



System x

IBM Hardware Management Pack for  
Microsoft System Center Operations Manager 2007  
Version 2.0 Release Notes

*Version 2.0*







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**Note**

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

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## About this release

With the IBM® Hardware Management Pack for Microsoft® System Center Operations Manager 2007, Version 2.0, you can use enhanced features of Microsoft System Center Operations Manager 2007 to manage IBM System x™ systems and BladeCenter® blade servers that are installed with IBM Director Core Services or IBM Director Agent.

Major features of the IBM Hardware Management Pack for Microsoft System Center Operations Manager 2007, Version 2.0 include:

- Monitoring the health of IBM systems and system components
- Creating groups of IBM systems and system components for monitoring at a high level
- Automatically restoring the health state of a component from an error state to a healthy state when an error is resolved

IBM Hardware Management Pack, V2.0 monitors all of the hardware health states that are critical for continuous functioning of your IBM systems. To help you focus on events that might need your attention, the Hardware Management Pack reports errors for all critical health conditions that might impact the system.

There are no fixes to earlier releases of the product in this release because this release is a new version of the product.





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## Information resources

You can find additional information about IBM Hardware Management Pack for Microsoft System Center Operations Manager 2007, Version 2.0 in the product documentation and on the Web.

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### Printable PDF files

View or print documentation that is available in Portable Document Format (PDF).

#### Downloading Adobe® Acrobat Reader

You need Adobe Acrobat Reader to view or print these PDF files. You can download a copy from the Adobe Web site.

#### Viewing and printing PDF files

You can view or print any of the PDF files in the following list. The most current version of each document is available online in the information center and on the product download page. Go to the product download page to sign in and locate the download links for the following titles, or click any title in the following list to open the version of each book that is in the IBM System x and BladeCenter Tools information center:

##### IBM Hardware Management Pack PDFs

- *IBM Hardware Management Pack for Microsoft System Center Operations Manager 2007, Version 2.0 Release Notes*
- *IBM Hardware Management Pack for Microsoft System Center Operations Manager 2007, Version 2.0 Installation and User's Guide*

##### IBM BladeCenter Chassis Management Pack PDFs

- *IBM BladeCenter Chassis Management Pack for Microsoft System Center Operations Manager 2007 Release Notes, Version 1.0.3*
- *IBM BladeCenter Chassis Management Pack for Microsoft System Center Operations Manager 2007 Installation and User's Guide, Version 1.0.3*

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## World Wide Web resources

The following Web pages provide resources for understanding, using, and troubleshooting IBM System x, BladeCenter blade servers, and systems-management tools.

#### IBM Systems: Technical support site

IBM Systems: Technical support site

Locate support for IBM hardware and systems-management software.

#### IBM Systems Management Software: Download/Registration page

IBM Systems Management Software: Download/Registration page

Download IBM systems-management software.

## **IBM System x Systems Management page**

IBM System x Systems Management page

Obtain an overview of IBM systems management using IBM Director Agent or IBM Director Core Services.

## **IBM ServerProven<sup>®</sup> page**

IBM ServerProven page

Obtain information about hardware compatibility with IBM System x, IBM BladeCenter, and IBM IntelliStation<sup>®</sup> hardware.

## **Microsoft System Center Operations Manager 2007 page**

Microsoft System Center Operations Manager 2007 page

Obtain information about System Center Operations Manager that describes how to monitor your IBM systems across large organizations, using IBM and Microsoft applications and operating system knowledge to resolve operational problems.

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## Chapter 1. Getting started with the Hardware Management Pack, Version 2

Use these topics to install the IBM Hardware Management Pack for Microsoft System Center Operations Manager 2007, Version 2.0 and use it to discover IBM System x systems and BladeCenter blade servers to monitor and manage. You can also learn how to uninstall the management pack, or reinstall the management pack after it has been uninstalled.

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### Installing IBM Hardware Management Pack, V2.0

Two installation packages are provided for this management pack, for 32-bit and 64-bit systems. Complete installation instructions, including other system requirements, are also provided in the IBM Hardware Management Pack for Microsoft System Center Operations Manager 2007, Version 2.0 *Installation and User's Guide* (IBM HW MP v2.0 User's Guide.pdf).

#### Installing Microsoft Systems Center Operations Manager 2007

Go to the *Operations Manager 2007 Quick Start Guide* at <http://technet.microsoft.com/en-us/library/bb418758.aspx> to install Microsoft System Center Operations Manager 2007.

#### Uninstalling any previously installed version of the IBM Hardware Management Pack

Uninstall Version 1.0 of the IBM Hardware Management Pack before installing Version 2.0.

Both versions can coexist, but should not be used interchangeably. Version 1.0 does not detect all of the hardware components and events that Version 2.0 can detect. It is possible that Version 1.0 might give you no indication of an error that Version 2.0 can recognize.

Uninstall the earlier version to avoid any such possible confusion.

#### Locating and launching the correct installation package

This release contains two installation packages (.msi files) for Microsoft Operations Manager 2007, to manage IBM System x systems and IBM BladeCenter blade servers. Go to the IBM download site for management packs for Microsoft Systems Center Operations Manager at [https://www14.software.ibm.com/webapp/iwm/web/reg/download.do?source=dmp&lang=en\\_US&S\\_PKG=director\\_uim&cp=UTF-8](https://www14.software.ibm.com/webapp/iwm/web/reg/download.do?source=dmp&lang=en_US&S_PKG=director_uim&cp=UTF-8) to download one or both of the following installation packages:

- **Version 2.0 (32-bit):** IBM\_HW\_MgmtPack\_v2.0.0\_x86.msi
- **Version 2.0 (64-bit):** IBM\_HW\_MgmtPack\_v2.0.0\_x64.msi

Launch the installer by double clicking on a package after you download it.

After the installation, the Management Pack might take up to two minutes to appear in the Operations Manager console.

There are actually two management packs that are installed, the "IBM Hardware Management Pack – Common Library" and the "IBM Hardware Management Pack for System x and BladeCenter x86 systems".

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## Uninstalling IBM Hardware Management Pack, V2.0

To uninstall the Management Pack entirely, go to the "Add or Remove Programs" function in the Windows® Control Panel, and select **Remove** on the Management Pack entry. Deleting a management pack from the Operations Manager console detaches the management pack from the Operations Manager Server, but does not remove any files that the management pack installs.

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## Reinstalling IBM Hardware Management Pack, V2.0

If you recently uninstalled, wait approximately three minutes for the settings to get propagated to the Operations Manager database before you reinstall.

If you do not wait for the uninstall to register, reinstalling can result in managed clients that are not listed in the Operations Manager Console.

If you uninstall, you detach the Hardware Management Pack from the Operations Manager Server. You must then reinstall the Hardware Management Pack into the Operations Manager 2007.

See "Installing IBM Hardware Management Pack, V2.0" on page 1 for more information.

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## Discovering IBM systems to manage

To add a supported IBM system into the management scope, open the Microsoft Operations Manager Discovery Wizard in the Operations Manager Console Administration page. Follow the instructions that are displayed in the wizard. For more information about how to use the wizard, see the documentation for Microsoft Systems Center Operation Manager 2007.

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## Chapter 2. Installation requirements for the IBM Hardware Management Pack

You install the Hardware Management Pack on an IBM system that is running the Microsoft Operations Manager Server.

The Operations Manager Server must be a 32-bit or 64-bit IBM system that is listed on the IBM ServerProven Web site at <http://www-03.ibm.com/systems/serverproven/>.

You do not install the Hardware Management Pack on a managed IBM system. The Operations Manager Server pushes the Hardware Management Pack to an IBM system that you discover, if the Hardware Management Pack supports the system, as described in "Supported configurations of managed systems."

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### Supported configurations of managed systems

Several factors contribute to determining the combinations of operating systems and IBM systems that the Hardware Management Pack supports as managed systems.

If you think of the supported systems matrix as resembling a target with concentric circles, each ring in the target represents a factor that influences the subset of systems in the innermost supported systems circle. The outermost ring represents the IBM systems that run Microsoft System Center Operations Manager 2007. The next ring represents the subset of systems that run IBM Director Agent (Level 2) or IBM Director Core Services (Level 1). The next ring represents the subset of systems that are System x systems (including xSeries<sup>®</sup> servers) or BladeCenter blade servers that are running a supported operating system. The next ring represents the subset of systems that run a specific version of IBM Director Agent or IBM Director Core Services that the Hardware Management Pack supports. This ring is also the innermost ring and represents the systems supported by IBM Hardware Management Pack, V2.0.

To verify that a system is supported, verify that the system meets the following qualifications:

1. Verify that Operations Manager 2007 supports the system hardware and software. See "Ops Mgr SP1 Supported Configurations" at <http://technet.microsoft.com/en-us/library/bb309428.aspx> for more information.
2. Verify that IBM Director Agent (Level 2) or IBM Director Core Services (Level 1) supports the system hardware and software. See the following table for links to information about supported hardware and operating systems.

Table 1. IBM System x systems and BladeCenter blade servers that are supported by IBM Director Agent and IBM Director Core Services

IBM Director Version	Supported Hardware and Software
IBM Director 5.20	<p>System x systems: <a href="http://publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo_5.20/fqm0_r_hardware_compatibility_system_x.html">http://publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo_5.20/fqm0_r_hardware_compatibility_system_x.html</a></p> <p>xSeries systems: <a href="http://publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo_5.20/fqm0_r_hardware_compatibility_xseries.html">http://publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo_5.20/fqm0_r_hardware_compatibility_xseries.html</a></p> <p>BladeCenter HSxx and LSxx servers: <a href="http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp?topic=/diricinfo_5.20/fqm0_r_hardware_compatibility_bladecenter.html">http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp?topic=/diricinfo_5.20/fqm0_r_hardware_compatibility_bladecenter.html</a></p> <p>Supported operating systems: <a href="http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp?topic=/diricinfo_5.20/fqm0_r_supported_operating_systems.html">http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp?topic=/diricinfo_5.20/fqm0_r_supported_operating_systems.html</a></p>
IBM Director 5.10	<p>System x systems: <a href="http://publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo/fqm0_r_hardware_compatibility_system_x.html">http://publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo/fqm0_r_hardware_compatibility_system_x.html</a></p> <p>xSeries systems: <a href="http://publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo/fqm0_r_hardware_compatibility_system_x.html">http://publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo/fqm0_r_hardware_compatibility_system_x.html</a></p> <p>BladeCenter HSxx and LSxx blade servers: <a href="http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp?topic=/diricinfo/fqm0_r_hardware_compatibility_bladecenter.html">http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp?topic=/diricinfo/fqm0_r_hardware_compatibility_bladecenter.html</a></p> <p>Supported operating systems: <a href="http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp?topic=/diricinfo/fqm0_r_supported_operating_systems.html">http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp?topic=/diricinfo/fqm0_r_supported_operating_systems.html</a></p>

3. Verify that the operating system is supported by the System x system or BladeCenter blade server. See the following links for information about supported operating systems:
  - For operating systems supported by System x systems, see <http://www-03.ibm.com/servers/eserver/serverproven/compat/us/indexsp.html>.
  - For operating systems supported by BladeCenter blade servers, see <http://www-03.ibm.com/servers/eserver/serverproven/compat/us/eserver.html>.
4. Verify that the IBM Director Agent or the IBM Director Core Services version is supported by the Hardware Management Pack. The following versions are supported:

Table 2. Supported components of IBM Director

IBM Director Version	IBM Director Agent (Level 2)	IBM Director Core Services (Level 1)
IBM Director 5.20.2 and later	X	X
IBM Director 5.20.1	Not supported	Not supported
IBM Director 5.20	X	X
IBM Director 5.10.x	X	X

IBM Director 5.20.1 components are not supported due to a known compatibility issue.

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## Chapter 3. Known limitations

The following limitations, problems, and workarounds are applicable to IBM Hardware Management Pack for Microsoft System Center Operations Manager 2007, Version 2.0.

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### Known issues and limitations of Microsoft System Center Operations Manager 2007

The following known issues and limitations are applicable to Microsoft System Center Operations Manager 2007.

#### 1. Warnings when starting the Operations Manager Console

The The SDK was unable to synchronize of monitoring object instance with its cached monitoring class information. warning might be displayed when you launch the Operations Manager Console, after the Hardware Management Pack is uninstalled.

You can ignore this warning that is drawing your attention to the fact that a management pack was uninstalled when the Operations Manager was not online.

**Workaround:** To avoid the warning, launch the Operations Manager Console from the command line with the /ClearCache command line option after uninstalling the Hardware Management Pack (or any management pack). See the documentation for Microsoft System Center Operations Manager 2007 to determine the command line method for starting the Operations Manager.

#### 2. Errors when uninstalling when the Operations Manager Console is online

If you uninstall the Hardware Management Pack while the Operations Manager Console is online, a series of errors is displayed immediately after the uninstall. The errors are of this form:

```
Invalid Column Name ...
```

This error occurs only when uninstalling the Hardware Management Pack when the Operations Manager Console is online and the cursor focus is on one of the views that was uninstalled. Other errors, such as: Collection was modified; enumeration operation may not execute might also be displayed after the uninstall.

#### 3. Alerts and events show up late, after the managed system comes back online and reconnects to the Operations Manager Server

All alerts and events from the Hardware Management Pack depend on the Microsoft Health Service on the managed system to communicate the alert or event back to the Operations Manager Server. If the network connection between the Operations Manager Server and the managed system is broken, or if the managed system stays offline, no alerts or events are communicated to the Operations

Manager Server. When the network connection resumes, the cached alerts and events begin to flow to the Operations Manager Server.

When this situation occurs, you might see older alerts and events in the cache as the backlog of alerts and events is communicated and the cache is cleared.

#### **4. Up to a three-or-four-minute-lag time after discovery and adding a managed system**

Once a managed system is added to the Operations Manager Server scope, up to three or four minutes might pass before the system and component health states begin to populate correctly in the Operations Manager Console.

**Workaround:** You can perform manual refreshes periodically to display the discovered components more quickly.

#### **5. No data is displaying in state views**

Data in the health state views might disappear if you scroll left and scroll right often because of many columns in the view.

**Workaround:** A manual refresh causes the data to be displayed again.

#### **6. Dashboard views cannot be resized**

In the Monitoring pane dashboard are separate views for the "IBM System x and BladeCenter x86 systems" state view and the "IBM Systems Hardware Components" state view. You cannot adjust the height of these two views or of any dashboard view.

This is a known Microsoft System Center Operations Manager 2007 limitation without a workaround.

#### **7. Empty value for the Path property**

The Path property for some object classes can be empty. All systems in the root Computers view have an empty Path property value, but do have a non-empty Path name property. All objects coming directly from the Windows Computers view also have an empty Path value unless the Hardware Management Pack explicitly overrides it.

This is a known Microsoft System Center Operations Manager 2007 limitation without a workaround.

#### **8. An out-of-disk-space condition on a managed system might prevent health monitoring and event alerts**

Client-side, script-based, in-band management packs like the IBM Hardware Management Pack, V2.0 and the Microsoft Operations Manager Agent require disk space on the managed system. If the disk space runs out on the managed system, the scripts in the Hardware Management Pack cannot launch and cannot communicate health data and alerts to the Operations Manager Server, until disk space is available.



The disk drive of concern is the drive with the %TEMP% folder of the Local System Account, which is the user account that the Operations Manager Health Service Modules run under. This %TEMP% folder almost always is the system drive where Windows is installed.

Microsoft does not recommend an amount of disk space that should be reserved, but the amount of disk space in the %TEMP% drive is controlled by the per-user TEMP environment variable.

When this situation occurs, the event log of the Operations Manager Agent on the managed system might have entries that are similar to the entries in the following examples.

**Example 1:**

Event Type: Warning  
Event Source: Health Service Modules  
Event Category: None  
Event ID: 10363  
Date: 04/20/08  
Time: 17:24:04  
User: N/A  
Computer: A-X3650-RAID  
Description:  
Module was unable to enumerate the WMI data.

Error: 0x80041032  
Details: Call cancelled

One or more workflows were affected by this.

Workflow name: many  
Instance name: many  
Instance ID: many  
Management group: ValX64

For more information, see Help and Support Center at <http://go.microsoft.com/fwlink/events.asp>.

**Example 2:**

Event Type: Error  
Event Source: Health Service Modules  
Event Category: None  
Event ID: 9100  
Date: 04/20/08  
Time: 17:25:33  
User: N/A  
Computer: A-X3650-RAID  
Description:  
An error occurred on line 105 while executing script 'MOM Backward Compatibility Service State Monitoring Script'  
Source: Microsoft VBScript runtime error  
Description: ActiveX component can't create object: 'GetObject'

One or more workflows were affected by this.

Workflow name: System.Mom.BackwardCompatibility.ServiceStateMonitoring  
Instance name: a-x3650-raid.Lab54.local  
Instance ID: {EE77E6E4-5DC5-F316-A0CA-502E4CBFCB97}  
Management group: Adamgrp1

For more information, see Help and Support Center at <http://go.microsoft.com/fwlink/events.asp>.

This is a known Microsoft System Center Operations Manager 2007 limitation.

**Workaround:** Create free space on the %TEMP% drive for the Local System Account.

## **9. Views and columns do not revert to default settings, even after deleting the Management Pack and importing it back into the Operations Manager**

The Microsoft Operations Manager Console provides sticky views, which are remembered from session to session. Such views are remembered even if you delete the Hardware Management Pack and import it back.

This is a known Microsoft System Center Operations Manager 2007 limitation without a workaround.

## **10. Messages declaring a dependency on the Default Management Pack**

When attempting to delete the Hardware Management Pack, a message similar to the following example might be displayed:

```
Remove the Default Management Pack first
before removing the Management Pack because of dependency.
You cannot delete the Management Pack without removing the dependent management packs.
```

These messages mean that there are one or more overrides of the rules or monitors in the Hardware Management Pack. The overrides were saved in the Default Management Pack, or in the management pack that is listed in the message.

This behavior is normal for Microsoft System Center Operations Manager 2007.

You can save overrides in a custom management pack and delete the overrides or import the overrides, if necessary. Using a custom management pack in this way can make such tasks less cumbersome.

This is a known Microsoft System Center Operations Manager 2007 limitation.

**Workaround:** You can delete the management pack that you created to store the overrides of the rules or monitors to prevent dependency messages when you attempt to delete the Hardware Management Pack.

## **11. No Windows Server 2008 support**

Microsoft System Center Operations Manager 2007 does not support Microsoft Windows Server 2008 at this time.

## **12. A “reset health” request might take two minutes or more to update the top-most health state views**

After using Health Explorer to reset the health states, the most current data can take two minutes or more to roll up to the top-most state views and reflect the true health state.

**Workaround:** Performing a manual refresh of the information by pressing **F5** can speed up the display of the current information.

### **13. No data for a right-click on a blank space in the "All IBM System x and BladeCenter x86 systems" state view**

When you right-click a blank space between the last system line and the horizontal scroll bar, the Data and Status information is no longer displayed.

This is a known Microsoft System Center Operations Manager 2007 limitation.

**Workaround:** Pressing F5 refreshes the display of the information.

### **14. Waiting for an uninstall to register before reinstalling**

If you recently uninstalled, wait approximately three minutes for the settings to get propagated to the Operations Manager database before you reinstall.

If you do not wait for the uninstall to register, reinstalling can result in managed clients that are not listed in the Operations Manager Console.

This is a known Microsoft System Center Operations Manager 2007 limitation without a workaround.

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## **Known issues and limitations of the Hardware Management Pack, V2.0**

The following issues and limitations are related to the Hardware Management Pack.

### **1. Systems are not correctly classified until long after their discovery**

Discovery operations on some systems can take a relatively long time. While the discovery is occurring, the system might be incorrectly classified at first, but corrected after a period of time. When this happens, the event log contains script timed out events for the Operations Manager on the managed system, and perhaps for Active Alerts on the Operations Manager Server.

**Workaround:** You can perform a manual refresh to see the discovered components more quickly.

### **2. Old systems that are categorized as "Unclassified" might support discovery, health monitoring, and alerting**

An older system might be categorized as an unclassified IBM system, although it is recognized as an IBM system. Component discovery, health monitoring, and alerting might be active, so long as IBM Director Agent supports the discovery, monitoring, and alerting.

This is normal behavior for the Hardware Management Pack without a workaround.

### **3. Not all components in every system are discoverable, and not all hardware events are reportable events on every system**

Component discovery and health monitoring depend on hardware capability, firmware support, and management software support. Some systems might have more than one physical power supply, for example, but perhaps not all of the power supplies are instrumented or manageable.

Hardware health events are specific to hardware platforms. Not all hardware events are supported as reportable events on all hardware platforms.

This is normal behavior for the Hardware Management Pack.

**Workaround:** To achieve full health monitoring and management coverage of your entire hardware system, upgrade to a newer system that is equipped with a Baseboard Management Controller (BMC) service processor, or that is equipped with RSA-II.

#### **4. Older management controllers might not be discoverable**

Older versions of service processors cannot be discovered. These older service processors include the ASM PCI Adapter, the ASM processor, and ISMP, all of which are not discoverable. However, components that these older service processors manage might be discovered and monitored if IBM Director Agent supports their discovery and monitoring.

This is normal behavior for the Hardware Management Pack.

**Workaround:** To achieve full health monitoring and management coverage of your entire hardware system, upgrade to a newer system that is equipped with a Baseboard Management Controller (BMC) service processor, or that is equipped with RSA-II.

#### **5. The IBM Director event simulation tool is not supported**

The IBM Hardware Management Pack does not support tools like winevent that do generate IBM Director events, but that do not fully prescribe specific target instances. Such simulated events are displayed in the Operations Manager Console event views, but no alerts are raised and no health state changes occur.

This is normal behavior for the Hardware Management Pack without a workaround.

#### **6. You must reset the health of some components manually for some events**

The IBM Hardware Management Pack can automatically reset the health status of some components when there is specific enough information to reset the health status of the component. Other component events are too generic to establish a baseline for resetting the health. In these cases, you must reset the status manually.

You must manually reset the normal health state of components that recover from the following problems:

- Security health problems
- Storage health problems
- Nonspecific device problems, such as a generic processor error
- Platform-specific extended events, such as a processor temperature that is too hot, without an out-of-processor-chip temperature sensor

This is normal behavior for the Hardware Management Pack without a workaround.

## 7. Estimated lag time for discovery

After the Discovery Wizard indicates that the discovery task has completed successfully, it might take from two or more minutes for an IBM system to show up in the “Windows Computer on IBM System x and BladeCenter x86 Blade Systems” view. The time for all hardware components to be discovered and to start indicating their health state might take five minutes or longer.

Latency is subject to a variety of directly related influences:

- The number of managed systems in the discovery task
- The performance of the Operations Manager database
- The amount and speed of network traffic

See also the known Microsoft Operations Manager issue, “4. Up to a three-or-four-minute-lag time after discovery and adding a managed system” in “Known issues and limitations of Microsoft System Center Operations Manager 2007” on page 5.

This is normal behavior for the IBM Hardware Management Pack without a workaround.

## 8. Using the Operations Manager Web Console prevents knowledge pages from being displayed

If you are using the Operations Manager Web Console to view a browser-based version of the Monitoring pane of the Operations Manager Console, the IBM knowledge pages cannot be displayed. Therefore, the IBM knowledge pages are not available.

**Workaround:** Use the Operations Manager 2007 Console to manage the environment and view all IBM knowledge pages.

This is a known issue in IBM Hardware Management Pack, Version 2.0.0.



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