



# VMware vSphere and vSphere with Operations Management

Licensing, Pricing and Packaging

WHITE PAPER

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## Executive Summary

This guide provides an overview of the licensing, pricing, and packaging for VMware vSphere® 6 and VMware vSphere with Operations Management™ 6.2. The key topics discussed in this guide include:

- VMware vSphere and vSphere with Operations Management Overview
- Licensing Overview – Licensing metric and license management
- Packaging Overview – Packaging options for editions (including VMware vCenter Server™) and kits
- Version Upgrade Entitlements for Existing Customers
- Paid Edition Upgrades from VMware vSphere 6 and VMware vSphere with Operations Management 6.2

## VMware vSphere and vSphere with Operations Management Overview

vSphere is the leading server virtualization platform with consistent management for virtual data centers. It delivers business value from day one with powerful server virtualization, breakthrough availability, safe automated management and intelligent operational insight that adapts to your environment. vSphere automates workload placement and resource optimization based on preset customizable templates.

vSphere with Operations Management offers the most trusted virtualization platform with critical operational enhancements in performance monitoring and capacity management. 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. On average, customers see tremendous benefits beyond using vSphere alone: 36 percent reduction in application downtime, 30 percent increase in hardware savings, and 26 percent decrease in time spent on troubleshooting issues<sup>1</sup>.

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1. Source: Management Insight Technologies (2014). The Benefits of VMware's vCenter Operations Management Suite: Quantifying the Incremental Value of the vCenter Operations Management Suite for vSphere Customers.

## Licensing Overview

### VMware vSphere 6 and vSphere with Operations Management 6.2 Licensing: Per-Processor

vSphere 6 and vSphere with Operations Management 6.2 is licensed on a per-processor basis. Each physical processor (CPU) in a server needs to have at least one processor license key assigned to be able to run vSphere or vSphere with Operations Management. vSphere 6 and vSphere with Operations Management 6.2 license keys can be purchased, deployed and managed in the same way they were with vSphere 4.x, vSphere 5.x and vSphere with Operations Management 6.2.

#### No Limits on Physical Resources

There are no restrictions on physical cores or physical RAM with vSphere 6 and vSphere with Operations Management 6.2.

#### No Limits on Number of Virtual Machines

There are no restrictions on the number of virtual machines that can run on each properly licensed vSphere 6 and vSphere with Operations Management 6.2 processor.

#### VMware vSphere 6 for Virtual Desktop Deployments

VMware vSphere Desktop is specifically designed for licensing vSphere when used to run virtual desktops. It can only be used as a virtualization platform for Virtual Desktop Infrastructure (VDI) deployments with either VMware Horizon® View™ or third-party connection brokers. For more details, see the Packaging Overview section.

#### Two Components Under a Single License

VMware vSphere with Operations Management 6.2 combines two components (vSphere and VMware vRealize® Operations™ Standard) into a single product with a single license. All virtual machines running on a properly licensed VMware vSphere with Operations Management processor can use all components. vSphere with Operations Management is not decomposable: the two components of a vSphere with Operations Management edition behave as a single entitlement. Upgrades occur on an edition basis or through add-ons only – vSphere and VMware vRealize Operations components cannot be upgraded independently.

## License Management

VMware vSphere 6 and vSphere with Operations Management 6.2 licenses are simple license keys (25-character alphanumeric strings) that contain encrypted information about the vSphere or vSphere with Operations Management edition or kit purchased and the processor quantity. These license keys do not contain any server-specific information and are not tied to a specific piece of hardware. This means that the same license key can be assigned to multiple vSphere and vSphere with Operations Management hosts, as long as the sum of physical processors on those hosts does not exceed the encoded license quantity in the license key.

### Centralized Licensing with No Single Point of Failure

VMware vCenter Server is the recommended interface for license assignment to vSphere and vSphere with Operations Management hosts. When a license key is assigned by vCenter Server, it is copied to the host and saved in a persistent format. If the host becomes disconnected from vCenter Server, the license key remains active on the host indefinitely, even after a host reboot. Only a deliberate licensing operation by the user can remove or replace a host license key.

### Decentralized Licensing Option

VMware recommends that customers assign all vSphere and vSphere with Operations Management licenses centrally through VMware vCenter Server.

However, vSphere customers have the option to assign their license keys directly to individual hosts. There is no difference between directly and centrally assigned license keys. When a vSphere or vSphere with Operations Management host is added to the vCenter Server inventory, any license key already on the host will become available for management, reporting and assignment in vCenter Server, just like any license key added directly via vCenter Server. For more information on licensing, visit <http://www.vmware.com/support/licensing.html>.

### Example: Licensing New Hosts with vSphere with Operations Management 6.2

A user has two 2-CPU (each with 6 cores) hosts with 128GB of physical RAM each that they wish to license with vSphere with Operations Management 6.2 Enterprise Plus edition. Each physical CPU requires a license, so four vSphere with Operations Management 6.2 Enterprise Plus licenses are required. No additional licenses will be needed regardless of the number of virtual machines, amount of virtual memory (vRAM) or physical cores or RAM.

## Packaging Overview

VMware offers several packaging options that are designed for customers to meet their specific requirements for scalability, size of environment, and use cases.

### vSphere and vSphere with Operations Management Editions

Customers can choose from three editions of vSphere and vSphere with Operations Management (see Figure 1). A Support and Subscription (SnS) contract is required for every edition purchase.

**vSphere Standard Edition** provides an entry-level solution for basic server consolidation to slash hardware costs while accelerating application deployment.

**vSphere Enterprise Plus Edition** offers the full range of vSphere features for transforming data centers into dramatically simplified cloud infrastructures, for running today's applications with the next generation of flexible, reliable IT services.

**vSphere with Operations Management Enterprise Plus Edition** offers the full range of vSphere features for transforming data centers into dramatically simplified virtualized infrastructures, for running today's applications with the next generation of flexible, reliable IT services. Best in class management capabilities allow IT to gain visibility into virtual environments, proactively identify and remediate emerging performance issues, and optimize resource utilization through a unified console.

For information on local currency prices for vSphere and vSphere with Operations Management Editions, visit: <http://www.vmware.com/products/datacenter-virtualization/vsphere/pricing.html>

	VSPHERE		VSPHERE WITH OPERATIONS MANAGEMENT
	Standard	Enterprise Plus	Enterprise Plus
<b>Features</b>			
Hypervisor	•	•	•
vMotion®, Storage vMotion and X-Switch vMotion	•	•	•
High Availability and Fault Tolerance	2 vCPU	4 vCPU	4 vCPU
Data Protection™ and Replication¹	•	•	•
vShield Endpoint™	•	•	•
Virtual Volumes and Storage-Policy Based Management	•	•	•
APIs for Storage Awareness	•	•	•
APIs for Array Integration, Multipathing	•	•	•
Distributed Resource Scheduler™ and Distributed Power Management™		•	•
Big Data Extensions		•	•
Distributed Switch™		•	•
Storage DRS™		•	•
I/O Controls (Network and Storage) and SR-IOV		•	•
Host Profiles and Auto Deploy		•	•
Flash Read Cache™		•	•
Cross-vCenter and Long Distance vMotion		•	•
Content Library		•	•
vGPU		•	•
vSphere Monitoring*			•
Capacity Optimization*			•
Operations Visibility*			•

Figure 1. vSphere 6 and vSphere with Operations Management 6.2 Editions

\* vSphere Monitoring, Capacity Optimization, and Operations Visibility are found also in VMware vRealize™ Operations™ Standard

¹ Advanced backup features (app-aware agents, replication, integration with Data Domain, etc.) are now available in vSphere Data Protection™

## VMware Integrated OpenStack

vSphere Enterprise Plus and vSphere with Operations Management Enterprise Plus customers can use VMware Integrated OpenStack free of charge. Optional support for VMware Integrated OpenStack is sold separately on a per CPU basis. For more information, visit <http://www.vmware.com/products/openstack.html>.

## VMware vSphere Hypervisor

VMware vSphere Hypervisor is a free product that provides a simple and easy way to get started with virtualization at no cost. vSphere Hypervisor provides only basic virtualization capabilities, allowing customers to virtualize servers and run applications in virtual machines in a matter of minutes. vSphere Hypervisor cannot connect to vCenter Server and therefore cannot be centrally managed. Users can remotely manage individual vSphere Hypervisor hosts using the vSphere Client.

There are no restrictions on the number of cores per physical CPU, on the number of physical CPUs per host and on the amount of RAM per server/ host. The maximum vCPUs per virtual machine is eight.

## VMware vSphere Desktop

vSphere Desktop Edition is a vSphere Edition designed for licensing vSphere in VDI deployments. vSphere Desktop provides all functionalities of vSphere Enterprise Plus Edition™. It can only be used for VDI deployment and can be leveraged with both VMware Horizon View and other third-party VDI connection brokers.

vSphere Desktop edition is licensed based on the total number of powered-on desktop virtual machines and can be purchased either stand-alone in a pack size of 100 desktop virtual machines or included with the Horizon View bundle. For detailed information on pricing visit: <http://www.vmware.com/products/view/howtobuy.html>

## vSphere and vSphere with Operations Management Acceleration Kits

vSphere and vSphere with Operations Management Acceleration Kits are all-in-one convenience bundles that provide a simple way for customers to purchase all the necessary components to set up a new VMware environment (see Figure 2). Each kit consists of six processor licenses for vSphere or vSphere with Operations Management, and a license for one instance of vCenter Server Standard.

Unlike the Essentials Kits and VMware vSphere 4.x Acceleration Kits that function as single entity, vSphere and vSphere with Operations Management Accelerations Kits decompose into their individual kit components after purchase. This allows customers to upgrade and renew SnS for each individual component on its own schedule. Visit <http://www.vmware.com/vmwarestore> or contact your local reseller for more specific information on the latest available Acceleration Kit offerings.

## VMware vSphere Essentials Kits

VMware vSphere Essentials Kits are all-in-one solutions for small environments (up to three hosts with two CPUs each) available in

two editions— Essentials and Essentials Plus (see Figure 2). Each kit consists of six processor licenses for vSphere, and a license for one instance of vCenter Server Essentials. Scalability limits for the Essentials Kits are product-enforced and cannot be extended other than by upgrading the whole kit to an Acceleration Kit (see Paid Edition Upgrades section below). vSphere Essentials and Essentials Plus Kits are self-contained solutions and may not be decoupled, or combined with other vSphere editions.

vSphere Essentials Kit is an all-in-one solution ideal for small offices. It enables consolidation and management of applications to reduce hardware and operating costs—all with a low upfront investment. Essentials must be purchased along with a one-year subscription to software patches and updates. Support is optional and available on a per-incident basis.

vSphere Essentials Plus Kit adds features such as vSphere vMotion®, vSphere HA, and vSphere Data Protection™ to vSphere Essentials to enable always-on IT for the small environment. Essentials Plus is ideal for small businesses that, in addition to hardware and operation cost savings, are looking for maximization of application availability and business continuity with a low upfront investment. SnS for Essentials Plus is sold separately. A minimum of one year of SnS is required.

	vSPHERE ESSENTIALS KITS		vSPHERE ACCELERATION KITS		vSPHERE WITH OPERATIONS MANAGEMENT ACCELERATION KITS
	Essentials	Essentials Plus	Standard	Enterprise Plus	Enterprise Plus
<b>Includes</b>					
vSphere	6 CPUs	6 CPUs	6 CPUs	6 CPUs	6 CPUs
vCenter Server	1 instance vCenter Server Essentials	1 instance vCenter Server Essentials	1 instance vCenter Server Standard	1 instance vCenter Server Standard	1 instance vCenter Server Standard
<b>Features</b>					
Hypervisor	•	•	•	•	•
vMotion and X-Switch vMotion		•	•	•	•
High Availability		•	•	•	•
Data Protection™ and Replication <sup>1</sup>		•	•	•	•
vShield Endpoint		•	•	•	•
Fault Tolerance			2 vCPU	2 vCPU	4 vCPU
Storage vMotion			•	•	•
Virtual Volumes and Storage-Policy Based Management			•	•	•
APIs for Storage Awareness			•	•	•
APIs for Array Integration, Multipathing			•	•	•
Distributed Resource Scheduler™ and Distributed Power Management™				•	•
Big Data Extensions				•	•
Distributed Switch™				•	•
Storage DRS™				•	•

	vSPHERE ESSENTIALS KITS		vSPHERE ACCELERATION KITS		vSPHERE WITH OPERATIONS MANAGEMENT ACCELERATION KITS
I/O Controls (Network and Storage) and SR-IOV				•	•
Host Profiles and Auto Deploy				•	•
Flash Read Cache™				•	•
Cross-vCenter and Long Distance vMotion				•	•
Content Library				•	•
vGPU				•	•
vSphere Monitoring*					•
Capacity Optimization*					•
Operations Visibility*					•

**Figure 2.** vSphere 6 Essentials Kits, vSphere 6 Acceleration Kits and vSphere with Operations Management 6 Acceleration Kits  
 \*vSphere Monitoring, Capacity Optimization, and Operations Visibility are found also in VMware vRealize™ Operations™ Standard  
 † Advanced backup features (app-aware agents, replication, integration with Data Domain, etc.) are now available in vSphere Data Protection™

## VMware vSphere Remote Office Branch Office

VMware vSphere Remote Office Branch Office™ Standard and vSphere Remote Office Branch Office Advanced are new vSphere editions designed specifically for IT infrastructure located in remote, distributed sites and deliver improved service-levels, standardization, availability and compliance. These editions include 25 Virtual Machine (VM) licenses of the new vSphere Remote Office Branch Office Standard or vSphere Remote Office Branch Office Advanced. The flexible per VM pricing model also allows customers to deploy only the number of workloads they require in each remote site. Customers can deploy a maximum of 25 VMs per Remote Office Branch Office site. Server hosts can be managed by vCenter Server Foundation or vCenter Server Standard purchased separately.

**vSphere Remote Office Branch Office Standard** enables highly available IT infrastructure in the remote sites. This edition includes vMotion, High Availability, Data Protection and Replication, Hot Add, vShield Endpoint, Fault Tolerance, Storage vMotion, Virtual Volumes™ and Storage-Policy Based Management.

**vSphere Remote Office Branch Office Advanced** enables rapid provisioning of servers, minimization of host configuration drift and enhanced visibility into regulatory compliance, across multiple sites. This edition includes vMotion, High Availability, Data Protection and Replication, Hot Add, vShield Endpoint, Fault Tolerance, Storage vMotion, Virtual Volumes, Storage-Policy Based Management, Host Profiles, Autom Deploy and Distributed Switch.

For information on local currency prices for vSphere Editions and Kits visit: <http://www.vmware.com/products/datacenter-virtualization/vsphere/pricing.html>.

## vCenter Server Editions

vCenter Server provides unified management for vSphere environments and is a required component of a complete vSphere deployment. One instance of vCenter Server is required to centrally manage virtual machines and their hosts and to enable all vSphere features.

vCenter Server is available in the following packages:

- vCenter Server Essentials – Integrated management for vSphere Essentials Kits
- vCenter Server Standard - Highly scalable management with rapid provisioning, monitoring, orchestration and control of all virtual machines in a vSphere environment. **Now includes 25 Operating System Instances (OSIs) of vRealize Log Insight for vCenter Server.**

vCENTER SERVER		
	Essentials	Standard
Number of hosts	Up to 3	Unlimited
vSphere licensed managed	vSphere Essentials and vSphere Essentials Plus	vSphere Standard, vSphere Enterprise Plus, vSphere with Operations Management Enterprise Plus, and vCloud Suite

**Figure 3.** vCenter Server Essentials and vCenter Server Standard

For information on local currency prices for vCenter Server Editions visit: <http://www.vmware.com/products/datacenter-virtualization/vsphere/pricing.html>.

## Version Upgrade Entitlements for Existing Customers

vSphere customers with an active SnS contract are entitled to version upgrade to vSphere 6 at no extra charge. All version upgrades to vSphere 6 require acceptance of the new end-user licensing agreement (EULA) and vSphere 6 licensing model.

Visit the vSphere Upgrade Center for more information and to determine the appropriate upgrade path for your organization: <http://www.vmware.com/products/vsphere/upgrade-center/overview.html>.

### Version downgrades for vSphere and vSphere with Operations Management

- vSphere can version downgrade.
- vSphere with Operations Management cannot version downgrade the vSphere component to 4.x or prior. Customers can choose to run any vSphere 5.x or 6.0 version (downgrade via My VMware portal) and any vRealize Operations Standard 5.6-6.0 version (via static key available in product download group).
- VMware vSphere Remote Office Branch Office can version downgrade from 6.0 to 5.5U2. vCenter Server needs to be at the same version or above than the ESX™ host. For example, if the ESX version is 5.5U2, vCenter Server needs to be 5.5U2 or above.

### Reinstatement Options for Customers with Inactive SnS Contracts

Customers who have an expired SnS must pay reinstatement fees to purchase supported upgrades. Reinstatement fees are based on the following criteria:

- The applicable SnS fees for the current contract term
- Fees that would have been paid for the period of time that the customer's SnS contract was not active
- A 20 percent fee on the sum of the fees in the preceding two criteria

## Paid Edition Upgrades

Customers may purchase and upgrade to a higher vSphere or vSphere with Operations Management edition. For example, vSphere Standard customers may upgrade to vSphere Enterprise Plus or vSphere with Operations Management Enterprise Plus. When customers upgrade supported licenses to a higher edition, the original license key is deactivated and a new license key is issued for the upgraded edition. A SnS contract for the edition upgraded to must be purchased at time of upgrade purchase. This new SnS contract will be extended by the original SnS contract value remaining on the edition from which the customer upgraded. SnS contracts as short as two months are available for customers with a significant value remaining in their existing contract. This process ensures that only a single license key exists that has a single SnS contract with a single termination date.

Since vSphere and vSphere with Operations Management Acceleration Kits decompose into individual kit components after purchase, customers upgrade using the same upgrade paths as vSphere and vSphere with Operations Management customers. There are no Acceleration Kit to Acceleration Kit upgrades.

For information on local currency prices for vSphere Editions and Kits visit: [www.vmware.com/products/vsphere/pricing.html](http://www.vmware.com/products/vsphere/pricing.html)

## FAQ

### Q. How is vSphere with Operations Management 6.2 licensed?

A. vSphere with Operations Management is licensed on a per-processor basis without limitation on the number of virtual machines, cores or amount of physical RAM.

### Q. How many license keys will a customer get when they purchase vSphere with Operations Management?

A. vSphere with Operations Management will show up in the customer's license portal as a unique entitlement. This entitlement will generate one license key that the customer will activate in vCenter Server.

### Q. Are there VMware Acceleration Kits for vSphere and vSphere with Operations Management?

A. Yes, there are three Acceleration Kits associated with the three editions of vSphere and vSphere with Operations Management. Each kit consists of six processor licenses for vSphere or vSphere with Operations Management, and a license for one instance of vCenter Server Standard.



**Q. Is it acceptable to have both vSphere hosts and vSphere with Operations Management hosts managed under a single vCenter Server?**

A. VMware recommends managing only a single vSphere with Operations Management edition under a vCenter Server instance to simplify license management and compliance. If you must run multiple vSphere with Operations Management editions (or both vSphere with Operations Management and vSphere/vCloud Suite®) under a single vCenter Server instance (mixed environment), you can still be compliant. To be compliant in a mixed environment, you must ensure that all virtual machines are properly licensed for the functionality being used (e.g., capacity management provided by VMware vRealize Operations Standard). A virtual machine can be properly licensed either through a vSphere with Operations Management license (on a per-processor basis) or a standalone product license (on a per-processor or per-virtual machine basis).

**Q. Is it acceptable to have both VMware vRealize Operations on a per-VM basis and vSphere with Operations Management on a per-CPU basis? (e.g. customer adds vSphere with Operations Management into existing VMware vRealize Operations environment)**

A. Yes, this is acceptable as long as license compliance is maintained.

**Q. Does the vSphere 6 licensing model—per-processor without limitation on the number of virtual machines, cores or amount of physical RAM—apply to vSphere 5.x and vSphere 6.0?**

A. Yes. There are no restrictions on the number of cores or amount of physical RAM vSphere 5.x and 6.0 customers. This also applies to vSphere with Operations Management customers.

**Q. Does the vSphere 6 licensing model apply to existing licenses of vSphere 4.x or prior?**

A. No. The new vSphere licensing model applies only to new purchases of vSphere licenses or to existing licenses of vSphere 4.x or older that are version upgraded to vSphere 5.x or vSphere 6.0.

**Q. When version upgrading to existing licenses for vSphere 4.x or older to vSphere 5.x or vSphere 6.0, may I maintain the vSphere 4.x licensing model?**

A. No. In order to complete the upgrade, the new vSphere 5.x or vSphere 6.0 EULA must be accepted.

**Q. Can I apply the vRealize Operations functionality included with vSphere with Operations Management to virtual machines running on hosts that are not licensed with vSphere with Operations Management?**

A. No, the vRealize Operations functionality included with vSphere with Operations Management can only be used for virtual machines running on hosts that are properly licensed with vSphere with Operations Management. Virtual Machines running on other hosts would need to be licensed separately.

**Q. Which customers are eligible for vSphere Desktop?**

A. vSphere Desktop is available to all commercial, academic, and government customers who want to purchase new licenses of vSphere for only host desktop virtualization. Customers who purchase the Horizon View bundles get vSphere Desktop.

**Q. I am currently using vSphere Enterprise Plus to deploy a third-party desktop virtualization solution. Can I continue to do so?**

A. Yes. Customers currently using vSphere as backend for a third-party VDI deployment can continue to do so.

**Q. Can vSphere Desktop be used to run third-party desktop management and infrastructure tools or third-party server products for desktops?**

A. As per the vSphere 6 EULA, vSphere Desktop standalone can be used for hosting virtual desktop machines or desktop management and monitoring tools that are used for VDI deployments only.

**Q. What features are included in the new vRealize Log Insight for vCenter Server?**

A. A 25 Operating System Instance (OSI) pack of vRealize Log Insight™ for vCenter Server is now available to all vCenter Server Standard customers. vRealize Log Insight for vCenter Server captures log data from physical servers, network and storage devices, OSes, applications and more. In addition, the product provides predictive analytics for faster problem resolution. vRealize Log Insight for vCenter Server is built for the vSphere ecosystem, with powerful big data log management for vSphere and vCenter Server.

## How to Buy

For information on local currency prices for vSphere and vSphere with Operations Management Editions and Kits, visit: <http://www.vmware.com/products/vsphere/pricing.html>

To purchase vSphere or 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 or vSphere is right for your organization: <http://www.vmware.com/vmwarestore/>

## Learn More

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



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