Microsoft Windows Server 2008 Licensing Guide

Your Ultimate Quick Reference Resource for Licensing and Pricing

Windows Server® 2008

Microsoft

Table of Contents

Summary

Below is an overview of the Windows Server® 2008 core product offerings, indicating product names, available sales channels, licensing models, and number of running instances allowed per license. Also below is a feature/role comparison among Windows Server 2008 editions.

Windows Server 2008 – Core Product Offerings

Product	Channels	License	Running Instances in Physical and Virtual OS
Windows Server 2008 Standard	Retail, OEM, VL, SPLA	Server + CAL SPLA – Processor or SAL	1 + 1 (new change)
Windows Server 2008 Standard without Hyper-V™	Retail, OEM, VL, SPLA	Server + CAL SPLA – Processor or SAL	1 + 1
Windows Server 2008 Enterprise	Retail, OEM, VL, SPLA	Server + CAL SPLA – Processor or SAL	1 + 4
Windows Server 2008 Enterprise without Hyper-V	Retail, OEM, VL, SPLA	Server + CAL SPLA – Processor or SAL	1 + 4
Windows Server 2008 Datacenter	OEM, VL, SPLA	Processor + CAL	1 + unlimited
Windows Server 2008 Datacenter without Hyper-V	OEM, VL, SPLA	Processor + CAL	1 + unlimited
Windows Server 2008 For Itanium™-Based Systems	OEM, VL	Processor + CAL	1 + unlimited
Windows Server 2008 External Connector	VL	External Connector	
Windows® Web Server 2008	Retail, OEM, VL, SPLA	Server license	1 or 1
Windows Server 2008 CAL	Retail, OEM, VL, SPLA	VL – CAL SPLA – Windows Standard or Enterprise SAL	
Windows Server 2008 Terminal Services CAL	Retail, OEM, VL, SPLA, ISVR	VL – TS CAL SPLA – TS SAL	
Windows Server 2008 Terminal Services External Connector	VL	External Connector	
Windows Server 2008 Rights Management Services CAL	VL, SPLA	VL – RMS CAL SPLA – RMS SAL	
Windows Server 2008 Rights Management Services External Connector	VL	External Connector	

License Terms – 2008 Notables

Impacted Products	Change	Explanation
Windows Server 2008 Standard	Running Instances now allow 1 + 1 (was 1 in physical OS or 1 in virtual OS).	Want to further enable use of virtual instance with running instance in the physical OS.
Standard, Enterprise, and Datacenter	• Offering optional editions built without Microsoft Hyper-V hypervisor technology. • Same license terms as their regular counterparts. • Priced slightly lower than their regular conterparts.	Provide customers the choice of deploying Window Server 2008 without the Hyper-V technology. Customers will need to separately license the hypervisor technology, whether it is Microsoft Hyper-V, Microsoft Virtual Server R2, or a third-party hypervisor technology.
Windows Web Server 2008	• Use only for front-end Web serving internet-facing Web pages, Web sites, Web applications, Web services, and POP3 mail serving. • Now can run any type of database software on the software with no limit on the number of users.	• Provide customers with more flexibility in deploying web-facing solutions. • Overcome some of the limitations that were present in Windows Server® 2003 Web Edition.
New Windows Server 2008 for Itanium-Based Systems SKU	• Same license terms as Datacenter. • Only supports databases, line of business and custom applications. All services and functions not required to support these 3 target workloads are removed. • Same price as Datacenter.	Designed to be the leading alternative platform for RISC-based UNIX servers. Intended for scale-up database workloads and custom and line-of-business applications. This workload focus is consistent with the majority of current deployments of Windows Server Itanium.

Windows Server 2008 Product Overview Summaries

Edition	Summary
Windows Server 2008 Standard	Windows Server 2008 Standard is the most robust Windows Server operating system to date. With built-in, enhanced Web and virtualization capabilities, it is designed to increase the reliability and flexibility of your server infrastructure while helping save time and reduce costs. Powerful tools give you greater control over your servers and streamline configuration and management tasks. Plus, enhanced security features work to harden the operating system to help protect your data and network and provide a solid, highly-dependable foundation for your business.
Windows Server 2008 Enterprise	Windows Server 2008 Enterprise delivers an enterprise-class platform for deploying business-critical applications. Help improve availability with clustering and hot-add processor capabilities. Help improve security with consolidated identity management features. Reduce infrastructure costs by consolidating applications with virtualization licensing rights. Windows Server 2008 Enterprise provides the foundation for a highly dynamic, scalable IT infrastructure.
Windows Server 2008 Datacenter	Windows Server 2008 Datacenter delivers an enterprise-class platform for deploying business-critical applications and large-scale virtualization on small and large servers. Improve availability with clustering and dynamic hardware partitioning capabilities. Reduce infrastructure costs by consolidating applications with unlimited virtualization licensing rights. Scale from 2 to 64 processors. Windows Server 2008 Datacenter provides a foundation on which to build enterprise-class virtualization and scale-up solutions.
Windows Web Server 2008	Designed to be used specifically as a single-purpose Web server, Windows Web Server 2008 delivers on a rock solid foundation of Web infrastructure capabilities in the next generation Windows Server 2008. Integrated with the newly re-architected IIS 7.0, ASP.NET, and the Microsoft .NET Framework, Windows Web Server 2008 enables any organization to rapidly deploy Web pages, Web sites, Web applications, and Web services.
Windows Server 2008 for Itanium-Based Systems	Windows Server 2008 for Itanium-Based Systems is optimized for large databases, line of business and custom applications providing high availability and scalability up to 64 processors to meet the needs of demanding and mission critical solutions.

Windows Server 2008 Product Summaries – Without Hyper-V

Edition	Summary
Windows Server 2008 Standard without Hyper-V™	Windows Server 2008 Standard is the most robust Windows Server operating system to date. It is designed to increase the reliability and flexibility of your server infrastructure while helping save time and reduce costs. Powerful tools give you greater control over your servers and streamline configuration and management tasks. Plus, enhanced security features work to harden the operating system to help protect your data and network and provide a solid, highly-dependable foundation for your business. This product does not include Windows Server Hyper-V.
Windows Server 2008 Enterprise without Hyper-V™	Windows Server 2008 Enterprise delivers an enterprise-class platform for deploying business-critical applications. Improve availability with clustering and hot-add processor capabilities. Improve security with consolidated identity management features. Reduce infrastructure costs by consolidating applications with virtualization licensing rights. Windows Server 2008 Enterprise provides the foundation for a highly dynamic, scalable IT infrastructure. This product does not include Windows Server Hyper-V.
Windows Server 2008 Datacenter without Hyper-V™	Windows Server 2008 Datacenter delivers an enterprise-class platform for deploying business-critical applications and large-scale virtualization on small and large servers. Improve availability with clustering and dynamic hardware partitioning capabilities. Reduce infrastructure costs by consolidating applications with unlimited virtualization licensing rights. Scale from 2 to 64 processors. Windows Server 2008 Datacenter provides a foundation on which to build enterprise-class virtualization and scale-up solutions. This product does not include Windows Server Hyper-V.

Comparison by Server Role

Server Role	Enterprise	Datacenter	Standard	Itanium	Web
WebServices (IIS)	●	●	●	●	●
Application Server	●	●	●	●	○
Print Services	●	●	●	○	○
Windows Server Hyper-V*	●	●	●	○	○
Active Directory Domain Services	●	●	●	○	○
Active Directory Lightweight Directory Services	●	●	●	○	○
Active Directory Rights Management Services	●	●	●	○	○
DHCP Server	●	●	●	○	○
DNS Server	●	●	●	○	○
Fax Server	●	●	●	○	○
UDDI Services	●	●	●	○	○
Windows Deployment Services	●	●	●	○	○
Active Directory Certificate Services[1]	●	●	◉	○	○
File Services[2]	●	●	◉	○	○
Network Policy and Access Services[3]	●	●	◉	○	○
Terminal Services[4]	●	●	◉	○	○
Active Directory Federation Services	●	●	○	○	○

● – Full   ◉ – Partial/Limited   ○ – Not Available

* For customers that do not need virtualization, Windows Server 2008 Standard, Enterprise and Datacenter editions are available without Windows Server 2008 Hyper-V Technology

1 – Limited to creating Certificate Authorities – no other ADFS features (NDES, Online Responder Service). See ADCS role documentation on TechNet for more information

2 – Limited to 1 standalone DFS root

3 – Limited to 250 RRAS connections, 50 IAS connections and 2 IAS Server Groups

4 – Limited to 250 Terminal Services Gateway connections

Licensing of Windows Server 2008 remains consistent with Windows Server 2003 R2, with a few enhancements which will be covered in this Guide. OEM and Volume Licensing channel pricing of Windows Server 2008 is increased by approximately 1 percent relative to Windows Server 2003 R2 prices.

Every running instance of the server software may only run on an already licensed server.

Every user or device that directly or indirectly accesses or uses instances of the Windows Server 2008 server software requires the purchase of a Windows Server 2008 Client Access License (Windows Server CAL) except under the following circumstances:
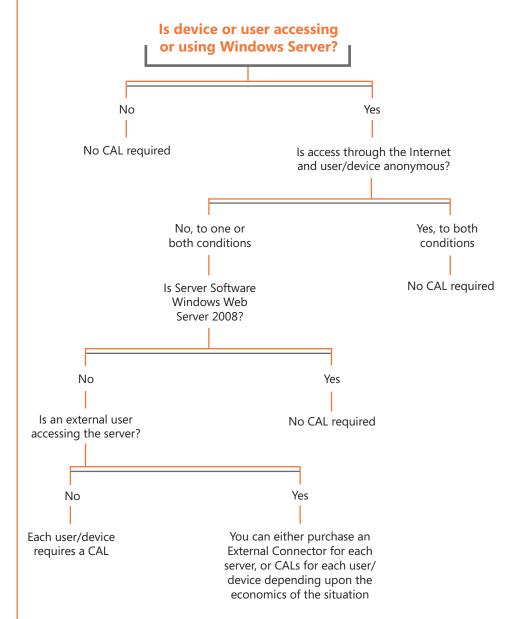
- Access to the instances of server software is only through the Internet without being authenticated or otherwise individually identified by the server software or authenticated through any other means

- Access is to Windows Web Server 2008

- Authenticated "external users" (see Glossary at end of this guide) access the instances of server software and you have acquired a Windows Server 2008 External Connector ("EC") license for each server being accessed

- For each license, up to two devices or users may access your instances of the server software but only to administer those instances

A Terminal Services 2008 CAL is required, in addition to a Windows Server 2008 CAL, to use the Terminal Services functionality of the server software. Similarly, a Rights Management Services (RMS) 2008 CAL is required, in addition to a Windows Server 2008 CAL, to use the Rights Management Services functionality of the server software.
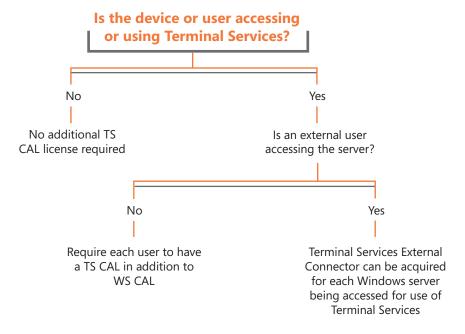
An External Connector license can be acquired for external users' access in lieu of individual CALs.

Windows Server 2008 Client Access Licensing: Decision Trees, Types, and Modes

**Windows Server CAL or
External Connector License Decision Tree**

**Is device or user accessing
or using Windows Server?**

No → No CAL required

Yes → Is access through the Internet and user/device anonymous?

No, to one or both conditions → Is Server Software Windows Web Server 2008?

Yes, to both conditions → No CAL required

Is Server Software Windows Web Server 2008?

No → Is an external user accessing the server?

Yes → No CAL required

Is an external user accessing the server?

No → Each user/device requires a CAL

Yes → You can either purchase an External Connector for each server, or CALs for each user/device depending upon the economics of the situation

TS CAL or Terminal Services External Connector (TS-EC) License Decision Tree

Is the device or user accessing or using Terminal Services?

No

No additional TS CAL license required

Yes

Is an external user accessing the server?

No

Require each user to have a TS CAL in addition to WS CAL

Yes

Terminal Services External Connector can be acquired for each Windows server being accessed for use of Terminal Services

Client Access Licensing: Types and Modes

CAL Types

Device CAL	User CAL
Acquire an access license for every device (used by any user) accessing your servers.	Acquire an access license for every named user accessing your servers (from any device).
Makes the most economical and administrative sense for an organization with multiple users for one device, such as shift workers.	Makes the most economical and administrative sense for an organization with many roaming employees who need access to the corporate network from unknown devices, and/or employees who access the network via multiple devices (that is, if the number of users is less than the number of devices, then this is the more economical choice).

CAL Licensing Modes

Per User or Per Device Mode	Per Server Mode
The number of Windows CALs required equals the number of users or devices accessing the server software (the number of servers accessed does not matter).	The number of Windows CALs required equals the maximum number of users or devices that may simultaneously access or use the server software running on a particular server. The Windows CALs you acquire are designated for use exclusively with a particular server.

Terminal Services Licensing Requirements

Terminal Services functionality in Windows Server 2008 lets you remotely execute applications on a Windows-based server from a wide range of devices over virtually any type of network connection. A server running Terminal Services can be referred to as a Terminal Server (TS).

Terminal Services CALs

If you wish to access the Terminal Services functionality of Windows Server 2008, a Windows Server 2008 CAL and Windows Server 2008 Terminal Services CAL are required for each user or device accessing the Terminal Server.

TS CAL Types

Device-based vs. User-based Terminal Services CALs

Two types of Terminal Services CALs are available. They may be used in combination simultaneously with the server software.

TS CAL Types

TS Device CAL	TS User CAL
Permits one device (used by any user) to access/use Terminal Services functionality of Windows Server software.	Permits one user (using any device) to access/use Terminal Services functionality of Windows Server software.

TS CAL Mode

Terminal Services CALs are only available in Per User/Per Device Mode.

CAL FAQs

Q: Can I use my Windows Server 2003 CALs to access Windows Server 2008 software?

A: No. You must either purchase new Windows Server 2008 CALs or have Software Assurance (to upgrade your CALs) to access instances of Windows Server 2008. Your Windows Server 2003 CALs may continue accessing instances of Windows Server 2003 software.

Q: If a user or device accesses a server running Windows Server 2008 but is authenticating via a third-party authentication application (non-Microsoft based authentication), does the user or device still require a Windows Server 2008 CAL?

A: Yes, if the user or device is authenticating by any means to a server running Windows Server 2008, it requires a Windows Server 2008 CAL.

Q: If a user is only infrequently accessing certain protocols or services of the server software (such as Network Access Protection or Dynamic Host Configuration Protocol), is a Windows Server CAL still required?

A: Yes, a Windows Server CAL is still required for such infrequent use of the server software.

Q: Can I use a Windows Device CAL and a Windows User CAL to access the same server? Also, can I use a Terminal Services Device CAL (TS Device CAL) and a Terminal Services User CAL (TS User CAL) on the same terminal server?

A: Yes. Windows Device and User CALs, as well as TS Device and User CALs, can be used on the same server.

Q: Is there a difference in price between Device CALs and User CALs?

A: No. Windows Device CALs and Windows User CALs are priced the same, as are TS Device CALs and TS User CALs.

Q: Are there any differences between the requirements for CALs in Windows Server 2003 versus Windows Server 2008?

A: No. The Windows Server CAL requirements are the same.

Q: My Windows Server 2008 software came with a set number of CALs because I acquired it through a retail store or with a new piece of hardware. How do I designate those CALs as being User or Device CALs?

A: When the software comes packaged with CALs, you choose whether those CALs are User or Device CALs after you make the purchase, on the CAL End User License Agreement document.

Q: I have some extra Windows Server 2003 CALs that are not being used. Can I apply these to servers running Windows Server 2008?

A: No. CALs must be the same version (or higher) as the server software they are accessing. In other words, users or devices accessing a server running Windows Server 2008 must have Windows Server 2008 CALs.

Q: If I move an instance of Windows 2003 to run as a virtual instance on a server with Windows Server 2008 Enterprise running in the physical operating system environment. Can I use Windows Server 2003 CALs to access the virtual instance of Windows Server 2003?

A: No. Because the virtual instance of Windows Server 2003 runs on a Windows Server 2008 license, the user or device accessing the virtual instance of Windows Server 2003 needs a Windows Server 2008 CAL.

Q: Can I use a Windows 2008 User CAL to access a server running Windows Server 2003?

A: Yes. Both Windows Server 2008 User and Device CALs can be used to access instances of Windows Server 2003.

Q: Do I need to upgrade my Windows Server CALs for access to future releases of Windows Server?

A: All future releases of Windows Server will require Windows Server CALs of the same version for the customer's internal users/devices accessing the Windows software. Customers can either acquire new Windows Server CALs when the new version releases, or maintain Software Assurance on their prior version CALs which gives the rights to the next version.

CAL FAQs, Cont'd.

Q: I have Software Assurance for my CALs.
Can I switch between User and Device CALs?

A: Volume Licensing customers may switch from one to the other when they renew their Software Assurance. You must designate your CALs as Device or User when you upgrade them.

Q: Will I be allowed to switch between Windows Server 2008 Device CALs and User CALs? What about TS CALs?

A: If your Windows CALs are covered under Software Assurance, you can convert those Windows CALs from Device CALs to User CALs, or vice versa, when you renew your Software Assurance. If your Windows CALs are not covered under Software Assurance, you may not switch; your choice is permanent. This also applies to TS CALs.

Q: Are CALs required for Windows Web Server 2008?

A: No, Windows Web Server 2008 is licensed by a server license only and no CALs are required. However, when Windows Web Server 2008 is used as a scale-out front end for applications running on back end servers, Windows Server CALs may still be required on these back end servers running Windows Server.

Windows Server 2008
External Connector Licenses

If you would like to allow your business partners or customers to access your network, and do not want to purchase individual CALs for each of them, you can acquire a Windows Server 2008 External Connector (EC) license for each Windows server that will be accessed by these external users.

Similarly, instead of acquiring individual TS CALs for valid external users of Terminal Services functionality, you can acquire a Windows Server 2008 Terminal Services EC license for each terminal server being accessed. Note that a Windows Server EC license is a prerequisite for a Terminal Services EC license.

Additionally, instead of acquiring individual RMS CALs for valid external users of RMS functionality, you can acquire a Windows Server 2008 RMS EC license for each server on which RMS functionality is being accessed. Note that a Windows Server EC license must always be acquired when a RMS EC license is acquired.

Windows Server EC, Terminal Services EC, and RMS EC licenses can be acquired for servers running instances of Windows Server 2008 Standard, Enterprise, Datacenter, and Windows Server 2008 for Itanium-Based Systems. The EC licenses are not applicable to Windows Web Server 2008.

Downgrade rights are available for the EC, Terminal Services EC, and RMS EC licenses.

Note that the acquisition of an EC license does not negate the requirement to acquire a Windows Server license.

EC FAQs

Q: For which Windows servers do I acquire EC licenses?

A: External Connector licenses should be acquired for each Windows server that the external user is accessing or using, not just the server to which they are authenticating.

Q: Can I acquire a Windows Server 2008 EC license and use it to access a Windows Server 2003 licensed server?

A: Yes, this is permitted, and its use on a Windows Server 2003 licensed server maintains the rights of the EC license.

Q: If I purchase a TS EC for a Terminal Server, do I also need to purchase a Windows Server EC for the same server? And do I need additional Windows Server ECs for the other Windows Servers that the TS User is accessing?

A: Yes, a Windows Server EC license must always be acquired when a Terminal Services EC license is acquired. A Windows Server EC must be purchased for every Windows Server that the TS User is accessing.

Windows Server 2008 Standard

A customer licensed with Windows Server 2008 Standard now may run one instance of the server software in the physical operating system environment (POSE) and one instance of the server software in a virtual operating system environment (VOSE). This is a new enhancement to the virtualization rights of Windows Server Standard. Diagram A below illustrates this new license enhancement. The orange arrow indicates that when running both instances, the instance of the server software running in the POSE may only be used to manage and service the operating system environments on the server.
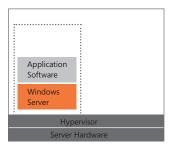
Note, when customers are running virtualized instances of the server software, they must be using some form of virtualization or "hypervisor" technology, such as Microsoft Virtual Server software, Microsoft's new Hyper-V Technology, or other third-party virtualization software.

Diagram A: Running Instances of Windows Server 2008 Standard

Use Right: 1 Physical and 1 Virtual OSE

(orange arrow indicates that POSE may only be used to manage/service VOSE)

If Running Apps in Physical OSE
(POSE)

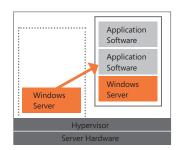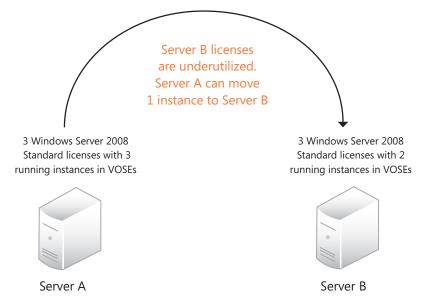If Running Apps in Virtual OSE
(VOSE)

Diagram B below indicates that with Windows Server 2008 Standard, you may move a virtual instance of the server software to another server that is properly licensed to support such added instance. For Volume License customers, the actual license may also be reassigned to another server every 90 days.

Diagram B: Moving virtual instances of Windows Server 2008 Standard

Server B licenses
are underutilized.
Server A can move
1 instance to Server B

3 Windows Server 2008
Standard licenses with 3
running instances in VOSEs

3 Windows Server 2008
Standard licenses with 2
running instances in VOSEs

Server A

Server B

Windows Server 2008 Standard without Hyper-V

Although we consider the new Microsoft Hyper-V hypervisor technology a key feature of the Windows Server 2008 core operating system, we want to still provide customers the choice of deploying Windows Server 2008 without this technology. We enable this by offering Windows Server 2008 Standard without Hyper-V at a slightly reduced price from Windows Server 2008 Standard. The licensing terms are exactly the same as Windows Server 2008 Standard, including the virtualization use rights (and rules on running and moving instances of the server software as outlined above for Windows Server 2008 Standard). With Windows Server 2008 Standard without Hyper-V, a customer will need to separately license the hypervisor technology, whether it is Microsoft Hyper-V, Microsoft Virtual Server R2, or a third-party hypervisor technology.
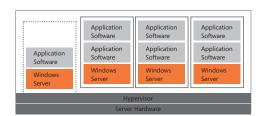
Windows Server 2008 Enterprise

Diagram A below indicates that with Windows Server 2008 Enterprise, you may run one instance of the server software in the POSE and up to four instances of the server software in VOSEs. The orange arrow indicates that when running all five instances, the instance of the server software running in the POSE may only be used to manage and service the operating system environments on the server.

Note, when customers are running virtualized instances of the server software, they must be using some form of virtualization or "hypervisor" technology, such as Microsoft Virtual Server software, Microsoft's new Hyper-V technology, or a third-party virtualization software.

Diagram A: Running Instances of Windows Server 2008 Enterprise

Use Right: 1 Physical and 4 Virtual OSEs

(orange arrow indicates that POSE may only be used to manage/service VOSE)

If Running 3 Apps in Virtual OSEs
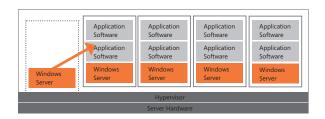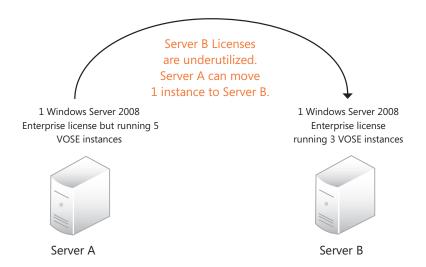

If Running Apps Using all 4 Virtual OSEs

Diagram B below indicates that with Windows Server 2008 Enterprise, you may move a virtual instance of the server software to another server that is properly licensed to support such added instance. Note that Server A is under-licensed because it is running one instance more than what is granted by the Enterprise license. For Volume License customers, the actual license may also be re-assigned to another server every 90 days.

Diagram B: Moving virtual instances of Windows Server 2008 Enterprise

Server A has 1 license running 5 virtual instances.
Server B has 1 license and only running 3 virtual instances.

Server B Licenses
are underutilized.
Server A can move
1 instance to Server B.

1 Windows Server 2008
Enterprise license but running 5
VOSE instances

1 Windows Server 2008
Enterprise license
running 3 VOSE instances

Server A

Server B

Windows Server 2008 Enterprise without Hyper-V

Although we consider the new Microsoft Hyper-V hypervisor technology a key feature of the Windows Server 2008 core operating system, we want to still provide customers the choice of deploying Windows Server 2008 without this technology. We enable this by offering Windows Server 2008 Enterprise without Hyper-V at a slightly reduced price from Windows Server 2008 Enterprise. The licensing terms are exactly the same as Windows Server 2008 Enterprise, including the virtualization use rights (and rules on running and moving instances of the server software as outlined above for Windows Server 2008 Enterprise). With Windows Server 2008 Enterprise without Hyper-V, a customer will need to separately license the hypervisor technology, whether it is Microsoft Hyper-V, Microsoft Virtual Server R2, or a third-party hypervisor technology.

Windows Server 2008 Datacenter and Windows Server 2008 for Itanium-Based Systems

Unlike Windows Server 2008 Standard and Enterprise that are licensed by a server plus CAL model, Windows Server 2008 Datacenter and Windows Server 2008 for Itanium-Based Systems are licensed per physical processor (number of processors in the server) plus CAL model.

Windows Server 2008 for Itanium-Based Systems now is a separate Windows Server 2008 product and not merely an Itanium platform selection (as in the previous Windows Server 2003 version). It is intended for customers using the Itanium platform and designed for specific workloads. It is designed to be the leading alternative platform for RISC-based UNIX servers, and is intended for scale-up database workloads, custom applications, and line-of-business applications. This workload focus is consistent with the majority of current deployments of Windows Server on Itanium. Please note that Windows Server 2008 for Itanium-Based Systems does not interoperate with Microsoft Virtual Server, nor does it include or support Microsoft Hyper-V hypervisor technology. To virtualize software on Windows Server 2008 for Itanium-Based Systems, customers may use third-party non-Microsoft hypervisor technology.
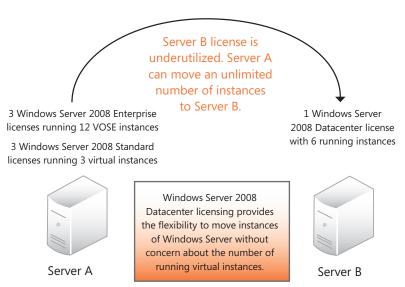
With Windows Server 2008 Datacenter and Windows Server 2008 for Itanium-Based Systems, you may run one instance of the server software in the POSE and any number of instances of the server software in VOSEs. Unlike in Windows Server 2008 Standard and Enterprise, there is no restriction that the instance of the server software running in the POSE may only be used to manage and service the operating system environments on the server. However, each processor on the partition on which the instances of the server software are running must be licensed.

Diagram A indicates that with Windows Server 2008 Datacenter and Windows Server 2008 for Itanium-Based Systems, you may move as many virtual instances of Windows Server software to a server running Windows Server 2008 Datacenter or Windows Server 2008 for Itanium-Based Systems and not have to be concerned about the number of running virtual instances. For Volume License customers, the actual license may also be reassigned to another server every 90 days.

Note, when customers are running virtualized instances of the server software, they must be using some form of virtualization or "hypervisor" technology, such as Microsoft Virtual Server software, Microsoft's new Hyper-V Technology, or a third-party virtualization software.

**Moving Instances of Windows Server 2008 Standard and Enterprise –
Server A has 3 Enterprise licenses running 12 virtual instances, and 3 Standard
licenses running 3 virtual instances. Server B has 1 Windows Server 2008 Datacenter
license and only running 6 virtual instances.**

Server B license is
underutilized. Server A
can move an unlimited
number of instances
to Server B.

3 Windows Server 2008 Enterprise
licenses running 12 VOSE instances

3 Windows Server 2008 Standard
licenses running 3 virtual instances

1 Windows Server
2008 Datacenter license
with 6 running instances

Windows Server 2008
Datacenter licensing provides
the flexibility to move instances
of Windows Server without
concern about the number of
running virtual instances.

Server A

Server B

Windows Server 2008 Datacenter without Hyper-V

Although we consider the new Microsoft Hyper-V hypervisor technology
a key feature of the Windows Server 2008 core operating system, we want
to still provide customers the choice of deploying Windows Server 2008
without this technology. We enable this by offering Windows Server 2008
Datacenter without Hyper-V at a slightly reduced price from Windows
Server 2008 Datacenter. The licensing terms are exactly the same as
Windows Server 2008 Datacenter, including the virtualization use rights
(and rules on running and moving instances of the server software as
outlined above for Windows Server 2008 Datacenter). With Windows Server
2008 Datacenter without Hyper-V, a customer will need to separately license
the hypervisor technology, whether it is Microsoft Hyper-V,
Microsoft Virtual Server R2, or a third-party hypervisor technology.

Note – Windows Server 2008 for Itanium-Based Systems
and Windows Web Server 2008 are not configured to include
the Microsoft Hyper-V technology, so these do not have
corresponding without Hyper-V products.

Windows Server 2008 for Itanium-Based Systems FAQs

Q: How is Windows Server 2008 for Itanium-Based Systems licensed and priced?

A: Windows Server 2008 for Itanium-Based Systems is licensed and priced the same as Windows Server 2008 Datacenter; Processor plus CAL licensing model applies, and the same price applies as Windows Server 2008 Datacenter.

Q: What are the specific workloads intended for Windows Server 2008 for Itanium-Based Systems?

A: Windows Server 2008 for Itanium-Based Systems is enabled for mission-critical solutions for large databases, line-of-business and custom applications.

Q: Do I have virtualization rights with Windows Server 2008 for Itanium-Based Systems?

A: Yes, with Windows Server 2008 for Itanium-Based Systems, you have the same virtualization rights as Windows Server 2008 Datacenter. Although the virtualization role is not part of this edition, you can use Windows Server 2008 for Itanium-Based Systems with a third-party hypervisor to perform virtualization.

Q: Where can I acquire licenses of Windows Server 2008 for Itanium-Based Systems?

A: Windows Server 2008 for Itanium-Based Systems can be purchased through Volume Licensing directly from Microsoft or from OEMs preinstalled on servers. The Datacenter High Availability Program is only available through OEMs.

Windows Server 2008 without Hyper-V products FAQs

Q: Why offer Windows Server 2008 Standard, Enterprise, and Datacenter editions with and without virtualization (without Hyper-V)?

A: Microsoft believes that most customers now expect virtualization capabilities in their server OS. We anticipate that most Microsoft customers will see this value and buy Windows Server 2008. However, based on customer demand, we also decided to create the Microsoft Hyper-V Server, a stand-alone server virtualization product. Once we decided to create this product, it made sense for us to offer Windows Server and Windows Server without Hyper-V for Standard, Enterprise, and Datacenter editions. We will monitor customer demand and market developments over time and may adjust our offerings accordingly.

Q: Why will Microsoft be offering a stand-alone server virtualization product, Microsoft Hyper-V Server?

A: Microsoft believes that most customers now expect virtualization capabilities in their server OS. We anticipate that most Microsoft customers will see this value and buy Windows Server 2008. However, based on customer demand, we will also offer Microsoft Hyper-V Server, a stand-alone server virtualization product.

Q: In which sales channels will the Windows Server 2008 without Hyper-V products be available?

A: The Windows Server 2008 without Hyper-V products are available in all retail, OEM, and Volume Licensing sales channels.

Q: How are the Windows Server 2008 without Hyper-V products licensed?

A: The Windows Server 2008 without Hyper-V products have the same license terms and license models as their regular Windows Server 2008 product counterparts.

Windows Server 2008 without Hyper-V products FAQs, Cont'd.

Q: What is the price difference between Windows Server 2008 product with and without Hyper-V?

A: Estimated Retail prices for the Windows Server 2008 without Hyper-V products will be approximately $28 lower than their regular Windows Server 2008 product counterparts.

Q: When customers who currently have Windows Server 2003 R2 with Software Assurance (SA) would like to upgrade to Windows Server 2008, which version can they upgrade to, the Windows Server 2008 product (with Hyper-V) or the Windows Server 2008 without Hyper-V?

A: Customers who have SA on Windows Server 2003 R2 can opt for either Windows Server 2008 (with Hyper-V) or the product without Hyper-V. Once they opt for either, at renewal of their SA, they will acquire the appropriate SA renewal SKU. Once a customer has made a choice, they will not be able to switch.

Windows Web Server 2008

Windows Web Server 2008 is specifically designed to be used as a single-purpose Web server. It is intended only for Internet accessible, front-end Web serving of Web pages, Web sites, and Web applications. Unlike the other core Windows Server 2008 products described above, Windows Web Server 2008 is licensed by a server license only; and no CALs are required. Exceptions to this no-CAL rule may occur when Windows Web Server 2008 is used as a scale-out front end for applications. Using Windows Web Server 2008 in these types of configurations offer customers an economical way to deploy scale-out applications. In such configurations, Windows Server CALs may still be required on the back end of a scale-out application.

Windows Web Server 2008 licensing is enhanced to allow any type of database software on the server software with no limit on the number of users. Licensing terms for Web Server also further clarify that the server software may only be used for front-end Web serving Internet accessible Web pages, Web sites, Web applications, Web services, and POP3 mail serving.

With Windows Web Server 2008, you may run one instance of the server software in either the POSE or in a VOSE.
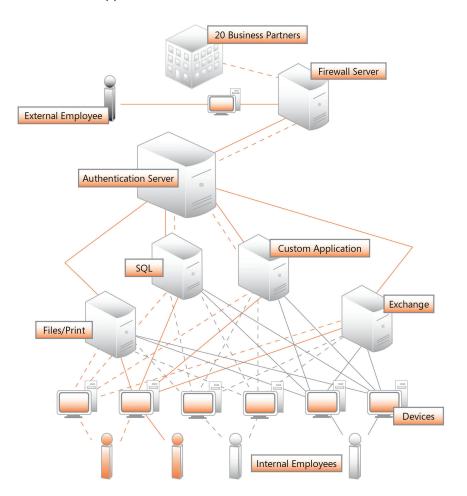
Windows Web Server 2008 FAQs

Q. Can I use the Web Server as a file server or an application server?

A. No. Windows Web Server 2008 can be used solely to deploy Internet facing Web pages, Web sites, Web applications, Web services, and POP3 mail serving.

Q: With Windows Web Server 2008, am I restricted to only running non-enterprise level database application software with the server software?

A: No. With Windows Web Server 2008, you may run any level of enterprise/non-enterprise database application software with the server software.

Q: Can database software running on Web Server 2008 support external applications running on other servers?

A: No, with Web Server 2008, the database software may only support applications that are running on the same local instance of Web Server 2008.

Licensing Scenarios

Example 1: Windows Server in Three-Tier Architecture

XYZ inc. has a corporate network with a firewall server, an authentication server, a file/print server, and servers running SQL, Exchange, and a custom application.

XYZ Inc. has 5 employees who use 7 devices that are known to the company, they also have 20 business partners who are allowed limited access to certain of XYZ's corporate servers (namely, those running SQL and the custom application).

20 Business Partners

Firewall Server

External Employee

Authentication Server

Custom Application

SQL

Exchange

Files/Print

Devices

Internal Employees

What are the licensing requirements for this scenario?

Since there are a total of 6 servers running Windows Server software (firewall, authentication, file/print, SQL, custom application, Exchange), 6 Windows Server licenses are required.

For employees' access: 5 Windows User CALs or 7 Windows Device CALs (note that for employees, doesn't matter if access is internal or external).
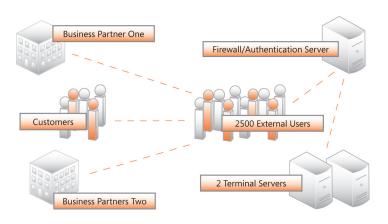
For business partners' access: 20 Windows User CALs or 4 External Connector licenses (1 for each of firewall server & authentication server, and 1 for each of the servers they get access to—in this case, SQL and custom application servers).

In this case, it is more cost-effective to license employees on a User CAL basis because there are fewer users than devices. And since the External Users are known (and limited in number), it is more cost-effective to acquire individual Windows CALs for them as opposed to acquiring EC licenses for each server accessed by the External Users (20 x $29* vs. 4 x $2000*).

Example 2: Terminal Services External Connector

ABC Health Corp. wants to extend its benefits application to customers and business partners/insurance companies. There are 2500 users/devices, but a limited number of users, 500, at any given time. Employees, other than administrators, do not access this set of servers.

What are the licensing requirements for this scenario?

Since there are a total of 3 servers running Windows Server software (1 firewall/authentication server, 2 terminal servers), 3 Windows Server licenses are required.
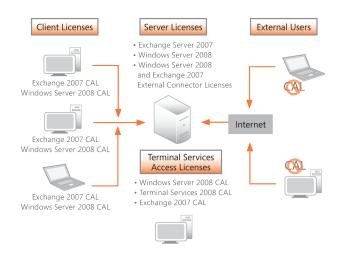
For external users' access: 2500 Windows User CALs and 2500 TS User CALs, or 3 Windows External Connector licenses and 2 Terminal Server External Connector licenses.

In this case, the number of external users is quite large so there is a significant cost difference–thus, it is more cost-effective to acquire EC licenses. Compare 2500 x $29* vs. (3 x $2000* + 2 x $8000*); that is, $75,000 (and indirect costs of managing 2500 external users) vs. $22,000.

Note: there is no concurrent licensing for terminal servers, so "500 users at any given time" does not impact the CALs required UNLESS the 2500 users use the same 500 devices. In this case, 500 TS Device CALs can be purchased (this is a highly unlikely scenario).

*Based on Open VL program ERP pricing. Pricing may vary. Please visit http://www.microsoft.com/windowserver2008/howtobuy/licensing/ for more information.

Example 3: Server plus CAL licensing model

Based on the diagram above:

* Internal client users/devices each require Windows Server 2008 and Exchange 2007 CALs.

* Users/devices utilizing terminal services functionality of Windows Server 2008 require Windows Server 2008 CALs, Windows Server Terminal Services 2008 CALs, and the Exchange 2007 CALs to access Exchange.

* External users do not require CALs as the server is licensed with both Windows Server 2008 and Exchange Server 2007 External Connector licenses.

Licensing of New and Updated Features
of Windows Server 2008

New and Updated Features in Windows Server 2008

New/Updated Feature	Enterprise	Datacenter	Standard	Web	Itanium	License Requirements
Internet Information Services 7.0	●	●	●	●	●	Covered by server license. No incremental licensing requirements.
Hyper-V	●	●	●	○	○	Covered by server license. No incremental licensing requirements.
Network Access Protection	●	●	●	○	○	Covered by server license. No incremental licensing requirements.
AD Rights Management Services	●	●	●	○	○	Covered by server license, but incremental RMS CALs required, similar to Terminal Services.
Terminal Services Gateway and RemoteApp	●	●	●	○	○	Covered by server license, but incremental TS CALs required, similar to AD Rights Management Services.
Server Manager	●	●	●	●	●	Covered by server license. No incremental licensing requirements.
Windows Deployment Services	●	●	●	○	○	Covered by server license. No incremental licensing requirements.
Server Core	●	●	●	●	○	Covered by server license. No incremental licensing requirements.

● – Available   ○ – Not Available

Upgrade/Downgrade Options
Windows Server Upgrade Options

Previous versions of Windows Server can be upgraded to Windows Server 2008, as shown below. Volume Licensing customers who have SA on Windows Server Standard, Enterprise, or Datacenter editions can opt for either Windows Server 2008 with or without Hyper-V. Once they decide, they will not be able to switch. Upon renewal of their SA, they will acquire the appropriate SA renewal SKU.

Customer has:	Customer acquires:
Windows 2000 (no SA)	New WS 2008 Standard L or L & SA (or Standard without Hyper-V option)
Windows 2000 (with SA)	No additional purchase required
Windows 2000 Advanced (no SA)	New WS 2008 Enterprise L or L & SA (or Enterprise without Hyper-V option)
Windows 2000 Advanced (with SA)	No additional purchase required
Windows Server 2003 Standard Edition (no SA)	New WS 2008 Standard L or L & SA (or Standard without Hyper-V option)
Windows Server 2003 Standard Edition (with SA)	No additional purchase required
Window Server 2003 Enterprise Edition (no SA)	New WS 2008 Enterprise L or L & SA (or Enterprise without Hyper-V option)
Windows Server 2003 Enterprise Edition (with SA)	No additional purchase required
Windows Server 2003 Enterprise Edition (Itanium platform) (no SA)	New WS 2008 for IA Based Systems or new WS 2008 Enterprise L or L & SA (or Enterprise without Hyper-V option)
Windows Server 2003 Enterprise Edition (Itanium platform) (with SA)	No additional purchase required
Windows Server 2003 Datacenter Edition (no SA)	New WS 2008 Datacenter L or L & SA (or Datacenter without Hyper-V option)
Windows Server 2003 Datacenter Edition (with SA)	No additional purchase required
Windows Server 2003 Datacenter Edition (Itanium platform) (no SA)	New WS 2008 for IA Based Systems or new WS 2008 Datacenter L or L & SA (or Datacenter without Hyper-V option)
Windows Server 2003 Datacenter Edition (Itanium platform) (with SA)	No additional purchase required
Windows Server 2003 Web Edition (no SA)	New Windows Web Server 2008 L or L & SA
Windows Server 2003 Web Edition (with SA)	No additional purchase required
Windows Server 2003 CAL, 2003 TS CAL, and 2003 RMS CAL (no SA)	New WS 2008 CAL, WS 2008 TS CAL, and WS 2008 RMS CAL, respectively or L & SA
Windows Server 2003 CAL, 2003 TS CAL, and 2003 RMS CAL (with SA)	No additional purchase required
Windows Server 2003 R2 Standard Edition (no SA)	New WS 2008 Standard L or L & SA (or Standard without Hyper-V option)
Windows Server 2003 R2 Standard Edition (with SA)	No additional purchase required
Windows Server 2003 R2 Enterprise Edition (no SA)	New WS 2008 Enterprise L or L & SA (or Enterprise without Hyper-V option)
Windows Server 2003 R2 Enterprise Edition (with SA)	No additional purchase required
Windows Server 2003 R2 Datacenter Edition (no SA)	New WS 2008 Datacenter L or L & SA (or Datacenter without Hyper-V option)
Windows Server 2003 R2 Datacenter Edition (with SA)	No additional purchase required

Windows Server Downgrade Options

2008 licenses can be downgraded to older versions of the corresponding licenses as listed below:

2008	2003 R2	2003	2000
Windows Server 2008 Standard	Windows Server 2003 R2 Standard Edition	Windows Server 2003 Standard Edition	Windows 2000 Server
Windows Server 2008 Standard without Hyper-V	Windows Server 2003 R2 Standard Edition	Windows Server 2003 Standard Edition	Windows 2000 Server
Windows Server 2008 Enterprise	Windows Server 2003 R2 Enterprise Edition	Windows Server 2003 Enterprise Edition	Windows 2000 Advanced Server
Windows Server 2008 Enterprise without Hyper-V	Windows Server 2003 R2 Enterprise Edition	Windows Server 2003 Enterprise Edition	Windows 2000 Advanced Server
Windows Server 2008 Datacenter	Windows Server 2003 R2 Datacenter Edition	Windows Server 2003 Datacenter Edition	Windows 2000 Datacenter Server
Windows Server 2008 Datacenter without Hyper-V	Windows Server 2003 R2 Datacenter Edition	Windows Server 2003 Datacenter Edition	Windows 2000 Datacenter Server
Windows Server 2008 for Itanium-Based Systems	N/A – no equivalent	Windows Server 2003 Datacenter Edition (IA), or Windows Server 2003 Enterprise Edition (IA)	N/A - no equivalent
Windows Web Server 2008	N/A – no equivalent	Windows Server 2003 Web Edition	N/A - no equivalent
Windows Server 2008 CAL	Windows Server 2003 CAL		Windows 2000 CAL
Windows Server 2008 External Connector	N/A – no equivalent	Windows Server 2003 External Connector	Windows 2000 Internet Connector
Windows Server 2008 Terminal Services CAL	N/A – no equivalent	Windows Server 2003 Terminal Services CAL	Windows 2000 Terminal Services CAL
Windows Server 2008 Terminal Services External Connector	N/A – no equivalent	Windows Server 2003 Terminal Services External Connector	Windows Terminal Services Internet Connector
Windows Server 2008 Rights Management Services CAL	N/A – no equivalent	Windows Server 2003 Rights Management Services CAL	N/A - no equivalent
Windows Server 2008 Rights Management Services External Connector	N/A – no equivalent	Windows Server 2003 Rights Management Services External Connector	N/A - no equivalent

Comparison of Volume Licensing Programs for Windows Server 2008

Microsoft offers volume licensing programs to help reduce administrative overhead and software-management costs for your organization, while enabling product licensing on an ongoing basis at considerable discounts.

Volume Licensing Programs

Enterprise Agreement (EA)	• Designed for medium, large, and multinational companies who are interested in standardizing their enterprise and who value the benefits of centralized purchasing. • Best for corporate customers with at least 250 PCs. • Significant discounts over full retail prices, with a fixed, pre-determined, annual price per desktop. • Volume pricing and the rights to the latest Microsoft enterprise software products, including Microsoft Office Professional Plus 2007, Microsoft Office Enterprise 2007, the Windows Vista Enterprise Edition, Microsoft Core Client Access License, and Microsoft Enterprise Client Access License. • Eligibility for upgrades for all enrolled products and other benefits of Software Assurance coverage. • Windows Web Server 2008, Windows Server 2008 Standard, Windows Server 2008 Enterprise, Windows Server 2008 Datacenter, and Windows Server 2008 for Itanium-Based Systems can be added as additional products under the enrollment or can be covered under an associated Select License Agreement.
Enterprise Subscription Agreement (EAS)	• Designed for medium, large, and multinational companies who wish to acquire non-perpetual licenses for one or more Microsoft enterprise products. • Best for corporate customers with 250 or more PCs who prefer to subscribe to, rather than purchase, Microsoft software licenses. • Eligibility for upgrades for all enrolled products and other benefits of Software Assurance coverage. • Three-year, annualized payment agreement with option to renew for an additional one or three years. • Windows Web Server 2008, Windows Server 2008 Standard, Windows Server 2008 Enterprise, Windows Server 2008 Datacenter, and Windows Server 2008 for Itanium-Based Systems can be added as additional products under the enrollment or can be covered under an associated Select License Agreement.

Volume Licensing Programs, Cont'd.

Select License	
	• Designed for medium, large, and multinational organizations with mixed Microsoft licensing requirements, decentralized purchasing, and the ability to forecast purchases.
	• For corporate, government, and academic customers with 250 or more PCs.
	• Customers receive a volume price level for each pool of products selected (applications, systems, or servers) based on a three-year software forecast.
	• Significant discounts over full retail prices, based on how much software you expect to license during the agreement term.
	• Eligibility for upgrades for all enrolled products and other benefits of Software Assurance coverage.
	• Easier management of license portfolios with online licensing tools.
	• Three-year agreement term with option to renew for one or three additional years. Annualized payments for License and Software Assurance (L&SA) and Software Assurance (SA) only.
	• Windows Web Server 2008, Windows Server 2008 Standard, Windows Server 2008 Enterprise, Windows Server 2008 Datacenter, and Windows Server 2008 for Itanium-Based Systems qualify under the server product pool.
Open License	
	• Designed for customers seeking an easy, one-time transaction process with the flexibility of acquiring licenses from a broad network of resellers.
	• For corporate, government, academic, and charity customers with five or more PCs.
	• Easier management of license portfolios with eOpen (electronic license tracking).
	• Eligibility for upgrades for all enrolled products and other benefits of Software Assurance coverage.
	• Discounts over full retail prices.
	• Two-year agreement term (Open Business and Open Volume programs) or new three-year agreement term (Open Value program).
	• Windows Web Server 2008, Windows Server 2008 Standard, Windows Server 2008 Enterprise, Windows Server 2008 Datacenter, and Windows Server 2008 for Itanium-Based Systems qualify under the server product pool for Open Volume program and are available for Open Value and Open Business programs.

Volume Licensing Programs, Cont'd.

Services Provider Licensing Agreement	• Enables services providers to license Microsoft products on a monthly basis to provide services and hosted applications to their end customers. • Designed for Web hosters; application service providers; service providers offering messaging and/or collaboration, platform infrastructure, streaming media, or Web/Internet services; ISVs providing hosted applications; outsourcers providing software licenses; and consultants providing software services. • Windows Web Server 2008, Windows Server 2008 Standard, Windows Server 2008 Enterprise, and Windows Server 2008 Datacenter are offered in the SPLA program.
Educational Programs	• Designed specifically for academic organizations with options for subscription or transactional licensing. • Subscription licensing programs: Campus Agreement Subscription or School Agreement Subscription. • Transactional licensing programs: Academic Open or Academic Select. • Substantially lower prices. • Windows Web Server 2008, Windows Server 2008 Standard, Windows Server 2008 Enterprise, Windows Server 2008 Datacenter, and Windows Server 2008 for Itanium-Based Systems qualify under the server product pool for Academic Select program and are available for Academic Open program.

The size and nature of your organization will play a large part in the selection of your licensing arrangement. Enterprise agreements can greatly simplify planning and management for large organizations. Whereas, organizations with fewer than five users or devices connecting to a Windows Server 2008-based network might be best served by the standard retail purchasing option.

Pricing Table

Fully Packaged Product ERP Pricing

(The pricing below represents sample FPP ERP price points for the retail channel. Not all pricing is listed. Please visit http://microsoft.com/windowsserver2008/howtobuy/licensing/ for more information.)

FPP Retail ERP Pricing SKUs

Product	ERP*
Windows Server 2008 Standard	$999 (with 5 CALs)
Windows Server 2008 Standard without Hyper-V (new)	$971 (with 5 CALs)
Windows Server 2008 Enterprise	$3,999 (with 25 CALs)
Windows Server 2008 Enterprise without Hyper-V (new)	$3,971 (with 25 CALs)
Windows Web Server 2008	$469
Windows Server 2008 5 CAL Pack	$199
Rights Management Services 2008 CAL	$37
Terminal Services 2008 5 CAL Pack	$749

*ERP—Estimated Retail Price

General FAQs

Q: What are the pricing and licensing terms for the 64-bit versions of Windows Server 2008?

A: The 32-bit and 64-bit versions of the software are the same price as well as their license terms. The license grants the customer the option of using either the 32-bit version or the 64-bit version of the software. CALs are still required to access or use the server software.

Q: Can I run Windows Server 2008 software (with the Hyper-V technology enabled) on a 32-bit version?

A: No. Windows Server 2008 enabled with the Hyper-V virtualization technology may only run on 64-bit versions of Windows Server 2008 Standard, Enterprise, and Datacenter on hardware that supports hardware-assisted virtualization.

Q: I can't find Windows Server 2003 R2 products on the Volume Licensing or Retail price lists anymore. Does this mean I can no longer use Windows Server 2003 R2?

A: No. You can acquire Windows Server 2008 licenses and exercise your downgrade rights to still use Windows Server 2003 R2 products.

Q: Do I have to order special media in order to exercise my downgrade rights?

A: No. You may use your existing media to run older versions of the server software. If you no longer have the media for the version you wish to run, you can re-order it through your normal fulfillment channels, e.g., worldwide.

For more information, go to:
http://www.microsoft.com/windowsserver2008/howtobuy/licensing/

Licensing Glossary

CAL: Client Access License provides access to server software for either the User or Device.

EC: External Connector. Licensed per server, provides unlimited access for non-employee users/devices.

EULA: End User License Agreement.

External User: A person who is not an employee, or similar personnel of the company or its affiliates, and is not someone to whom you provide hosted services using the server software.

FPP: Fully packaged product for the retail sales channel.

Instance: Version of the server software that is created, stored or run on a server.

OEM: Original Equipment Manufacturer sales channel.

Per Server: License mode available in Windows Server that allows the CALs to be deployed on the specific named server, thereby limiting the access to that individual server.

POSE: Physical operating system environment.

PUR: Product Use Rights are the legal terms and conditions for products licensed through the Volume Licensing channel.

SA: Software Assurance. Provides automatic access to new technology and productivity benefits, support, tools, and training to help deploy and use software efficiently.

SAL: Subscriber Access license in the SPLA program. This is a per user-based monthly licensing model in SPLA.

SPLA: Services Provider License Agreement. This agreement enables service providers to license Microsoft products on a monthly subscription basis to provide services and hosted applications to their end customers.

VL: Microsoft Volume Licensing offers customized programs that are designed to meet the needs of your business. Tailored to the size and purchasing preference of your company, these programs provide simple, flexible, and affordable solutions that enable you to easily manage your licenses.

VOSE: Virtual operating system environment.

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