



IBM Systems

IBM Virtual Machine Manager Version 2.1

Release Notes





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Note

Before using this information and the product it supports, read the general information in "Notices" on page 11.

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Chapter 1. About this release

IBM® Virtual Machine Manager (VMM) version 2.1 is a minor update to VMM 2.0.

Changes in the VMM 2.1 release

VMM 2.1 adds the following enhancements:

Support for Windows® 2003 x64 Edition

VMM 2.1 supports Windows 2003 x64 Edition operating systems that are supported by IBM Director 5.1 or a virtualization application.

Improved support for IBM Director 5.1

VMM 2.1 has been updated to fully support of IBM Director 5.1 features.

Support for the latest versions of virtualization applications

VMM 2.1 includes support for the latest versions of virtualization applications that were available at the time of release.

Migration enhancements

VMM 2.1 includes the following enhancements for migration:

- When running VMware VirtualCenter 1.3, VMM 2.1 provides the **Enable Migration** attribute. The value of this attribute is used to set VMware VirtualCenter VMotion for dynamic migration of virtual machines on an ESX host.
- Virtual machines running under GSX 3.2 can be statically migrated with VMM. Migration of virtual machines running under GSX 3.1 had several issues and limitations.

Virtual machine support

VMM 2.1 includes the following enhancements for virtual machines:

- You can change the value of any undoable disk attributes when a virtual machine is turned on. Previously, a virtual machine had to be turned off to change this value. This enhancement applies to these virtual machine attributes:
 - (VMM Agents for VirtualCenter and ESX only) PowerON Action for Undoable Disk
 - (VMM Agents for VirtualCenter, ESX, and Virtual Server only) PowerOFF Action for Undoable Disk
- You can create virtual machines with as much as 3.6 GB of memory and as much as 12 GB of disk space.
- Virtual machines that are running under GSX 3.2 can be properly shut down and turned off when using Windows 2000.

For details about the functionality in VMM 2.1, see the *IBM Virtual Machine Manager Installation and User's Guide*.

Product compatibility

VMM 2.1 is supported for use with IBM Director 5.1 and later maintenance releases.

Compatibility with other products, such as operating systems or virtualization products from VMware or Microsoft®, are described in the installation chapter of the *IBM Virtual Machine Manager Installation and User's Guide*.

VMM information resources

You can find additional information about VMM and IBM Director in the product documentation and on the World Wide Web.

Documentation

In addition to the *IBM Virtual Machine Manager Version 2.1 Release Notes*, VMM 2.1 is supported by the *IBM Virtual Machine Manager Installation and User's Guide* (vmm210_docs_user.pdf).

All documentation is in Portable Document Format (PDF). You need Adobe Acrobat Reader or Xpdf to view it.

World Wide Web resources

The following Web pages provide resources for understanding, using, and troubleshooting IBM Director and systems-management tools.

IBM Virtual Machine Manager page

www.ibm.com/servers/eserver/xseries/systems_management/ibm_director/extensions/vmm.html

Read an overview of VMM and find links to download the product, release notes, and user's guide.

IBM personal computing support page

www.ibm.com/pc/support/

Locate support for IBM hardware and systems-management software. For systems-management software support, click **Systems management**.

IBM Systems Management Software: Download/Registration page

www.ibm.com/pc/us/eserver/xseries/systems_management/dwnl.html

Download IBM systems-management software, including VMM.

IBM Systems Management page for Intel processor-based servers

www.ibm.com/servers/eserver/xseries/systems_management

Obtain an overview of IBM systems management and IBM Director. This Web page also contains links to Web pages for IBM Director extensions including Remote Deployment Manager (RDM), Scalable Systems Manager (SSM), Server Plus Pack, and Software Distribution (Premium Edition).

IBM ServerProven® page

www.ibm.com/servers/eserver/serverproven/compat/us/

Obtain information about IBM @server® xSeries®, IBM BladeCenter®, and IBM IntelliStation® hardware compatibility with IBM Director.

Chapter 2. Installation and upgrade information

VMM has three software components that are installed on different servers in your network:

- VMM Server is installed on the management server that is running IBM Director Server.
- VMM Console is installed on the management console that is running IBM Director Console.
- The applicable version of VMM Agent is installed on a managed system that is running one of the following sets of software:
 - IBM Director Agent, VMware VirtualCenter server, and VMware VirtualCenter Web service
 - IBM Director Agent and VMware ESX Server (service console only)
 - IBM Director Agent and VMware GSX Server
 - IBM Director Agent and Microsoft Virtual Server

Detailed installation instructions, including versions of supported virtualization applications and other system requirements, are provided in the *IBM Virtual Machine Manager Installation and User's Guide*.

Chapter 3. Limitations, general problems, and workarounds

This chapter contains information about limitations, general problems, and workarounds.

Limitations

The limitations in VMM 2.1 apply either to all VMM agents or to a specific VMM agent that is being used.

Limitations for any agent of VMM

VMM 2.1 has the following limitations for any agent of VMM:

Unable to use dircli with some language-specific versions of Windows

IBM Director command-line interface (dircli) and VMM commands use the backslash (\) for various commands. For example, the backslash is used when designating the full path name to a virtual machine configuration file. However, some language-specific versions of Microsoft Windows use a different character for backslash. Therefore, when a backslash is used with dircli, it fails to run on that language-specific version of Windows. For example, this problem occurs with the Korean and Japanese versions of Windows.

VMM icon is not displayed properly on Windows 2000 without installing Service Pack 4

After you install a VMM component on a system that is running Windows, the VMM program is listed as a currently installed program on the Add/Remove Programs window. However, when the system is running Windows 2000 without Service Pack 4, the icon for the VMM program is not displayed properly. After Service Pack 4 has been installed, the VMM icon is displayed properly. This limitation is seen when running the English and Korean versions of Windows 2000.

Limitations when using VMM Agent for VMware VirtualCenter

VMM 2.1 has the following limitations when using VMM Agent for VMware VirtualCenter:

Excessive windows prompting for undoable disk power actions

When a virtual machine has one or more undoable disks and a power operation occurs on that virtual machine, VMware VirtualCenter requires user input to complete the operation. If the power operation is originated by VMM, then VMM provides the required input. However, if there is a VMware Remote Console open at the time that the power operation occurs, a window opens that asks for the required information even though it has been provided by VMM. When a user attempts to provide the information that was requested, an error message is displayed.

This same behavior can be observed when two VMware Remote Console sessions are open to the same virtual machine. In that case, even though the question might be answered at one console, the window at the second console remains open and returns an error if the user attempts to answer the question.

Limitations when using VMM Agent for VMware ESX Server

VMM 2.1 has the following limitations when using VMM Agent for VMware ESX Server:

Changed UUIDs can cause virtual machine objects to disappear from IBM Director Console

If you turn off a virtual machine with the VMware Console and select to always create a new universal unique identifier (UUID) and later use VMM to migrate that virtual machine, the UUID for the virtual machine is changed when the virtual machine is eventually turned on at the destination host. This sequence of events causes the virtual machine object to be deleted from IBM Director and causes a Virtual Machine, Deleted event to occur.

To restore the virtual machine object to IBM Director Console, you must use VMM to discover the virtual machines on the host. From IBM Director Console, in the Group Contents pane, right-click the managed object for the host and click **Host Management** → **Discover Virtual Machines**.

Limitations when using VMM Agent for VMware GSX Server

VMM 2.1 has the following limitations when using VMM Agent for VMware GSX Server:

Shutting down and turning off a virtual machine under Windows 2000 and VMware GSX Server 3.1

If you use VMM to shut down and turn off a virtual machine that is running Windows 2000 under VMware GSX Server 3.1, the virtual machine is only shut down, it is not turned off. You must use the VMware Console to turn the virtual machine off. Further, in VMM, the virtual machine remains in the transition state. After the virtual machine has been turned off through the VMware Console, use VMM to rediscover the virtual machine so that VMM reflects the turned-off state. These limitations do not apply to virtual machines that are running under VMware GSX Server 3.2.

Migrating a turned-on virtual machine that is running Windows 2000 under VMware GSX Server 3.1

If a turned-on virtual machine that is running Windows 2000 under VMware GSX Server 3.1 is migrated, the migration process cannot be completed, because the VMM Agent for GSX cannot turn off the virtual machine, which is required for static migration. To resolve this issue, use the VMware Console to manually turn off the virtual machine. If the virtual machine is turned off within the timeout period of the VMM Server (generally 5 minutes), VMM detects the state change of the virtual machine and continues the migration. This limitation does not apply to virtual machines that are running under VMware GSX Server 3.2.

Limitations when using VMM Agent for Microsoft Virtual Server

VMM 2.1 has the following limitations when using VMM Agent for Microsoft Virtual Server:

Shutting down and turning off a virtual machine when the guest operating system is locked

If you use VMM to shut down and turn off a virtual machine when the guest operating system is locked, the virtual machine is not shut down nor turned off. You must use the Administration Web site for Microsoft Virtual Server to turn off the virtual machine. Further, in VMM, the virtual machine remains in the transition state. After the virtual machine has been turned off through the Administration Web site, use VMM to rediscover the virtual machine so that VMM reflects the turned-off state.

Migrating a turned-on virtual machine when the guest operating system is locked

If a turned-on virtual machine is migrated, but the guest operating system is locked, the migration process cannot be completed as the VMM Agent for Virtual Server cannot turn off the virtual machine, which is required for static migration. To resolve this issue, use the Administration Web site for Microsoft Virtual Server to manually turn off the virtual machine. If the virtual machine is turned off within the timeout period of the VMM Server (generally 5 minutes), VMM detects the state change of the virtual machine and continues the migration.

Registration problem with Microsoft Virtual Server 2005

Sometimes Microsoft Virtual Server 2005 does not properly unregister virtual machines. When this problem occurs, a virtual machine cannot be easily reregistered, which causes it to become unusable. This problem can occur during any unregister and reregister operations, but is exposed during migration as the migration process involves unregistering and reregistering virtual machines. This limitation does not apply to virtual machines that are running under Microsoft Virtual Server 2005 R2.

General problems and workarounds

This section contains information about these general problems and workarounds that apply to VMM 2.1:

Start Vendor Software task and VMware VirtualCenter client

If a user who does not have Windows administration privileges tries to use the Start Vendor Software task to run the VMware VirtualCenter client, an exception error message is displayed that does not indicate the true problem. If an exception error occurs, make sure that the user has Windows administration privileges on the system from which the user is trying to run VMware VirtualCenter client.

Multiple power operations in a Microsoft Virtual Server environment

Sometimes one or two events are not received by VMM Server when VMM Agent is monitoring multiple events from power operations that occur on virtual machines that are in a Microsoft Virtual Server environment. This problem occurs intermittently when more than 50 virtual machines are associated with one host. When a power operation event is not received by VMM Server, VMM cannot update the state icons for the virtual machine. If this happens, manually discover the virtual machines that are associated with a host.

Suspended virtual machines cannot be successfully unregistered and reregistered in a Microsoft Virtual Server environment

Sometimes unregistering a suspended virtual machine in a Microsoft Virtual Server environment can cause the files for the virtual machine to become corrupted. The problem becomes evident when the virtual machine is reregistered later. The virtual machine can be reregistered, but it will not turn on as expected. If you plan to use a virtual machine again, be sure that it is not suspended before you unregister it.

Unregistering a virtual machines in a Microsoft Virtual Server environment can leave a link file

When unregistering a virtual machine, Microsoft Virtual Server sometimes leaves a link file (.lnk) on its associated host. This link file prevents the virtual machine from being registered on the destination host. This problem is exposed during migration as the migration process involves unregistering and reregistering a virtual machine. To resolve the problem, you must delete the link file that is associated with the virtual machine from the source host. The event log from Microsoft Virtual Server lists the name of the link file. After the file is deleted, manually register the virtual machine to the destination host.

Chapter 4. Corrections to the VMM 2.1 documentation

At the time of release, there were no known corrections to either the VMM 2.1 documentation or online help.

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