

VMware vSphere with Operations Management

AT A GLANCE

Virtualizing helps prevent costly infrastructure sprawl. However, users are plagued by capacity management and performance monitoring challenges as they expand their virtualization footprint.

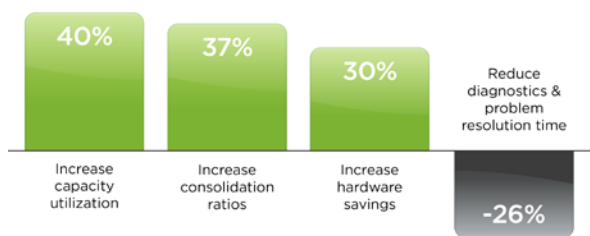
VMware vSphere® with Operations Management™ is the next iteration of the market-leading virtualization platform that powers the Fortune 500. With vSphere with Operations Management, users can now use a single pane of glass to optimize capacity and monitor workload performance. Customers can meet improved service-level agreements (SLAs), achieve infrastructure and application availability, and gain higher resource utilization.

KEY BENEFITS

VMware vSphere with Operations Management has enabled customers to achieve incremental benefits beyond running vSphere alone¹:

- Increase capacity utilization by 40 percent and consolidation ratios by 37 percent
- Increase hardware savings by 30 percent
- Reduce diagnostics and problem resolution time by 26 percent

Benefits of Running vSphere with Operations Management Impact beyond running vSphere alone



Source: Sept 2012 Management Insights Study

What is vSphere with Operations Management?

vSphere with Operations Management offers the world's leading virtualization platform with insight to IT capacity and performance. As vSphere environments continue to grow, users require visibility into their workload capacity and performance to ensure resources are being utilized efficiently and prevent emerging performance problems from impacting the business. vSphere with Operations Management enables users to get the most out of the virtualization platform by reclaiming unused capacity, rightsizing virtual machines, improving utilization and increasing consolidation ratios.

Supporting more than 3,000 applications from more than 2,000 ISV partners, vSphere with Operations Management 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
- **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.
- **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 within your virtualized infrastructure.

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.

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 ultra-powerful virtual machines that possess up to 64 virtual CPUs.
- **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
- **Capacity Optimization** ensures virtual machines are right-sized for the most efficient use of virtualized resources.
 - **vSphere Monitoring** uses patented, self-learning analytics to anticipate and identify performance bottlenecks.
 - **Operations Visibility** provides intuitive operations dashboards with actionable recommendations to reduce time spent on diagnostics and problem resolution.
- ### 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.
 - **VMware vSphere Reliable Memory** places critical vSphere components (such as the hypervisor) into memory regions identified as “reliable” on supported hardware. This further protects components from an uncorrectable memory error.
 - **VMware vSphere Big Data Extensions** run Hadoop on vSphere to achieve higher utilization, reliability and agility. vSphere Big Data Extensions support multiple Hadoop distributions and make it seamless for IT to deploy, run and manage Hadoop workloads on one common platform.

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™** automates load balancing by using 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.
- **VMware vSphere Profile-Driven Storage** reduces the steps in the selection of storage resources by grouping storage according to a user-defined policy.
- **VMware vSphere Flash Read Cache** virtualizes server-side flash providing a high performance read cache layer that dramatically lowers application latency.
- **vSphere App HA** adds a new level of availability that allows vSphere to detect and recover from application or OS failure. Supports the most common applications on the market and can extend to the VMware ecosystem through its APIs.

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 with Operations Management, 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 with Operations Management 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 with Operations Management Acceleration Kits that combine a vSphere with Operations Management edition with vCenter Server. <http://www.vmware.com/products/vsphere-operations-management/compare.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 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.

