

VMware Pricing & Licensing FAQ

Microsoft Licensing for Virtualized Environments

September 2006

Note: This document answers frequently asked questions about Microsoft operating system (OS) and server application licensing policies related to VMware virtualized environments. This document is provided solely as a convenience for VMware employees, partners, customers and prospects and does not constitute legal advice. Your review of this FAQ should not substitute for review of applicable Microsoft licensing agreements and documentation

Q. Microsoft recently announced enhanced licensing of Windows Server Enterprise and Datacenter Editions. Are customers licensed to run multiple instances of Windows Server in VMware virtual machines on products like VMware® Server and ESX Server because of these changes?

A: Yes, customers are licensed to run multiple Windows Server OS instances in virtual machines on servers licensed for Windows Server 2003 RS Enterprise or Datacenter Editions.

1. A physical server licensed for **Enterprise Edition** can run up to **four** instances of Windows Server in virtual machines on that particular server at no extra charge.
2. A physical server licensed for **Datacenter Edition** can run an **unlimited** number of Windows Server instances in virtual machines on that particular server at no additional charge.

In the case of VMware Server, which installs like an application on top of the host OS, the policy for Windows Server 2003 RS Enterprise Edition applies to four guest operating systems in addition to the host OS. Because ESX Server (included in VMware Infrastructure 3) installs directly on hardware without a host OS, customers can pay for one Enterprise Edition license and run up to a total of four guest instances. These implementations for Windows Server 2003 RS Enterprise Edition are illustrated below. Note that the VMware Infrastructure architecture below is not available from Microsoft (only Virtual Server, which is similar in architecture to VMware Server below) and is therefore not represented in their licensing materials.

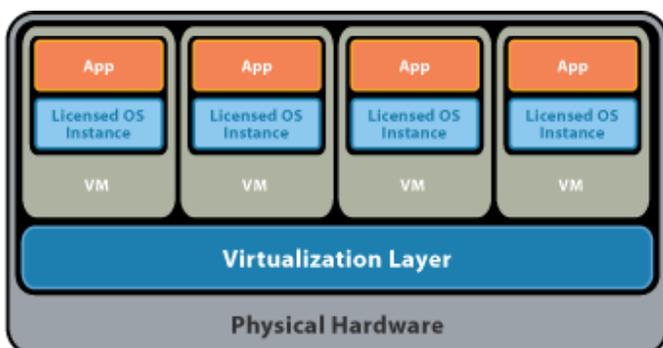
Q. Do these policies apply to other Windows Server editions?

A: Customers must be using either the Enterprise or Datacenter editions of Windows Server 2003 R2 to benefit from these policies. List price for the Enterprise Edition is \$3,999, which is four times as expensive as Standard Edition at \$999. Taking advantage of these policies requires customers to upgrade to Microsoft's more advanced server operating systems.

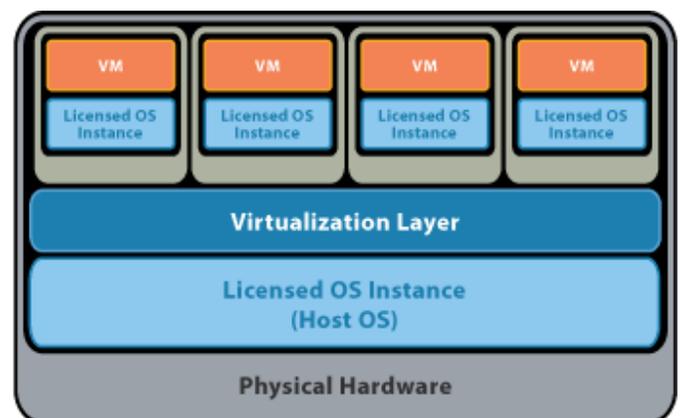
Q. How do Microsoft's policies apply to VMware products?

A: Microsoft licensing policies related to virtualized environments apply equally to both VMware and Microsoft server virtualization products. Any OS licensing cost savings realized by customers using Enterprise and Datacenter Editions should be realized by VMware customers as well.

VMware Infrastructure (ESX Server)



VMware Server



or

Q: How do Microsoft's policies reduce the cost of virtualized environments?

A: The vast majority of customers running Windows Server 2003 RS Web or Standard Editions will be unaffected and receive no benefit from these policies. The ability to run multiple guest OS licenses at no additional charge only applies to a small subset of Microsoft customers who are running Enterprise and Datacenter Editions of Windows Server 2003 R2. Customers can realize these cost savings whether they are using Microsoft or VMware virtualization technology.

Q: What about licenses for OS instances in inactive or stored virtual machines?

A: Customers only pay for *active* and running OS instances. Instances of applicable operating systems that are stored in virtual machines and are NOT active (e.g., for test/dev or disaster recovery) do NOT require additional licenses. This policy also applies to server applications such as BizTalk and SQL Server.

Q: Are Windows OS and server application licenses portable?

A: Instances of Windows OS and server applications are "portable" and can travel across licensed physical machines. Moving licenses across servers requires that both the source and target physical machines be appropriately licensed. For example, if two servers are attached to a SAN where multiple virtual hard disks contain both Windows Server 2003 and Exchange, these instances can be moved one physical server to another as long as those physical servers are assigned Windows Server 2003 and Exchange licenses.

Q: Are applications in virtual machines licensed per physical processor or per virtual processor?

A: Microsoft software available under the per processor licensing model that is run in a virtual OS environment is licensed based on the number of virtual processors used by that virtual OS environment, rather than by the number of physical processors contained in the server. A license is required for each virtual processor used by virtual OS environments on a particular server—whether the total number of virtual processors is lesser or greater than the number of physical number of processors in that server. Customers who use SQL Server, BizTalk, ISA Server or any other Microsoft server applications under this licensing model can realize substantial license cost savings compared to per physical processor licensing.

Q: What reference materials from Microsoft further clarify their licensing policies?

A: Microsoft has published extensive materials to clarify their licensing policies. This white paper on virtualization policies specifies in great detail their policy for licensing within virtualized environments:

http://download.microsoft.com/download/6/8/9/68964284-864d-4a6d-aed9-f2c1f8f23e14/virtualization_whitepaper.doc

Additional clarification on the following topics can be found within the document as follows:

Page 9 – Microsoft licensing based on running instances

Page 11 – Moving instances of software from one licensed server to another (as with VMotion™)

Page 21 – Microsoft new policy for licensing server applications on a per virtual processor basis

Page 26 – Microsoft policy for running up to 4 Windows Server Enterprise Edition ("WSEE") or Windows Server Standard Edition ("WSSE") instances in virtual machines but only having to pay for 1 WSEE license

This document and additional guidance on Microsoft's licensing policies can be found on the Volume Licensing Web page:

<http://www.microsoft.com/licensing/resources/volbrief.mspx>

October 2005 announcement from Microsoft:

<http://www.microsoft.com/presspass/press/2005/oct05/10-10VirtualizationStrategyPR.mspx>

June 2006 news bulletin from Microsoft on unlimited deployment rights for Datacenter Edition:

<http://www.microsoft.com/windowsserver2003/evaluation/news/bulletins/datacenterhighavail.mspx>