Your guide to selling HP and Microsoft® virtualization solutions to SaaS hosters

Introduction

As you know, the Software-as-a-Service (SaaS) market is growing rapidly. But the hosters who provide these Web-based, pay-as-you-go services often have massive IT workload demands, rigorous SLA standards, and the need for rock-solid availability, security, and disaster recovery.

They're all reasons that virtualization—the pooling and sharing of IT resources such as servers and storage—can be critically important to hosters. In fact, virtualization helps hosters reduce costs, makes their infrastructure more flexible, and assures that supply automatically meets demand. For hosters, virtualization can reduce expenses for hardware, power, cooling, and floor space by as much as 70 percent.

To help them achieve these benefits, HP and Microsoft offer complete portfolios of virtualization solutions for consolidation, disaster recovery, and lower costs—each specifically designed for the first team in hosting platforms: HP ProLiant servers, HP BladeSystem, HP Insight software, HP StorageWorks products, and HP ProCurve solutions along with Microsoft Hosted Messaging and Collaboration (HMC 4.5) and Microsoft Dynamic Customer Relationship Management (CRM) running on Microsoft Windows® Server 2008.

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Microsoft®

What virtualization means to you

Selling virtualization to hosters does two very important things for you. First, it gives you the opportunity to increase your share of wallet. Virtualization implementations often lead to higher attach rates for HP StorageWorks solutions, HP ProCurve networking gear, software, and services. Second, it builds stronger ties with your hoster-customers for more revenue in the future. That means:

- **A greater presence** because you deliver solutions that help customers unlock savings to reduce total cost of ownership *and* protect their businesses from the risks of downtime, data loss, and security threats—adding to your role as trusted advisor
- **Sales upgrades** all along the way, without competing on price alone

This guide is written to help you achieve those advantages by giving you:

- An overview of the HP and Microsoft virtualization portfolios
- Insight into the problems and concerns that hosters face
- A review of the objections hosters might have about virtualization
- Effective answers to those questions
- Sources for more information and support from HP and Microsoft

"All hosters are looking for better business outcomes. Virtualization is the cornerstone to help them transform and manage their business."
—Don Grantham, SVP and Chief Sales Officer, Hewlett-Packard Company

Hosters' pain points—what they're worried about

Hosters' concerns are similar to the pain points at any data center—but magnified, even exaggerated, by the very nature of a hoster's business. The end customers for hosted services expect unfailing performance uptime as well as absolutely reliable SLAs. Of the many worries this creates, there are four that stand out.

Worry 1: underutilization

In order to meet their end customers' expectations, hosters might have a tendency to overprovision. Virtualization improves utilization to help hosters do more with less, reducing overall IT costs by as much as 50 to 100 percent.

Worry 2: meeting service level agreements

A hoster's business is built on providing the highest levels of performance and reliability. Virtualization will distribute computing and storage more flexibly—dynamically putting resources where they're needed, when they're needed.

Worry 3: availability, disaster recovery, and regulatory compliance

Virtualization improves disaster recovery and provides more predictable service for consistently higher availability, outstanding disaster recovery, and full regulatory compliance for the hoster's end customers.

Worry 4: energy and cooling costs

Providing online solutions to many end customers means hosters need substantial computing and storage capacity. By cutting energy and cooling costs by as much as 40 percent, virtualization helps hosters reduce the escalating costs of power and produce a smaller carbon footprint.

How virtualization works for hosters

In a virtualized world, people, processes, and technology work together more efficiently to increase service levels and efficiencies, giving hosters a business advantage in at least three areas vital to their success:

1. **Lower costs**

   By eliminating the need for additional physical resources, virtualization can reduce a hoster's costs by as much as 40 percent. Virtualization can also increase resource utilization by 50 percent or more. Virtualization can also cut operating expenses, thanks to lower utility costs and reduced administrative overhead.

2. **Accelerated business growth**

   Virtualization can increase the speed at which hosters can deliver new business services—often cutting delivery from weeks or months to mere hours or days. Virtualization can also cut the time needed for resource deployment from weeks to just minutes. And virtualization allows hosters to shift resources from management and maintenance to more productive business priorities.

3. **Mitigation of risk**

   To keep their customers happy and coming back for more, hosters must be up and running 24x7x365. Because virtualization can rapidly re-allocate resources, it can reduce a hoster's *unplanned* downtime. And by performing maintenance on virtual images, it can almost completely eliminate *planned* downtime. Furthermore, virtualization can enhance the security of the customer's data—an obviously critical consideration for both hosters and their end customers.

HP virtualization for hosters

These virtualization benefits are part of the HP Adaptive Infrastructure which transforms the IT infrastructure, shifting the focus from technology to better business outcomes. For hosters, the results are:

- Lower cost of IT operations
- Higher quality of service
- IT changes at an accelerated speed
- Far greater energy efficiency

In practice, virtualization means hosters can:

- Run multiple applications on a single server—reducing the need for physical resources
- Increase agility, responsiveness to customers, and service quality
- Double, or even more, CPU utilization of existing servers
- Dramatically reduce power and cooling costs
- Provision new systems in minutes rather than days
- Lower the cost of operations and management
- Add new virtual servers dynamically in response to constantly fluctuating demands from their customers
- Gain better control of their business services
- Enhance IT manageability

Working with key partners such as Microsoft, HP offers hosters a long list of services and solutions to help them create a virtualized environment in their data center, including the following:

HP ProLiant servers and HP BladeSystem (an infrastructure in a box that saves time, power, and money) are designed to fit into a hoster's existing data center and include support for HP Smart Array controllers, NICs, and storage options. ProLiant servers and HP BladeSystem also support the industry's most popular operating systems, including Microsoft Windows Server 2003 and 2008 as well as Red Hat Linux, and also virtualization platforms, including VMware and Microsoft Hyper-V. With HP Thermal Logic, BladeSystem uses 30 percent less power and pushes 47 percent less air for the system to cool.* With useful features such as hot-plug devices, Onboard Administrator, and Virtual Connect, BladeSystem will let hosters add, replace, move, or recover blades and virtual servers in minutes instead of days. HP ProLiant servers and HP BladeSystem are designed for virtualization and include these features:

- **Memory** (designed for core scalability): 256 GB (32 sockets)
- **I/O bandwidth** (designed for per-instance scalability): 9 slots x4, x8, x16
- **Network ports** (designed for multiple network paths)
- **Management for virtual environments**
  - HP Systems Insight Manager (SIM) virtualization-enabled
  - HP Insight Control for essential management of physical and virtual infrastructures
  - HP Insight Dynamics – VSE for advanced management of physical and virtual infrastructures
  - Microsoft System Center Suite
- **Reliability**
  - Redundancy throughout
  - Memory protection and resilience
  - Automated monitoring
  - Power and cooling with power management and capping at rack and data center

Extensive Hyper-V support from HP provides the flexibility to choose the right combination of HP ProLiant servers, BladeSystem blades, and StorageWorks solutions to meet specific hoster needs. HP has tested and qualified a wide range of servers and storage with Hyper-V to help achieve maximum performance and scalability for hosters.

HP Virtual Connect is an ideal interconnect option for hosters who need to speed operations, lower costs, and reduce response times. HP BladeSystem c-Class server blades combined with Virtual Connect architecture put them in control, enabling them to:

- Provision an entire infrastructure at once, adding or replacing servers and the networks they connect to on the fly
- Use one network port to provide four physical connections, allowing precise bandwidth control to the needs of each application or virtual server
- Create and store a server's LAN or SAN connection profile, and then with a few simple clicks, apply it to any other server anywhere in the data center—without touching a cable or changing settings or touching the network settings
- Add, move, or replace server blades without multiple experts at each step and without impacting networks

With the unique ability to fine-tune bandwidth to the needs of each application or virtual server channel, HP Virtual Connect Flex-10 adds the ability to consolidate network equipment up to four-to-one.

HP Insight Dynamics – VSE is a new class of integrated management software that addresses the key data center issues of cost, speed, quality, and energy. It can continuously analyze and optimize a hoster's adaptive infrastructure to accelerate complex IT projects, simplify daily operations, and proactively manage

* HP BladeSystem TCO tool calculation with 64 HP ProLiant BL460c G5 server blades vs. 64 HP ProLiant DL360 Servers.

data center capacity. Insight Dynamics – VSE builds on the value of HP Systems Insight Manager, Insight Control, and Virtual Server Environment to:

- Plan capacity and power continuously: The state-of-the-art capacity planning capabilities of HP Insight Dynamics – VSE give hosters deep insight into resource utilization, including power.
- Balance physical and virtual resources: Using HP Insight Dynamics – VSE, hosters can balance physical and virtual resources on the fly to provide better performance and service levels to the business.
- Enable cost-effective availability: With the speed and ease of moving physical and virtual resources, hosters can achieve higher levels of availability more economically than with traditional clustering solutions.
- Provision infrastructure consistently: HP Insight Dynamics – VSE enables hosters to manage the lifecycle of their infrastructure from planning to retirement consistently and efficiently. With the HP Insight Orchestration option, they can accelerate the design and delivery of infrastructure resources through a self-service portal.

In action, HP Insight Dynamics – VSE can lower the cost of key data center tasks by as much as 40 percent while it gives fast, tangible results in the following areas:

- **Capacity planning:** HP Insight Dynamics – VSE cuts analysis from months down to days.
- **Provisioning:** HP Insight Dynamics – VSE cuts time to production from weeks down to hours.
- **Upgrades and changes:** HP Insight Dynamics – VSE executes changes in minutes, not days.
- **Power use:** HP Insight Dynamics – VSE makes energy-aware planning easier and faster.

Microsoft virtualization for hosters

Windows Server 2008 can scale to support fast-growing, demanding workloads and maintain high-traffic application services that are always ready for customers. Windows Server 2008 Hyper-V allows consolidation of server roles and operating systems and provides a single set of management tools to manage physical and virtual resources in a dynamic data center. Windows Server 2008 and Windows Hosting Platform are tested and verified for extreme reliability and offer a large arsenal of security and data protection capabilities. Windows Hosting Platform centralizes and simplifies administration of the infrastructure and services, allowing management by exception with the following benefits:

- Streamlines application and data management by using virtualization in highly effective ways
- Presents a powerful combination of extensive security, ultimate dependability, and wide-ranging flexibility
- Helps reduce administrative overhead and encourage efficient use of network administrator resources
- Allows fast, efficient development and implementation of e-commerce capabilities
- Promotes consistent, demonstrable regulatory compliance
- Accelerates service delivery and helps to reduce TCO
- Enables increased revenue generation and delivery of value-added software services

Windows Server 2008 Hyper-V is Microsoft's next-generation hypervisor-based virtualization product. Virtualization with Windows Server 2008 Hyper-V enables hosters to make excellent use of their server hardware investment. It is done by consolidating multiple server roles as separate virtual machines running on a single physical machine. Hosters can also efficiently run multiple operating systems (Windows, Linux, and others) in parallel, on a single server, allowing them to fully leverage the power of x64 computing. In practice, Windows Server 2008 Hyper-V helps hosters:

- Consolidate workloads across multiple machines onto fewer machines
- Reduce hardware, energy, and management costs
- Create a more dynamic IT infrastructure

With Microsoft's flexible licensing policy, it is easier than ever for hosters to take advantage of virtualization's cost savings. In addition, many virtualization enhancements come with Windows Server 2008 Hyper-V, including these:

- 32-bit and 64-bit support for guests
- New hardware-based virtualization technology
- Capability to support large memory (up to 64 GB per virtual machine)
- Symmetric multi-processing capabilities for virtual machines (up to 24 logical processors)
- Pass-through disk access for virtual machines
- New Virtual Service Provider/Virtual Service Client architecture (allowing requests to shared hardware such as disk devices, networking devices, etc.)
- Runs on server core installation, minimizing footprint and increasing security of host

Microsoft System Center Virtual Machine Manager (VMM) is a comprehensive management solution that enables centralized management of virtual server infrastructure. Among other platforms, it supports Microsoft Windows Server 2008 Hyper-V, Microsoft Hyper-V Server, Microsoft Virtual Server 2005 R2, and VMware ESX.

Microsoft System Center Server Management Suite Enterprise (SMSE) is a licensing suite that includes Enterprise Server management licenses for System Center Operations Manager 2007 and Configuration Manager 2007. It also includes Data Protection Manager 2007, the license for Virtual Machine Manager 2007, and rights to manage an unlimited number of operating system environments on a single server. SMSE provides an easy and economical way for hosters to get a complete server management solution for enterprise server environments. SMSE delivers up to 30 percent cost savings over standalone component parts for licensing.

Using HP Insight Dynamics – VSE and Microsoft System Center together provides a stronger solution than using either alone. Microsoft System Center solutions are optimized to assist in planning, deploying, and operating Windows Server environments. HP Insight Dynamics – VSE enables administrators to manage physical and virtual resources in the same way, through the logical servers capability, and allows you to do advanced capacity planning. System Center VMM 2008 provides advanced configuration, deployment, and management of Hyper-V virtual machine environments. Together, they make a hoster's infrastructure change-ready, with the freedom and flexibility of virtualization delivered across their entire infrastructure.

ID-VSE and SCVMM can work hand in hand to deliver optimized management of virtual environments for hosters through:

- **Continuous consolidation:** When hosters need to refresh their server hardware, they can use Insight Dynamics – VSE and SCVMM to forecast capacity needs and intelligently place the new Hyper-V virtual machine hosts and guests.
- **Everyday high availability:** Insight Dynamics – VSE can predict hardware failures. HP Pro Packs also integrate with System Center, which allows hosters to reduce downtime by proactively moving the Hyper-V virtual machines before failures occur. Insight Dynamics – VSE can move the host as a logical server to a spare blade, quickly bringing users back to full capacity.
- **Energy-aware planning:** Using Insight Dynamics – VSE, hosters can run consolidation or server rebalancing scenarios to see which configuration will minimize power requirements.

Answering hoster objections

Virtualization is too complicated for us.

You can provide the assessment service to review a hoster's current environment to identify the areas where virtualization can produce the biggest or quickest return on investment—including the best candidates for consolidation. If needed, HP Assessment Service can be used as well.

How do I manage a virtual environment?

HP offers unified management of physical and virtual resources through one integrated family: HP Insight software, simplifying infrastructure management.

Are HP and Microsoft the best answer for us?

HP and Microsoft offer the full breadth of virtualization solutions, including many not generally available, such as unified management of virtual and physical infrastructure along with storage, client, and network virtualization capabilities—plus the services to deliver them. Hosters can get even greater benefits if they combine HP and Microsoft virtualization solutions.

The competition

IBM

- Limited unified manageability
- Immature blades portfolio and I/O virtualization
- Custom engagements at a higher cost rather than proven methodology and best practices

Dell

- No scalable server focus
- Limited by dependence on third-party offerings
- Immature blades portfolio and I/O virtualization
- Limited services and support

EMC

- Focused on storage virtualization—no server infrastructure offering
- No unified manageability

Sun

- Incomplete server virtualization portfolio
- Little integration with other OS technologies
- Challenges in storage portfolio consolidation
- Lacks unified manageability

Why we win: the HP/Microsoft advantage

- HP and Microsoft offer end-to-end infrastructure solutions including virtualization and management software, servers, storage, networking, and blade technology.
- HP and Microsoft enable unified management of physical, virtual, and storage infrastructure using HP Systems Insight Manager and Microsoft System Center.

- HP provides complementary technologies such as HP Virtual Connect and HP StorageWorks SANs to extend the benefits of virtualization to networks and storage systems.
- By creating greater IT agility and better use of server resources, Microsoft Windows Server 2008 with Hyper-V provides the most flexible, robust Windows Server operating system to date, creating greater IT agility and better use of resources.

For more information

Resources/Support tools

HP

- Virtualization internal Web site
  http://intranet.hp.com/tsg/ww/bt/Pages/virtualization.aspx
- Virtualization external Web site
  www.hp.com/go/virtualization
- Sell Insight – tools to help you sell Insight software
  http://intranet.hp.com/tsg/WW2/ess-swmarketing/Pages/SellInsight.aspx
- HP BladeSystem Sales Toolkit
  http://intranet.hp.com/tsg/WW2/TSG_Sales/Bladesystem/Pages/index.aspx
- Storage virtualization
  http://h71028.www7.hp.com/enterprise/cache/456105-0-0-225-121.html
- Solution Demo Portal
  http://h20324.www2.hp.com/SDP/default.aspx

Microsoft

- Virtualization ROI Tool
  https://roianalyst.alinean.com/microsoft/virtualization/
- "Green" virtualization site
  www.hyper-green.com/
- Virtualization training tools
  www.microsoft.com/learning/virtualization, including offers for free training plus discounted reference works.

Technology for better business outcomes

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