-class partnerships, HP makes it easy on the balance sheet to put the power of the HP portfolio to work for you through HP Financial Services. For more information on these services, contact your HP sales representative, or visit:

www.hp.com/go/hpfinancialservices

Managing the HP Virtual Server Environment for improved server utilization

Implementing the HP Virtual Server Environment is a significant and positive step toward establishing a more efficient, more highly utilized, more cost-effective IT architecture. But it's not the only step you can take, or the final one. Making sure your VSE is managed carefully and aggressively through the use of HP VSE management software will help ensure that it operates at top efficiency and delivers the greatest benefits to your IT organization and your company.

The sooner we start, the better the business outcome.

We're ready to put our vast resources and expertise to work to help you achieve better business outcomes. Let's start with a discussion of your business strategies, tactics, and goals. Contact your HP representative or HP Authorized Reseller today. Or learn more about managing the HP Virtual Server Environment at:

www.hp.com/go/vse

HP Services—ready to help

Need assistance implementing VSE solutions? HP Services can help. We're VSE experts, and we're here to provide support wherever you need it. We can do assessments, help with design, integrate your solution, or assist with management. Just let us know when you need a hand—we'll be happy to step in.

Of course, our IT knowledge extends far beyond VSE as well. We're industry leaders in delivering solutions that help businesses improve agility in all sorts of ways. Our services portfolio includes:

- **Business Continuity Consulting**—planning, development, and deployment services to minimize IT downtime based on industry best practices
- **Data Center Services**—project and transitional fulfillment, operational continuity, and continual improvement for the entire data center environment
- **Education & Training Services**—industry-leading training and education programs for IT professionals
- **HP Factory Express**—comprehensive portfolio of customized, factory-configured solutions and onsite deployment services
- **Mission Critical Services**—comprehensive portfolio of integrated hardware and software support services for maintaining an available, reliable, and scalable IT environment and improving service levels
- **Service Management Services**—comprehensive portfolio of services focused on continually improving service levels to the business

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