

IBM Virtual Machine Manager 2.0



Release Notes

Note

Before using this information and the product it supports, read the general information in "Notices" on page 13.

Second Edition (August 2005)

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Chapter 1. About this release

IBM® Virtual Machine Manager (VMM) 2.0 is the second release of VMM.

The *IBM Virtual Machine Manager 2.0 Release Notes* (vmm200_relnotes_v2.pdf) is the second edition of a new document created specifically to support VMM 2.0. This document contains the types of information that were provided in readme.txt files for previous releases of VMM. This document, the vmm200_relnotes_v2.pdf from August 2005, supercedes the vmm200_users.pdf that was available in July 2005.

New in this release

VMM 2.0 adds the following new features, functions, and enhancements:

General enhancements

VMM 2.0 adds the following general enhancements:

- Two new virtualization environments that are supported with VMM 2.0:
 - VMware ESX Server and VMM Agent for VMware ESX Server
 - VMware GSX Server and VMM Agent for VMware GSX ServerVMware VirtualCenter is not used in both of these virtualization environments.
- Support for hosts that are running VMware GSX Server in a VMware VirtualCenter environment.
- Improvements in the migration of a single or all virtual machines on a host, including the ability to create a migration task to migrate all virtual machines on a host to the host with the lowest central processing unit (CPU) utilization.
- IBM Director Command Line Interface (DIRCMD) support for VMM functionality.
- VMM subtasks for the creation of VMM farms and creation of migration tasks. These subtasks are in the Tasks pane of IBM Director Console.
- Attributes for VMM State and VMM Parent and other new attributes for various VMM objects.
- Attributes that can be displayed for guest-operating-system objects.

Coordinator objects

VMM 2.0 adds Scheduler tasks to discover all farms that are defined in VMware VirtualCenter and to revoke credentials.

VMM farm objects

VMM 2.0 adds support for the following enhancements:

- Introduction of the *VMM farm* concept that applies to farms in VMware VirtualCenter and collection of hosts in other supported virtualization environments. The phrase *VMM farm* replaces the phrase *farm* that was used in VMM 1.0.
- Ability to create a VMM farm for hosts that are not in VMware VirtualCenter environments.
- Ability to start and stop all hosts that are running Microsoft® Virtual Server in one VMM farm. (VMM 1.0 only supported starting and stopping of Microsoft Virtual Server on one host at a time.)
- New event action to add a host to a VMM farm.

- Scheduler tasks to delete farms from VMware VirtualCenter server and to start and stop all hosts in a VMM farm that are running Microsoft Virtual Server.

Host objects

VMM 2.0 adds support for the following enhancements:

- Host objects are discovered for systems that are running either VMM Agent for VMware ESX Server or VMM Agent for VMware GSX Server. These systems that are represented by these host objects are not in a VMware VirtualCenter environment.
- Host objects are discovered for systems that are running VMware GSX Server in a VMware VirtualCenter environment. These host objects are not running any VMM Agents. Instead, the system running VMware VirtualCenter Server is running VMM Agent for VirtualCenter.
- Scheduler tasks to discover all virtual machines on a host.

Virtual machine objects

VMM 2.0 contains the following enhancements:

- Ability to create and delete a virtual machine.
- Ability to register and unregister virtual machines to and from a host.
- Addition of the pending state.
- Ability to power manage and migrate virtual machines that contain undoable disks.
- Ability to change attribute values for virtual machines, including the ability to specify an action to take when powering on or off virtual machines that contain undoable disks.
- Static migration for virtual machines running under these virtualization applications:
 - VMware ESX Server, without VMware VirtualCenter
 - VMware GSX Server, without VMware VirtualCenter
 - Microsoft Virtual Server
- New event filters for attribute changes and for virtual machines in the pending state.
- Scheduler tasks for discovery, migration, and deletion of virtual machines.

For details about the functionality in VMM 2.0, see the *IBM Virtual Machine Manager Installation and User's Guide*.

Compatibility with IBM Director

VMM 2.0 is supported for use with IBM Director 4.22.

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 2.0 Release Notes*, VMM 2.0 is supported by the *IBM Virtual Machine Manager 2.0 Installation and User's Guide, Second Edition, August 2005* (vmm200_user_v2.pdf)

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

The *IBM Virtual Machine Manager 2.0 Installation and User's Guide, Second Edition, August 2005* includes documentation corrections previously listed in these release notes. These document corrections are additional migration requirements and information about enabling secure copy (scp) for static migration with VMM Agent for ESX. Furthermore, new information and clarifications have been added to the *IBM Virtual Machine Manager 2.0 Installation and User's Guide, Second Edition, August 2005*. For details, see the summary of changes at the beginning of that document.

The vmm200_users_v2.pdf from August 2005 supercedes the vmm200_users.pdf that was available in July 2005.

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/xseries_sm/vmm.html

This Web page presents an overview of VMM and 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 @server[®] xSeries[®] Systems Management page

www.ibm.com/pc/ww/eserver/xseries/systems_management/index.html

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/pc/us/compat/index.html

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

Installation instructions, including other system requirements, are provided in the *IBM Virtual Machine Manager 2.0 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 2.0 are specific to the VMM Agent that is being used.

Limitations for any component of VMM

VMM 2.0 has the following limitations for any component of VMM:

Unable to use DIRCMD with the Korean version of Windows

IBM Director command-line interface (DIRCMD) 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, the Korean version of Windows® uses a different character for backslash. Therefore, when a backslash is used with DIRCMD, it fails to run on the Korean version 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. Once 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 2.0 has the following limitations when using VMM Agent for VMware VirtualCenter:

Adding a host to a VMM farm

If you use VMM to add a host to a VMM farm in VMware VirtualCenter and you enter correct credentials for the coordinator, a failure message is displayed about Web services communication with the vendor failing. If you try to add the host again, a different failure message is displayed about the host already existing. When this happens, the host is already defined in VirtualCenter, but it takes several minutes for its corresponding host object to appear in IBM Director Console.

Further, if you add a host to a VMM farm, but you enter incorrect credentials for the coordinator, then later when you enter the correct credentials for the coordinator, this operation can take several more minutes to be completed successfully.

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, then 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 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 2.0 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 power 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, then the UUID for the virtual machine is changed when the virtual machine is eventually powered 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**.

Names of virtual machines created by VMM cannot contain some special characters

VMM Agent for ESX does not support the creation of virtual machines that contain backslashes (\), forward slashes (/), colons (:), or semicolons (;). This problem only affects the creation of the virtual machines through VMM. Note that when a virtual machine is created with these characters through VMware VirtualCenter client, VMM can manage the virtual machine.

Limitations when using VMM Agent for VMware GSX Server

VMM 2.0 has the following limitations when using VMM Agent for VMware GSX Server:

Shutting down and powering off a virtual machine under Windows 2000

If you use VMM to shut down and power off a virtual machine that is running Windows 2000, the virtual machine is only shut down, it is not powered off. You must use the VMware Console to power the virtual machine off. Further, in VMM, the virtual machine remains in the transition state. After the virtual machine has been powered off through the VMware Console, use VMM to rediscover the virtual machine so that VMM reflects the powered-off state.

Migrating a powered-on virtual machine that is running Windows 2000

If a powered-on virtual machine is migrated, the migration process cannot be completed as the VMM Agent for GSX cannot power off the virtual machine, which is required for static migration. To resolve this issue, use the VMware Console to manually power off the virtual machine. If the power off occurs within the timeout period of the VMM Server (generally 5 minutes), VMM detects the state change of the virtual machine and continues the migration.

Limitations when using VMM Agent for Microsoft Virtual Server

VMM 2.0 has the following limitations when using VMM Agent for Microsoft Virtual Server:

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

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

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

If a powered-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 power off the virtual machine, which is required for static migration. To resolve this issue, use the Administration Web site to Microsoft Virtual Server to manually power off the virtual machine. If the power off occurs within the timeout period of the VMM Server (generally 5 minutes), VMM detects the state change of the virtual machine and continues the migration.

General problems

This section contains information about these general problems applicable to VMM 2.0:

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.

Chapter 4. Corrections to the VMM 2.0 documentation

This chapter provides corrections to the VMM 2.0 documentation and online help.

Corrections to the *Installation and User's Guide (vmm200_users_v2.pdf)*

There are no corrections at this time.

Corrections to the help system

The help system requires the additional information that has been added to the *IBM Virtual Machine Manager 2.0 Installation and User's Guide, Second Edition, August 2005 (vmm200_users_v2.pdf)*. For details, see the summary of changes at the beginning of that document.

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Part Number: 32R1244

Printed in USA

(1P) P/N: 32R1244

