VMware vSphere with Operations Management

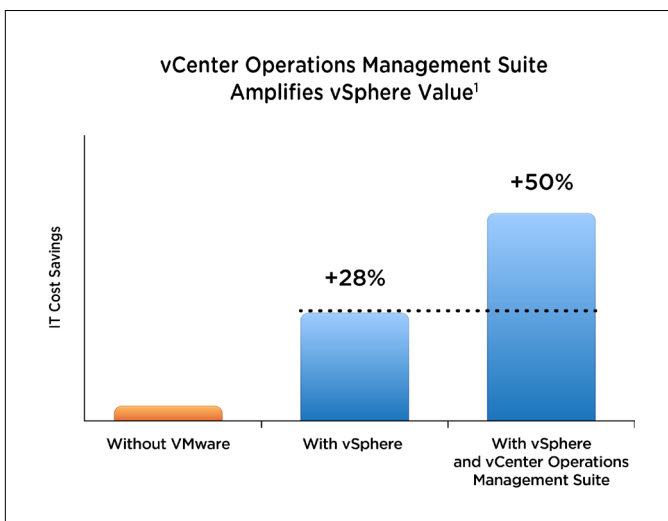**Our Answer to Anticipating Business Needs: Managed Virtualization**

Virtual infrastructure alone can help reduce customer IT costs. But when virtual infrastructure is combined with proactive operations management tools, customers can double their IT savings.[1]

VMware vSphere® with Operations Management™ helps aggregate workload data, apply predictive analytics and perform capacity planning. Customers can meet improved service-level agreements (SLAs), achieve infrastructure and application availability and gain higher resource utilization.

KEY BENEFITS

VMware vSphere in combination with operations management capabilities has enabled customers to[1]

• Reduce the downtime of applications by 36 percent

• Reduce diagnostics and problem resolution time by 26 percent

• Improve VMware capacity utilization by 40 percent and consolidation ratios by 37 percent

• Double the IT savings of vSphere

vCenter Operations Management Suite Amplifies vSphere Value[1]

What Is vSphere with Operations Management?

vSphere with Operations Management combines the world's leading virtualization platform with best-in-class management capabilities. This new solution enables users to gain operational insight into a vSphere environment while optimizing capacity. As vSphere environments continue to grow, users need proactive management that can deliver monitoring, performance and capacity information at a glance. This detailed analysis enables users to get the most out of the virtualization platform by reclaiming unused capacity, rightsizing virtual machines, improving utilization and helping to increase consolidation ratios.

Supporting more than 3,000 applications from more than 1,650 ISV partners, vSphere provides the broadest choice for virtualizing business-critical applications.

How Is vSphere with Operations Management Used?

• **Improve application performance and business continuity** – vSphere with Operations Management supports even the most resource-intensive applications to guarantee SLAs and availability. It reduces the cost and complexity of managing business continuity and disaster recovery with always-on IT capabilities and layered protection against service outages and data loss.

• **Simplify IT operations at a lower cost** – vSphere with Operations Management lowers operational overhead and dramatically simplifies the management of development, quality assurance and production IT environments that are large and geographically distributed.

• **Gain operational insight** – vSphere with Operations Management enables IT to respond to performance trends proactively. It collects and analyzes performance data, correlates abnormalities and identifies the root cause of building performance issues.

• **Optimize capacity** – vSphere with Operations Management makes it easier to manage and optimize capacity planning. Unused virtual machines can be reclaimed, and underprovisioned virtual machines can be rightsized, helping to make the most efficient use of resources.
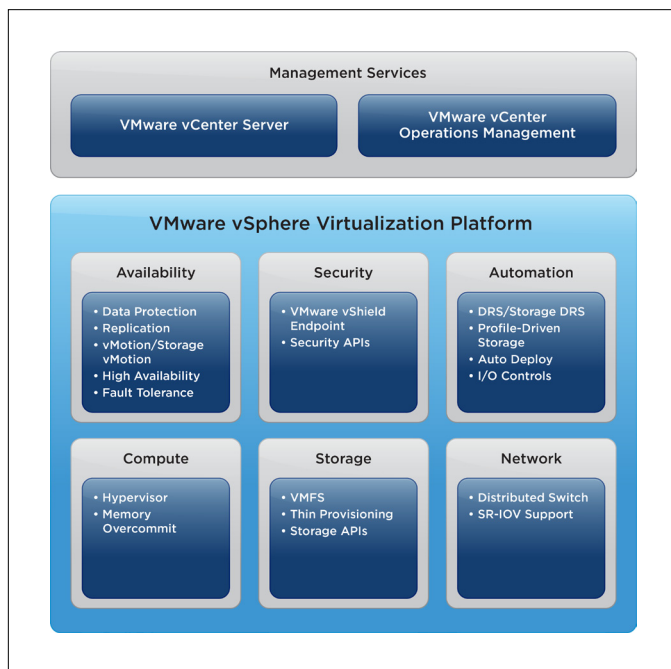
vSphere with Operations Management is available in three editions—Standard, Enterprise and Enterprise Plus—and in three vSphere with Operations Management Acceleration Kits.

1. Management Insights. "Quantifying the Incremental Value of vCenter Operations Management Suite for vSphere Customers," September 2012.

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Key Features and Components of vSphere with Operations Management

Virtualization Platform

• **VMware vSphere Hypervisor** architecture provides a robust, production-proven, high-performance virtualization layer. It enables multiple virtual machines to share hardware resources with performance that can match (and in some cases exceed) native throughput.

• **VMware vSphere Virtual Symmetric Multiprocessing** enables the use of ultrapowerful virtual machines that possess up to 8 virtual CPUs for the Standard edition, 32 virtual CPUs for the Enterprise edition and 64 virtual CPUs for the Enterprise Plus edition.

• **VMware virtual hardware** can support 1TB of RAM and a variety of next-generation hardware.

• **VMware vSphere Virtual Machine File System (VMFS)** allows virtual machines to access shared storage devices (Fibre Channel, iSCSI, etc.) and is a key enabling technology for other vSphere components such as VMware vSphere Storage vMotion®.

vSphere with Operations Management combines the world's leading virtualization platform with best-in-class management capabilities.

• **VMware vSphere storage APIs** provide integration with supported third-party data protection, multipathing and disk-array solutions.

• **VMware vSphere thin provisioning** provides dynamic allocation of shared storage capacity, enabling IT organizations to implement a tiered storage strategy while reducing storage spending by up to 50 percent.

• **VMware vSphere vMotion®** enables live migration of virtual machines between servers with no disruption to users or loss of service, eliminating the need to schedule application downtime for planned server maintenance.

• **VMware vSphere Storage vMotion** enables live migration of virtual-machine disks with no disruption to users, eliminating the need to schedule application downtime for planned storage maintenance or storage migrations.

• **VMware vSphere High Availability (HA)** provides cost-effective, automated restart within minutes for all applications if a hardware or operating system failure occurs.

• **VMware vSphere Fault Tolerance (FT)** provides continuous availability of any application in the event of a hardware failure—with no data loss or downtime.

• **VMware vSphere Data Protection™** provides simple, cost-effective backup and recovery for virtual machines. It is a newly architected solution based on EMC Avamar technology that enables agentless backups with built-in deduplication.

• **VMware vShield Endpoint™** secures virtual machines with offloaded antivirus and antimalware solutions without the need for agents inside the virtual machine.

Operations Management

• **Health monitoring and performance analytics** help anticipate performance bottlenecks and enable vSphere infrastructure health with patented self-learning analytics.

• **Capacity management and optimization** ensure that capacity consumption is rightsized and not overprovisioned to provide the most efficient use of virtualized resources.

• **Operations dashboards and root-cause analysis** provide intuitive operations dashboards and actionable recommendations.

Additional Components Available in Enterprise Edition

• **VMware vSphere Distributed Resource Scheduler™** provides dynamic, hardware-independent load balancing and resource allocation for virtual machines in a cluster, using policy-driven automation to reduce management complexity while meeting SLAs.

• **VMware vSphere Distributed Power Management™** automates energy efficiency in vSphere Distributed Resource Scheduler clusters by continuously optimizing server power consumption within each cluster.

Additional Components Available in Enterprise Plus Edition
(also inclusive of Enterprise Edition Components listed earlier)

• **VMware vSphere Distributed Switch** simplifies and enhances virtual-machine networking in vSphere environments and enables those environments to use third-party distributed virtual switches.

• **VMware vSphere Storage I/O Control and VMware vSphere Network I/O Control** set storage and network quality-of-service priorities for guaranteed access to resources.

• **VMware vSphere Auto Deploy™** performs quick, as-needed deployment of additional vSphere hosts. When vSphere Auto Deploy is running, it pushes out update images, eliminating patching and the need to schedule patch windows.

• **VMware vSphere host profiles** help IT administrators simplify host deployment and compliance.

• **VMware vSphere Storage DRS™ automated load balancing** uses storage characteristics to determine the best place for a virtual machine's data to reside, both when it is created and when it is used over time.

• **vSphere profile-driven storage** reduces the steps in the selection of storage resources by grouping storage according to a user-defined policy.

Customer Success Stories

Marshall University, the oldest public institution of higher learning in West Virginia, has leveraged vSphere to extend the life of an overcrowded data center while reducing IT expenditures and accelerating server provisioning time.
Read the Marshall University success story:
http://www.vmware.com/go/customer_success/marshall_u.

EGIS Nyrt., one of the leading pharmaceutical manufacturers in the Central Eastern European region, has used vSphere to consolidate the number of servers managed and has virtualized its business-critical applications to help improve performance and uptime.
Read the EGIS success story:
http://www.vmware.com/go/customer_success/EGIS_Nyrt.

QIC, one of Australia's largest institutional investment managers, has used vSphere to virtualize 80 percent of its Microsoft Windows Server production servers. The company not only has streamlined its infrastructure; it also has leveraged the backup and recovery capabilities of vSphere to further its disaster-recovery and business-continuity planning.
Read the QIC success story:
http://www.vmware.com/go/customer_success/QIC.

Additional vSphere Products and Add-Ons

VMware vCenter Server™ provides unified management for the entire virtual infrastructure and enables many key vSphere capabilities, such as live migration. vCenter Server can manage thousands of virtual machines across multiple locations and streamlines administration with features such as rapid provisioning and automated policy enforcement.

Note: vCenter Server is a required element of a complete vSphere implementation and is licensed separately on a per-instance basis.

Support and Professional Services

VMware offers global support and subscription (SnS) services to all vSphere customers. For customers requiring additional services, VMware also offers professional services engagements on best practices and getting started with your vSphere deployment, both directly and through an extensive network of certified professionals: http://www.vmware.com/services/.

How to Buy

To purchase vSphere, use the online VMware Partner Locator to find an authorized reseller in your area: http://partnerlocator.vmware.com/.

You can also visit the online VMware store to determine which kit or edition of vSphere is right for your organization: http://www.vmware.com/vmwarestore/datacenter-products/.

If you are an existing vSphere or VMware Infrastructure™ customer, visit the vSphere Upgrade Center to determine the appropriate upgrade path for your organization: http://www.vmware.com/products/vsphere/upgrade-center/.

For organizations that are new to virtualization, VMware offers solution bundles called vSphere Acceleration Kits that combine a vSphere edition with vCenter Server. They are available for up to 30 percent off the list price: http://www.vmware.com/vmwarestore/buyvsphere-acceleration-kits.html.

VMware vCloud Suite

Building on VMware vSphere Enterprise Plus Edition™, VMware vCloud® Suite delivers a complete, integrated cloud infrastructure suite that simplifies IT operations while delivering the best SLAs for all applications. vCloud Suite includes the entire set of cloud infrastructure capabilities: virtualization, software-defined data center services, policy-based provisioning, disaster recovery, application management and operations management.

Find Out More

For information or to purchase VMware products, call 877-4-VMWARE (outside North America, +1-650-427-5000), visit http://www.vmware.com/products or search online for an authorized reseller. For detailed product specifications and system requirements, refer to the vSphere documentation.