

System Requirements 2008 R2

Below are the basic system requirements for installing and running Virtual Machine Manager (VMM) 2008 R2. More complete and comprehensive information covering additional system configuration recommendations can be found and followed at the VMM 2008 TechCenter.

- System Requirements: VMM on a Single Computer
- System Requirements: VMM Server
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System Requirements: Installing VMM on a Single Computer

This topic describes the minimum and recommended hardware and software requirements for VMM 2008 R2 when installing all components on a single computer. Actual requirements vary based on your system configuration and the number of hosts and virtual machines that the VMM server manages.

This scenario is recommended only if the VMM server is managing a small number of hosts. For better performance when the VMM server is managing a large number of hosts, it is recommended that you distribute workloads by installing individual VMM components on dedicated computers.

Hardware Requirements

The minimum and recommended hardware requirements to install and operate all VMM components on a single computer are listed in the following tables based on the number of hosts that the VMM server manages.

From 5 to 10 hosts

Hardware component	Minimum	Recommended
Processor	Pentium 4, 2 GHz (x64)	Dual-Core Pentium 4, 2 GHz (x64) or greater
RAM	2 GB	2 GB
Hard disk space	10 GB	40 GB

From 11 to 20 hosts

Hardware component	Minimum	Recommended
Processor	Pentium 4, 2.8 GHz (x64)	Dual-Core Pentium 4, 2 GHz (x64) or greater
RAM	2 GB	4 GB
Hard disk space	10 GB	50 GB

Note: This computer serves as a virtual machine host, so it must have hardware-assisted virtualization support and hardware-assisted virtualization support must be enabled in the BIOS to run the Hyper-V server role in Windows Server 2008 R2.

Software Requirements

The following software must be installed prior to installing all VMM components on a single computer.

Software requirement	Notes
The Windows Server 2008 R2 operating system with Hyper-V, Standard, Enterprise, and Datacenter Editions	This software is included in Windows Server 2008 R2. If this software has been removed, the Setup Wizard automatically adds it.
Windows PowerShell 1.0	This software is included in Windows Server 2008 and the WinRM service is set to start automatically.
Windows Remote Management (WinRM)	<ul style="list-style-type: none"> • If the WinRM service is disabled and stopped, Setup will fail. • If the WinRM service is set to start automatically and is stopped, the Setup Wizard starts the service. • If the WinRM service is set to start manually and is stopped, the Setup Wizard starts the service and sets it to start automatically.

Software requirement	Notes
Windows Automated Installation Kit (WAIK) 1.1	If this software has not been installed previously, the Setup Wizard automatically installs it.
Windows Server Internet Information Services (IIS) 7.0	<p>You must add the Web Server (IIS) role and then install the following server role services:</p> <ul style="list-style-type: none"> • IIS 6 Metabase Compatibility • IIS 6 WMI Compatibility • Static Content • Default Document • Directory Browsing • HTTP Errors • ASP.NET • .NET Extensibility • ISAPI Extensions • ISAPI Filters • ISAPI Extensions • Request Filtering
<p>Note A supported version of Microsoft SQL Server</p>	If the default port (80) for the VMM Self-Service Portal is used by another Web site, you must either use a different dedicated port or specify a host header for the portal.

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System Requirements: VMM Server

The following are estimated system requirements for installing the VMM 2008 R2 server on a dedicated computer. If your computer has less than the minimum requirements, you cannot install this component. Actual requirements vary based on your system configuration and the number of hosts and virtual machines that the VMM server manages.

Hardware Requirements

The minimum and recommended hardware requirements for the VMM server depend on the number of hosts that the VMM server manages.

Managing up to 150 hosts

Hardware component	Minimum	Recommended
Processor	Pentium 4, 2.8 GHz (x64)	Dual-Core Pentium 4, 2 GHz (x64) or greater
RAM	2 GB	4 GB
Hard disk space (with remote database)	2 GB	40 GB
Hard disk space (with the default local SQL Server 2005 Express Edition SP2 database installed)	10 GB	50 GB

Note For the default local SQL Server 2005 Express Edition SP2, the database size is limited to 4 GB.

Note: If you use plan to use the VMM server as a library server, you need to provide additional hard disk space for storing objects.

Managing more than 150 hosts

Hardware component	Minimum	Recommended
Processor	Pentium 4, 2.8 GHz (x64)	Dual-Processor, Dual-Core, 3.6 GHz or greater (x64)
RAM	4 GB	8 GB
Hard disk space	10 GB	50 GB

Note: For better performance, when the VMM server is managing more than 150 hosts, it is recommended that you add one or more library servers and that you do not use the default library share on the VMM server.

Note: The SQL Server 2005 Express Edition SP2 database size is limited to 4 GB, and so it is recommended that you use a full version of SQL Server when the VMM server is managing more than 150 hosts.

Software Requirements

The following software must be installed prior to installing the VMM server.

Software requirement	Notes
Microsoft Windows Server 2008 R2 (x64)	
Windows Remote Management (WinRM)	This software is included in Windows Server 2008 R2 and the WinRM service is set to start automatically. If the WinRM service is stopped, the Setup Wizard starts the service.
Microsoft .NET Framework 3.0	This software is included in Windows Server 2008. If this software has been removed, the Setup Wizard automatically adds it.
Windows Automated Installation Kit (WAIK) 1.1	If this software has not been installed previously, the Setup Wizard automatically installs it.

If you use the same computer for your VMM server and your VMM database, you must install a supported version of Microsoft SQL Server.

Note: For better performance, when the VMM server is managing a large number of hosts, it is recommended that you use a separate computer for your VMM database.

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System Requirements: Administrator Console

It is strongly recommended that you install a Virtual Machine Manager (VMM) Administrator Console on the same computer as the VMM server. You can install additional VMM Administrator Consoles on other computers to remotely access and manage the VMM server. When you install the VMM Administrator Console, the Setup Wizard also installs Windows PowerShell — Virtual Machine Manager command shell.

If you plan to use the reporting feature of VMM, you must install a VMM Administrator Console on the same computer as the VMM server. The reporting feature of VMM relies upon System Center Operations Manager 2007. For Operations Manager administrators to perform tasks on hosts and virtual machines from within the Server Virtualization Management Pack requires that the Windows PowerShell — Virtual Machine Manager command shell be installed on the VMM server.

The following are the system requirements for installing the VMM Administrator Console on a dedicated computer. If your computer has less than the minimum requirements, you will not be able to install this component. Actual requirements vary based on your system configuration and the number of hosts and virtual machines that the VMM server manages.

Hardware Requirements

The following are the minimum and recommended hardware requirements for the VMM Administrator Console based on the number of hosts you manage.

Managing up to 150 hosts

Hardware component	Minimum	Recommended
Processor	Pentium 4, 550 MHz	Pentium 4, 1 GHz or greater
RAM	512 MB	1 GB
Hard disk space	512 MB	2 GB

Managing more than 150 hosts

Hardware component	Minimum	Recommended
Processor	Pentium 4, 1 GHz	Pentium 4, 2 GHz or greater
RAM	1 GB	2 GB
Hard disk space	512 MB	4 GB

Software Requirements

The following software must be installed prior to installing the VMM Administrator Console.

Software requirement	Notes
Supported operating system for the VMM Administrator Console	For more information, see Supported Operating Systems for VMM Components, below.
Windows PowerShell 1.0	This software is included in Windows Server 2008 R2. If this software has been removed, the Setup Wizard automatically adds it.
Microsoft .NET Framework 2.0	<ul style="list-style-type: none"> • For Windows Server 2008 R2, Microsoft .NET Framework 2.0 is not required. • For all other supported operating systems, if Microsoft .NET Framework 2.0 is not installed; you can have the Setup Wizard install it.

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System Requirements: Virtual Machine Hosts

The system requirements for a virtual machine host in System Center Virtual Machine Manager (VMM) vary depending on the host's virtualization software and other factors.

Hardware Requirements

The hardware requirements for a host vary depending on a number of factors, including but not limited to the following:

- The virtualization software installed on the host
- The number and type of guest operating systems
- The applications you plan to run on the guest operating systems

For more information about the hardware requirements for a host, refer to the product documentation for the virtualization software installed on the host.

Note: A host running the Hyper-V server role in Windows Server 2008 R2 must have hardware-assisted virtualization support and it must be enabled in the BIOS.

Software Requirements

VMM supports the following virtualization software for managing hosts.

Microsoft Virtual Server 2005

The following software is required for a host that is running Virtual Server 2005 virtualization software.

Software requirement	Notes
<p>One of the following versions of the Windows Server 2003 operating system:</p> <ul style="list-style-type: none">• Windows Server 2003 with SP2 or later• Windows Server 2003 R2 with SP2 or later• Windows Server 2003 x64 with SP2 or later• Windows Server 2003 R2 x64 with SP2 or later	<p>The Standard, Enterprise, and Datacenter Editions of Windows Server 2003 are supported.</p>
<p>One of the following versions of Microsoft Virtual Server 2005:</p> <ul style="list-style-type: none">• Microsoft Virtual Server 2005 R2 with SP1 or later• Microsoft Virtual Server 2005 R2 x64 with SP1 or later	<p>When you add a host to VMM and that host's operating system supports Virtual Server 2005 R2, VMM automatically installs the correct version of Virtual Server 2005 R2 if it is not installed already.</p>
<p>Windows Remote Management (WinRM) installed from the following site: http://go.microsoft.com/fwlink/?LinkId=84599.</p>	<p>If you have previously enabled WinRM by using the Management and Monitoring Tools components group in Add/Remove Windows Components, that version will not work with VMM. You must install the version of this software indicated here, which overwrites your existing version.</p>

Microsoft Windows Server 2008 R2

The following software is required for a host that is running Microsoft Windows Server Hyper-V virtualization software.

Software requirement	Notes
Microsoft Windows Server	Standard, Enterprise, and Datacenter Editions of Windows Server

Software requirement**Notes**

2008 R2

2008 are supported.

Windows Server Hyper-V server role must be enabled

To enable the Hyper-V server role in Windows Server 2008 R2, the computer must have hardware-assisted virtualization support enabled in the BIOS.

Non-Windows hosts

The following software is required for a host that is running VMware® virtualization software.

Software requirement**Notes**

One of the following versions of VMware® VirtualCenter:

- VMware® VirtualCenter 2.5
- VMware® VirtualCenter 2.0.1

For more information about the software requirements for VMware, refer to the VMware product documentation.

One of the following versions of VMware® ESX Server:

- VMware® ESX Server 3.5
- VMware® ESX Server 3.0.2
- VMware® ESX Server 3i

When you add a VMware® VirtualCenter server to VMM, all existing hosts that are running a supported version of ESX Server are also added to VMM.

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Supported Operating Systems for VMM Components

The following tables show the operating systems that are supported for Virtual Machine Manager (VMM) components and managed computers.

Note: For information about operating systems supported for physical-to-virtual (P2V) and virtual-to-virtual (V2V) conversions, see the VMM Operations content at <http://go.microsoft.com/fwlink/?LinkID=117761>.

Important

The information in this topic is current as of the date the product was released and is subject to change. For the most up-to-date system requirements information, see System Requirements for Deploying Virtual Machine Manager at <http://go.microsoft.com/fwlink/?LinkId=110906>.

VMM Server and Windows-based Hosts

Operating System	All VMM Components on One Computer	VMM Server	Hyper-V Hosts	Virtual Server Hosts
The Windows Server 2008 R2 operating system with Hyper-V 64-bit, Standard, Enterprise, and Datacenter Editions	Yes	Yes	Yes	N/A
Windows Server 2008 R2 — Server Core installation, Standard, Enterprise, and Datacenter Editions	No	No	Yes	No
The Windows Server 2003 operating system with Service Pack 2, Standard, Enterprise, and Datacenter Editions	No	No	No	Yes
Windows Server 2003 R2 with Service Pack 2	No	No	No	Yes
Windows Server 2003 x64 Edition with Service Pack 2	No	No	No	Yes
Windows Server 2003 R2 x64	No	No	No	Yes

Operating System	All VMM Components on One Computer	VMM Server	Hyper-V Hosts	Virtual Server Hosts
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Other VMM Components and VMM Library Servers

Operating System	VMM Administrator Console	VMM Self-Service Portal	VMM Library Server
The Windows Server 2008 R2 operating system with Hyper-V 64-bit, Standard, Enterprise, and Datacenter Editions	Yes	Yes	Yes
Windows Server 2008 R2 — Server Core installation, Standard, Enterprise, and Datacenter Editions	No	No	Yes
Windows Web Server 2008 R2	No	Yes	No
The Windows Server 2003 operating system with Service Pack 2, Standard, Enterprise, and Datacenter Editions	Yes	Yes	Yes
Windows Server 2003 R2 with Service Pack 2	Yes	Yes	Yes
Windows Server 2003 x64 Edition with Service Pack 2	Yes	Yes	Yes
Windows Server 2003 R2 x64 Edition with Service Pack 2	Yes	Yes	Yes

Operating System	VMM Administrator Console	VMM Self-Service Portal	VMM Library Server
The Windows Vista operating system with Service Pack 1	Yes	No	No
The Windows XP Professional operating system with Service Pack 2 or Service Pack 3	Yes	No	No
The Windows XP Professional x64 Edition operating system with Service Pack 2	Yes	No	No