

# VMware vSphere with Operations Management

## AT A GLANCE

### Virtualizing with the Industry Leading Platform

Virtualizing helps prevent costly infrastructure sprawl. As users expand their virtualization footprint, choosing a reliable virtualization platform to run business-critical applications, scale-up and scale-out applications, maximize ROI of hardware investments, and improve performance while avoiding disruption is critical.

VMware vSphere with Operations Management delivers vSphere, the industry leading virtualization platform, optimized with critical capacity management and performance monitoring capabilities. This offers the next level of insight into your virtual data center. It is designed for businesses of all sizes to run applications at high service levels and maximize hardware savings through higher capacity utilization and consolidation ratios.

## KEY BENEFITS

On average, customers see tremendous benefits beyond using vSphere alone<sup>1</sup>:

- 30 percent reduction in application downtime
- 36 percent increase in consolidation ratios, 34 percent increase in capacity utilization and 30 percent increase in hardware savings
- 26 percent decrease in time spent on troubleshooting issues

<sup>1</sup>Management Insights. "Study Shows Businesses Experience Significant Operational and Business Benefits from VMware vCenter Operations Management Suite," 2014.

## What is vSphere with Operations Management?

VMware vSphere with Operations Management delivers vSphere, the industry leading virtualization platform, optimized with critical capacity management and performance monitoring capabilities. This offers the next level of insight into your virtual data center. It is designed for businesses of all sizes to run applications at high service levels and maximize hardware savings through higher capacity utilization and consolidation ratios. IT can gain visibility into virtual environments, proactively identify and remediate emerging performance issues, and optimize resource utilization through a unified console.

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 and scale-up / scale-out applications.



The industry leading and most trusted virtualization platform provides critical operational enhancements in performance monitoring and capacity management.

## How is vSphere with Operations Management Used?

- **Deliver application availability and performance** – vSphere with Operations Management provides availability services and policies with simplicity and flexibility for any application, from legacy to next-gen applications (Hadoop) that require intense resources. The platform can be tuned to meet the performance needs of low-latency applications (e.g., in-memory databases).
- **Provide cost-effective data protection and services** – vSphere with Operations Management reduces the cost and complexity of managing business continuity and disaster recovery with layered protection against service outages and data loss. The platform provides fast, efficient backup and recovery for virtual machines, in addition to replicating a running virtual machine to another location.
- **Identify and remediate emerging system issues** – vSphere with Operations Management provides a comprehensive view into what is driving current and future performance issues. Predictive analytics and Smart Alerts on virtualized IT health enable proactive identification and remediation of system issues, while dynamic thresholds automatically adapt to environments to provide fewer and more specific alerts.
- **Optimize infrastructure capacity** – vSphere with Operations Management makes it easier to manage and optimize capacity planning. Reclaim overprovisioned capacity, increase resource utilization, and eliminate the need for scripts and spreadsheets.
- **OpenStack API Integration** – leverage VMware Integrated OpenStack with your existing vSphere with Operations Management expertise and Infrastructure to provide developers with OpenStack API's. VMware Integrated OpenStack is included with vSphere with Operations Management ENT+. Support for VMware Integrated OpenStack is optional and can be purchased separately. [Find out more here](#)

vSphere with Operations Management is available in three editions—Standard, Enterprise, and Enterprise Plus—and in three vSphere with Operations Management Acceleration Kits for net new customer sites.

## 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 128 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®.
- **VMware vSphere Storage APIs** provide integration with supported third-party data protection, multipathing and disk array solutions.
- **Virtual Volumes** - enables abstraction for external storage (SAN and NAS) devices making them VM-aware.
- **Storage-Based Policy Management** - allows common management across storage tiers and dynamic storage class of service automation via a policy-driven control plane.
- **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 for workloads up to 4-vCPU.
- **VMware vSphere Data Protection™** delivers storage-efficient backups through patented variable-length deduplication, rapid recovery and WAN-optimized replication for DR. Its vSphere-integration and simple user interface makes it an easy and effective backup tool for vSphere with Operations Management
- **VMware vSphere Replication™** is the only hypervisor-based replication engine for vSphere. It performs storage-agnostic replication of virtual machines with flexible RPOs as low as 15 min. Integrates with vCenter Site Recovery Manager (sold separately) to enable scalable, automated disaster recovery orchestration. [Find out more here.](#)
- **vShield Endpoint™** – secures VMs with offloaded antivirus and antimalware (AV) solutions without the need of agents inside the virtual machine
- **Hot Add** - increase capacity by adding CPU, memory or devices to virtual machines when needed, without disruption or downtime.

**Intelligent Operations** (features also available in VMware® vRealize Operations Standard Edition)

- **Predictive Analytics** uses self-learning algorithms and Smart Alerts to automatically analyze monitoring data and identify and avoid performance and capacity issues.
- **Automation and Guided Remediation** automate common actions through association with Smart Alerts to reduce mean time to incident (MTTI) and mean time to resolution (MTTR). For example, these workflows can be used to automatically delete old VM snapshots when available capacity falls below a critical threshold.
- **Unified console** displays key performance indicators in easily identifiable colored badges and provides a comprehensive view into what is driving current and potential future performance and capacity management issues.
- **Automated capacity optimization** reclaims overprovisioned capacity, increases resource utilization and eliminates the need for scripts and spreadsheets. Flexible capacity modeling scenarios facilitate capacity optimizations and help plan for resources according to SLAs.
- **vSphere Hardening** - ability to check against vSphere Hardening guidelines

### 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, further protecting components from an uncorrectable memory error.
- **VMware vSphere Big Data Extensions™** run Hadoop on vSphere to achieve higher utilization, reliability and agility. This supports multiple Hadoop distributions and makes it seamless for IT to deploy, run and manage Hadoop workloads on one common platform.
- **Storage API for Array Integration, Multipathing** - improve performance, reliability and scalability by leveraging efficient array-based operations as well as third-party storage vendor multi-path software capabilities.

### Additional Components Available in Enterprise Plus Edition

- **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 hosts. vSphere Auto Deploy pushes out updated 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.
- **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 to provide 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. This supports the most common applications and can extend to the VMware ecosystem through its APIs.
- **Cross-vCenter vMotion** - enables live migration across vCenter Servers 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.
- **Long-Distance vMotion** - enables live migration over long distances (up to 100 milliseconds round trip time) 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.
- **NVIDIA vGPU** - enables native 2D and 3D graphics performance for virtual machines
- **Content Library** - provides simple and effective centralized management for VM templates, virtual appliances, ISO images and scripts

## Customer Success Stories

The Waddington Group is a major global packaging manufacturer and marketer. Over the past few years, the company has experienced explosive growth, and it's been a challenge for IT team to keep up. Waddington Group deployed vSphere with Operations Management in order to achieve agility and scale quickly to meet business demands. Within a short period of time they reduced time spent integrating backend systems by more than 80 percent, improved consolidation ratios by 52 percent and increased data center efficiency by 34 percent.

[Read full story here.](#)

[Watch how The Waddington Group benefited](#)

Founded in 1988, Cornerstone Home Lending, Inc. is a privately owned mortgage bank that funds over \$5 billion in annual loans. In order to drive down IT costs and improve agility and scalability of its IT platform to support business growth, Cornerstone deployed vSphere with Operations Management and achieved 70 percent reduction in hardware costs, gained comprehensive visibility into IT, improved resource planning to better inform IT investments and decision-making, and reduced time spent on identifying and resolving system issues.

[Read the full story here.](#)

[Watch how Cornerstone uses vSphere with Operations Management here.](#)

Millennium Pharmacy Systems delivers pharmaceutical supply chain services to 225 nursing care facilities in the United States and is dependent on IT systems that must run 24/7. Millennium faced growing economic pressures to drive down costs and inefficient, de-centralized management of its IT infrastructure. It implemented vSphere with Operations Management within a day and achieved 25% efficiency increase through fewer resources delivering more value, 20% increase in VM density, and 20% decrease in operational costs.

[Read the full story here.](#)

[Watch the story here.](#)

## Additional Products and Add-Ons

**VMware vRealize™ Operations Insight™** is an IT operations and log management solution for businesses of all sizes using vSphere with Operations Management, who are concerned about application downtimes, return on IT investment, and budgets. vRealize Operations Insight is a unified management solution for performance management, capacity optimization, and real-time log analytics, using predictive analytics leveraging both structured data and unstructured log files, for proactive issue avoidance and faster problem resolution. It extends intelligent operations management beyond vSphere environments to include operating systems, physical servers, storage and networking hardware, and is supported by an

extensive marketplace of extensions for third-party tools, including those for Microsoft SCOM, Oracle and other technologies. [Find out more here.](#)

**VMware vCenter Server™** provides centralized management for a vSphere-based virtual infrastructure, enabling many key vSphere with Operations Management 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 with Operations Management implementation and is licensed separately on a per instance basis. [Find out more here.](#)

## Support and Professional Services

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

## 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 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 all-in-one solutions called vSphere with Operations Management Acceleration Kits. These combine 6 CPU licenses of a vSphere with Operations Management edition with vCenter Server: <http://www.vmware.com/products/vsphere-operations-management/compare.html>.

## 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 with Operations Management documentation.

