The virtualization challenge

Forward-looking information technology (IT) organizations recognize that virtualization is one of the keys to increasing utilization of computing resources, reducing costs and improving IT agility. But along with these gains, virtualization brings its own set of management challenges. Without the right tools in place, virtualization technologies can increase management burdens and drain staff resources.

If you are facing these challenges, HP can help. HP ProLiant Essentials Virtual Machine Management Pack (VMM) offers a unified solution that streamlines the management of virtual resources within HP Systems Insight Manager (HP-SIM). This integrated offering provides a comprehensive solution for managing your entire infrastructure, including both physical and virtual servers, from a single console.

VMM is ideal for a wide range of projects that involve server virtualization. It can help you achieve more value from:

• Server consolidation and disaster recovery projects
• Test development and client consolidation projects
• Workload management projects and initiatives to extend the life of legacy environments

The HP solution

Unify management.

The HP ProLiant Essentials Virtual Machine Management Pack (VMM) gives customers greater efficiency, automation and better server utilization by extending HP-SIM capabilities to manage virtual machines.

VMM software provides central management and control of VMware and Microsoft® virtual machines. It accomplishes this with a wide range of capabilities, including:

• Physical host to virtual machine association
• Easy identification of virtual machines (VMs) or host servers reaching high central processing unit (CPU), memory or disk utilization levels
• Highly flexible move capabilities that allow live moves and moves to dissimilar host resources
• Backup, template and alternate host capabilities that enable restoration of VMs on any available host

Together, HP Systems Insight Manager and Virtual Machine Management Pack enable you to unify your physical and virtual server infrastructure and gain more value from your virtualization investments.
Key benefits

- **Increase operational efficiency**—Use a single console and the same processes to manage both physical and virtual servers. Manage more server resources with fewer people. Solve problems faster to increase system availability.

- **Improve return on investment (ROI) of virtualization**—Reduce downtime by proactively moving VMs from hosts with hardware issues before server failure occurs.

- **Optimize server workloads**—Increase server utilization by using highly flexible move and backup capabilities. Move virtual machines quickly and easily to servers with excess capacity.

Achieve the benefits of unified virtualization.

**Increase operational efficiency.**
Our unified virtualization management solution enables your organization to increase operational efficiency. You can now use a single console and the same familiar processes to manage both physical and virtual servers. This helps your team manage more server resources with fewer people and solve problems faster to increase system availability.

The HP solution helps you:
- Leverage common HP-SIM functions and processes for physical as well as virtual servers—discovery, identification, event notification and handling, role-based access to specific VMs or hosts, scheduling of tasks and group-based actions.
- Gauge the health of complete server infrastructure with a single view of the health status of physical servers and virtual machines with associated host server resources.
- Create and maintain virtual machine templates to create, clone, deploy and upgrade virtual machines to any physical host in a matter of minutes.

**Improve ROI of virtualization.**
There are many solutions available that allow you to quickly recover VMs once a host server has failed, but the VMs are still down during this recovery process. With HP-SIM and VMM, you can automatically initiate live moves of VMs on your VMware ESX 3.x host systems upon receiving a predictive hardware failure warning. This allows you to relocate the VMs to a healthy host while still running, practically eliminating downtime and allowing you to address the hardware problem on your schedule.

The HP solution enables you to:
- For ESX 3.x systems using Distributed Resource Scheduler (DRS), put the host system in maintenance mode, automatically evacuating the VMs to other hosts based on DRS settings.
- Use VMM’s Failed Host Recovery setting to designate an alternate host server in VMotion for each VM if DRS is not configured.
- Run in automatic mode or run manually when alerted of a hardware issue.

**Optimize server workloads.**
In many enterprise environments, the underutilization of server resources is a chronic problem. Reclaim underutilized resources with highly flexible move and backup capabilities that enable you to move virtual machines quickly and easily to servers with excess capacity.

With a unified HP solution, you can:
- Initiate VMware VMotion (live moves) from HP-SIM to optimize virtual machine workloads in high-availability situations.
- Initiate fast SAN-based moves (Stopped VM) to optimize workloads among any available hosts without worrying about the similarity of the hosts.
- Make informed decisions on workload optimization with at-a-glance views of the performance of the virtual machine and associated host server.
- Restore virtual machines from backups (that can be scheduled) to any available host.

**New features**
The latest Virtual Machine Management Pack adds a number of new features. Among these new capabilities:
- Automated actions to move VMs on VMware ESX based on predictive failure alerts from HP-SIM
- Ability to collect events from VMware ESX 3.x and VirtualCenter 2.x for alerting
- HP-SIM Alert thresholds for memory and network
- Launch integration with VMware VirtualCenter and Microsoft System Center Virtual Machine Manager
- Display of cluster and resource pool information from VirtualCenter on ESX host page
- VMM failover on a clustered HP-SIM central management server (CMS)
- More flexible certificate-based VMM agents

**Options**
Available options include:
- HP Insight Control Environment
- HP Rapid Deployment Pack for deployment of ESX and guest OS in VMs
## Technical specifications

### HP ProLiant Essentials Virtual Machine Management Pack

<table>
<thead>
<tr>
<th>Virtualization platform</th>
<th>Host operating system (OS)</th>
<th>Platforms</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Windows Server 2003 Enterprise Edition</td>
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<tr>
<td><strong>Microsoft Virtual Server 2005 R2</strong></td>
<td>Windows Server 2003 Standard Edition SP1</td>
<td>HP ProLiant ML, DL and blade servers and other x86 servers supported by Microsoft Virtual Server 2005 R2</td>
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<td>Windows Server 2003 Standard x64 Edition</td>
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<td>Windows Server 2003 R2 Standard Edition</td>
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<td>Windows XP Professional SP2</td>
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<td></td>
<td>Windows XP Professional x64 Edition</td>
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<td><strong>VMware GSX 3.1 and 3.2</strong></td>
<td>Windows 2000 Server</td>
<td>HP ProLiant ML, DL and blade servers and other x86 servers supported by VMware GSX</td>
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<td>Windows Server 2003 Enterprise Edition</td>
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<td><strong>VMware Server 1.0</strong></td>
<td>Windows 2000 Server</td>
<td>HP ProLiant ML, DL and blade servers and other x86 servers supported by VMware Server</td>
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<td>Windows Server 2003 Enterprise Edition</td>
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<td>Windows XP Professional</td>
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<td><strong>VMware ESX</strong></td>
<td>VMware ESX Server 2.5.3, 2.5.4, 2.5.5, 3.0, 3.0.1 and 3.0.2</td>
<td>HP ProLiant ML, DL and blade servers and other x86 servers supported by VMware ESX</td>
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### Ordering information

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<thead>
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<th>Product number/SKU</th>
<th>Description</th>
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<tr>
<td>T9083AAE</td>
<td>ProLiant Essentials Virtual Machine Management Pack License including 1 year of 24x7 Technical Support and Update Service, Electronic</td>
</tr>
<tr>
<td>Note: This part number is only available directly from HP and select resellers in the Americas region.</td>
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<td>452153-B21</td>
<td>ProLiant Essentials Virtual Machine Management Pack, No Media, 1-Server License including 1 year of 24x7 Technical Support and Update Service</td>
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<tr>
<td>452154-B21</td>
<td>ProLiant Essentials Virtual Machine Management Pack, No Media, Flexible-Quantity License including 1 year of 24x7 Technical Support and Update Service</td>
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<tr>
<td>452166-B21</td>
<td>ProLiant Essentials Virtual Machine Management Pack, No Media, Tracking License including 1 year of 24x7 Technical Support and Update Service</td>
</tr>
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Ordering information

HP ProLiant Essentials Virtual Machine Management Pack can be ordered several different ways:

• Stand-alone product
• Bundled with VMware from HP
• As part of HP Insight Control Environment for HP BladeSystem

For more information on ordering VMM stand-alone or bundled with VMware from HP, visit www.hp.com/go/vmmanage.

For more information on ordering HP Insight Control Environment for HP BladeSystem, including VMM, visit www.hp.com/go/insightcontrol.

Getting started

The VMM 3.0 plug-in is for HP Systems Insight Manager (version 5.1 SP1 and later) and is installed as a standard option in the HP Systems Insight Manager install process.

Five free, 60-day trial licenses are available for Virtual Machine Management Pack.

The software can be acquired through one of the following sources:

• Learn more and download the software at www.hp.com/go/vmmanage.
• Get additional trial licenses and software at www.hp.com/go/tryessentials.
• Obtain the software as part of a bundle that combines VMware and the HP ProLiant Virtualization Management Software offering.

For more information, please contact your local HP representative, or visit www.hp.com/go/vmmanage.

HP Services

To fully capitalize on the capabilities of your server and storage management solution, you need a service partner who thoroughly understands your IT environment and how it behaves in a multi-vendor environment. HP Services has those unique insights and provides a wide range of support services designed to help you get the most from your technology.

What’s included with my software purchase?

• Warranty—HP will replace defective delivery media for a period of 90 days from the date of purchase. This warranty applies to all Insight Control Management, HP Systems Insight Manager and ProLiant Essentials products.
• Software Technical Support and Update Service—Insight Control suites and select ProLiant Essentials software products include one year of 24x7 HP Software Technical Support and Update Service. With this service, you will receive expedited problem resolution as well as proactive notification and delivery of software updates. For more information, see www.hp.com/services/insight.

What if I want additional services?

• HP Service Essentials Remote Support Pack—This powerful electronic support solution, which easily plugs into System Insight Manager, streamlines proactive problem resolution with automated monitoring and fault diagnosis. Many issues that previously required the active involvement of your IT staff and/or onsite support calls can now be resolved automatically with this service upgrade.
• Software Technical Support HP Care Pack Service Support Extension—This optional service extends the 24x7 Software Technical Support and Update Service from one year to a total of three years. Take advantage of this opportunity to extend the length of your software support coverage to match that of your hardware support.
• Installation and Startup Care Pack Service—This customized service provides deployment and configuration of key features such as system monitoring and control, power management, remote control, performance management, vulnerability scanning and patch management. Pre-installation planning with an HP service specialist, installation and configuration of software components on a supported server, and an orientation session on product usage are included in this service.

For a complete listing of services and support, please visit www.hp.com/services/proliantessentialsservices.