

# Important VMware vSphere™ 5.0 Licensing Changes

VMware vSphere™ is the industry-leading virtualization platform for building cloud infrastructures. vSphere accelerates the shift to cloud computing for existing data centers. It also underpins compatible public cloud offerings, paving the way for the industry's only hybrid cloud model. On July 12th, 2011 VMware vSphere™ 5.0 was released, and there are significant licensing changes compared to previous versions of VMware vSphere™.

## Why a change was necessary: two objectives

- Free customers from restrictive hardware-based entitlements
- Align the vSphere licensing model with IT as a service

With the introduction of VMware vSphere™ 5.0, VMware is evolving the product's licensing model to give customers the opportunity to move to a more cloud-like, "pay for consumption" approach to IT. The changes lay the foundation for a more modern IT cost model that is based on consumption and value rather than components and capacity. vSphere has made it possible for customers to maximize hardware utilization and efficiency through pooling.

With these licensing changes, VMware is extending this concept from technology to the business of IT. The new vSphere licensing model eliminates the restrictive physical entitlements of CPU cores and physical RAM per server, replacing them with a single virtualization-based entitlement of pooled virtual memory (vRAM). This will simplify the process of purchasing, deploying and managing vSphere while facilitating the move to shared infrastructure as a service.

The vSphere 5.0 licensing model is per processor (CPU) with pooled vRAM entitlements. It offers customers the following benefits relative to the previous vSphere 4.x model:

**Simplicity:** Removes two physical constraints (core and physical RAM), replacing them with a single virtual entitlement (vRAM). Customers now have a clear path to license vSphere on next-generation hardware configurations.

**Flexibility:** Extends the concept of resource pooling from technology to the business of IT by allowing aggregation and sharing of vRAM entitlement across a large pool of servers.

**Fairness:** Better aligns cost with actual use and value derived, rather than with hardware configurations and capacity.

**Evolution:** Allows customers to evolve to a cloud-like "pay for consumption" model without disrupting established purchasing, deployment and license-management practices and processes.

	VMware vSphere 4.1 and prior Per CPU with core/ physical memory limit		VMware vSphere 5.0 and later Per CPU with vRAM entitlement
Licensing Unit	CPU	=	CPU
SnS Unit	CPU	=	CPU
Core per proc	Restrictions by vSphere editions - 6 cores for Standard and Enterprise, ESS, ESS+ - 12 core for Advanced and Ent. Plus	<	Unlimited
Physical RAM Capacity per host	Restrictions by vSphere edition - 256GB for Standard, Advanced and Enterprise, ESS, ESS+ - Unlimited for Enterprise Plus	<	Unlimited
vRAM Capacity per proc	Not applicable	≠	Entitlement by vSphere edition - 24GB vRAM for Essentials Kit - 24GB vRAM for Essentials Plus Kit - 24GB vRAM for Standard - 32GB vRAM for Enterprise - 48GB vRAM for Enterprise Plus
Pooling of entitlements	Not applicable	<	YES - vRAM entitlements can be shared among vSphere hosts managed by a vCenter or linked vCenter Instance
Compliance policies	• Purchase in advance of use • High Watermark	=	• Purchase in advance of use • High Watermark
Monitoring tool	Not applicable	≠	YES - built-into vCenter Server 5.0

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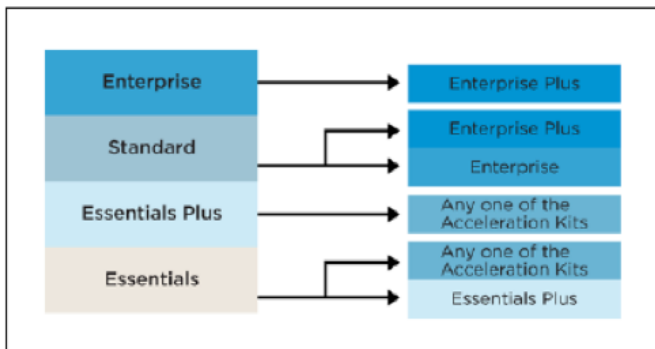
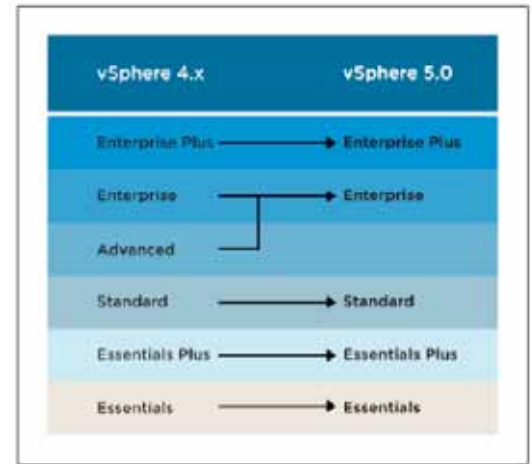
## Upgrade Entitlements for Existing Customers

vSphere customers with an active SnS contract are entitled to upgrade to vSphere 5.0 at no extra charge. The figure to the right shows the entitlement path of current vSphere 4.x customers as part of their active SnS contracts. Upgrades to vSphere 5.0 require acceptance of the new end-user licensing agreement (EULA) and vSphere 5.0 licensing model.

Customers who purchased vSphere 4.x Standard with vMotion and Storage vMotion are entitled to vSphere 5.0 Enterprise Edition. Contact Softchoice to clarify exactly what your organization is entitled to.

## Upgrading Between vSphere 5.0 Editions

Customers may purchase an upgrade to a higher vSphere offering. For example, vSphere Standard customers may upgrade to either vSphere Enterprise or vSphere Enterprise Plus. When customers upgrade supported licenses to a higher vSphere edition, the original license key is deactivated and a new license key is issued for the upgraded edition. The SnS fee is then calculated. This new SnS contract will be extended by the value remaining on the base edition. This process ensures that only a single license key exists that has a single SnS contract with a single termination date. This simplifies SnS renewals.



## Understand what this means for you

Let our dedicated VMware team help you understand your options by emailing [vmware@softchoice.com](mailto:vmware@softchoice.com) we can walk you through the licensing and the product changes so that you make the best decision for your unique organization.

# Frequently Asked Questions

**Q: Does the new VMware vSphere™ 5.0 licensing model apply to existing licenses of VMware 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 upgraded to vSphere 5.0.

**Q: When upgrading from existing licenses of vSphere 4.x or older to vSphere 5.0, may I maintain the vSphere 4.x licensing model?**

A: No. In order to complete the upgrade, the new vSphere 5.0 EULA must be accepted.

**Q: What is vRAM?**

A: vRAM or virtual RAM is the total memory configured to a virtual machine.

**Q: What is the available pooled vRAM capacity of my environment?**

A: Available pooled vRAM is equal to the sum total of vRAM entitlements for all vSphere licenses of a single edition, managed by a single instance of VMware vCenter Server or by multiple instances of VMware vCenter Server in Linked Mode.

**Q: How is consumed vRAM capacity determined?**

A: Consumed vRAM is equal to the sum total of vRAM configured to all powered on virtual machines managed by a single instance of VMware vCenter Server or by multiple instances of VMware vCenter Server in Linked Mode.

**Q: How big a vRAM pool can I make?**

A: The pooled vRAM capacity can be extended indefinitely by adding more vSphere licenses to VMware vCenter Server.

**Q: Can the pooled vRAM capacity be extended by using any vSphere edition?**

A: No, vRAM entitlements are pooled by vSphere edition. Therefore, a vRAM pool can be extended by adding vSphere licenses of the same edition.

**Q: How am I compliant with this licensing model? Is there a “hard stop” at my vRAM limit?**

A: To be compliant, consumed vRAM must be equal or less than the available pooled vRAM capacity. VMware vCenter Server will not impose a hard limit (with the exception of VMware vCenter Server for Essentials) on consumed vRAM, but will provide alerts that consumed vRAM is approaching or has surpassed available pooled capacity.

**Q: I have received an alert from VMware vCenter that I have exceeded the available pooled vRAM, but the product did not prevent me from deploying a new virtual machine. What is going on?**

A: Only vSphere Essentials and Essentials Plus implement hard enforcement of vRAM capacity. VMware vCenter Server Standard will not prevent you from exceeding the available vRAM capacity; it will only signal that the licensing of the environment is out of compliance. VMware licensing policy is that customers should buy licenses in advance of use, so we recommend monitoring the vRAM consumption and extending the available pooled vRAM capacity before exceeding it. In this example, to become compliant you should immediately add enough vSphere licenses to cover the high watermark of consumed vRAM capacity.

**Q: Once I use a vSphere license to add vRAM to a pool, can I later assign that vSphere license to a CPU?**

A: Yes, using the VMware Licensing portal [www.vmware.com/licensing/license.portal](http://www.vmware.com/licensing/license.portal) you can combine or split vSphere processor licenses. This process will create new license keys that can be reassigned to new and existing CPUs using the Licensing Module in vCenter Server.

**Q: What is the process through which I add vSphere licensing to the vRAM pool?**

A: There are two ways to add vSphere licenses to the pool:

- Introduce a new host to the pool and assign processor licenses to its CPUs
- Add new processor licenses, combining them to existing ones using the VMware licensing portal

**Q: Can I add vRAM to an Essentials or Essentials Plus kit?**

A: No, the total vRAM capacity of Essentials and Essentials Plus kits cannot be extended.

**Q: Does my SnS calculation change?**

A: SnS continues to be linked to vSphere processor licenses.

**Q: Do the licensing terms differ depending on which server I deploy vSphere 5.0 on?**

A: No. No vSphere license entitlement is linked to physical characteristics of the server on which vSphere is deployed.

**Q: How do I procure more vRAM?**

A: You simply need to buy and assign more vSphere CPU licenses.

**Q: Will this licensing model cost me more?**

A: Although it is impossible to predict the effects of the new model in every type of environment, the licensing model has been designed to minimize the risk of potential impacts in existing environments while also providing room for growth. vRAM entitlements have been set to provide enough capacity to scale well beyond today's average consolidation ratios of 5:1. In addition, thanks to pooling, customers will be able to share entitlements among multiple hosts, thereby making more efficient use of available capacity.

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