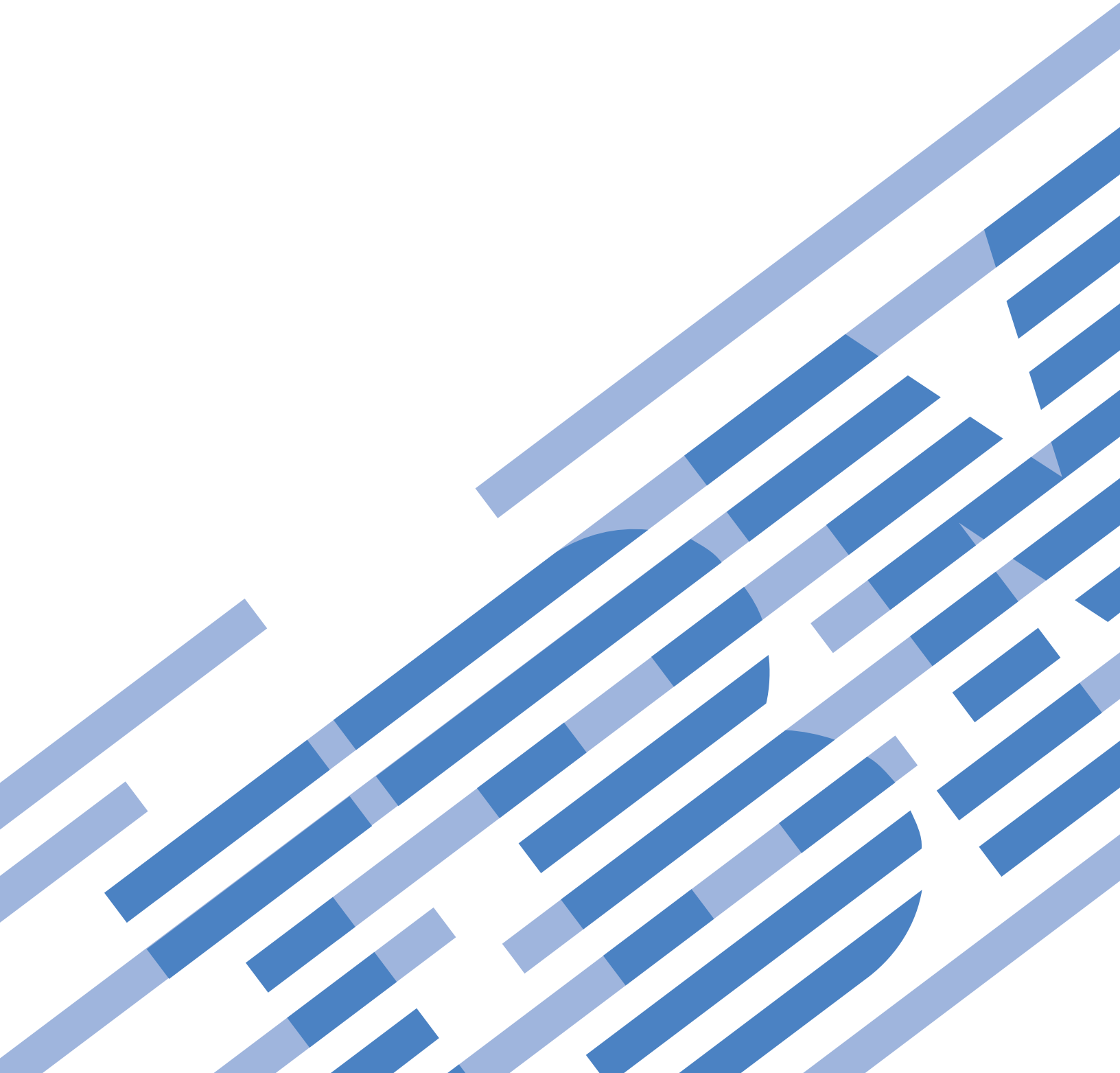# IBM

IBM Systems

IBM Director Release Notes

Version 5.20.3

IBM Systems

IBM Director Release Notes

Version 5.20.3

> **Note**
>
> Before using this information and the product it supports, read the information in "Notices" on page 29.

Contents

Chapter 1. Description

IBM® Director 5.20.3 includes the following changes:

Support for Windows® Authentication to MS SQL Server databases
> Starting in version 5.20.3, IBM Director can use Windows Authentication to authenticate to MS SQL Server databases. In previous versions of IBM Director, SQL authentication with a user name and password was the only authentication method available for MS SQL Server databases.

Inventory awareness of Remote Supervisor Adapter II
> The Inventory task can now detect the presence of a Remote Supervisor Adapter II even if its drivers are not installed.

Update Manager installation of drivers for Remote Supervisor Adapter II
> The Update Manager task can now be used to install drivers for a Remote Supervisor Adapter II even if no previous version of the drivers are installed.

Storage topology views for Serial Attached SCSI (SAS) storage environments
> View either the storage attached to a server or the server attached to storage in the Group Contents pane for SAS as well as Fibre Channel (FC) storage.

Support for additional hardware

Support for additional operating systems

Fixes for Authorized Program Analysis Reports (APARs) and known problems

A detailed description of the changes in version 5.20.3 is available in the "New in version 5.20.3" topic in the information center.

Related information

⇨ "New in version 5.20.3" in the IBM Director Information Center at publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo_5.20/fqm0_r_summary_of_changes_in_release_5.20.3.html

Chapter 2. Compatibility issues with earlier versions

Some IBM Director 5.20.3 components can work with IBM Director components from previous versions of the software.

As with previous versions of IBM Director, the following rules apply to the version compatibility of IBM Director version 5.20.3 components:

- The versions of IBM Director Server and IBM Director Console must be the same, even when they are installed on different systems.
- Versions of components that are installed on the same system, such as IBM Director Console and IBM Director Agent, must be the same.
- The version of IBM Director Server must always be the same or later than the version of any IBM Director Agent or IBM Director Core Services installed on managed systems.

See Table 1 for a complete listing of compatible IBM Director component versions for each IBM Director Version 5.20.3 component.

Table 1. Compatibility of IBM Director Version 5.20.3 components with other component versions

IBM Director Version 5.20.3	Compatible versions of IBM Director Server	Compatible versions of IBM Director Console	Compatible versions of IBM Director Agent	Compatible versions of IBM Director Core Services
IBM Director Server 5.20.3	N/A	5.20.3	5.20.3, 5.20.2, 5.20.1, 5.20, 5.10.3, 5.10.2, 5.10.1, 5.10, 4.22, 4.21, 4.20.2, 4.20, 4.12, 4.11, 4.10.2, 4.10	5.20.3, 5.20.2, 5.20.1, 5.20, 5.10.3, 5.10.2, 5.10.1, 5.10
IBM Director Console 5.20.3	5.20.3	N/A	5.20.3, 5.20.2, 5.20.1, 5.20, 5.10.3, 5.10.2, 5.10.1, 5.10, 4.22, 4.21, 4.20.2, 4.20, 4.12, 4.11, 4.10.2, 4.10	5.20.3, 5.20.2, 5.20.1, 5.20, 5.10.3, 5.10.2, 5.10.1, 5.10
IBM Director Agent 5.20.3	5.20.3 and later	5.20.3 and later	N/A	N/A
IBM Director Core Services 5.20.3	5.20.3 and later	5.20.3 and later	N/A	N/A

IBM Director version 5.20.3 is compatible with the following versions of IBM Director extensions:

Table 2. Compatibility of IBM Director extensions with IBM Director version 5.20.3

Extension	Compatible versions
Capacity Manager	5.20.3

Table 2. Compatibility of IBM Director extensions with IBM Director version 5.20.3 (continued)

Extension	Compatible versions
Electronic Service Agent™	System x™ DE V5.0, System x DE Linux® V5.0
External Application Launch Wizard	5.20
Hardware Management Console	5.20.2
IBM Systems Director Active Energy Manager (formerly IBM PowerExecutive™)	3.1, 2.10, 2.00.1, 2.00
Remote Deployment Manager	4.40, 4.30.1, 4.30
ServeRAID™ Manager	9.0 **Note:** ServeRAID Manager V9.0 is *not* compatible with earlier versions of ServeRAID Manager, and versions of IBM Director prior to 5.20.2 do not support ServeRAID Manager V9.0. This means that if you are using ServeRAID Manager and choose to upgrade IBM Director Server to version 5.20.2 or later, all managed systems will need to be upgraded to IBM Director 5.20.2 or later and ServeRAID Manager 9.0.
IBM Server Storage Provisioning Tool	5.20.3
Software Distribution Premium Edition	5.20
System Availability	5.20
IBM Systems Director Virtualization Manager	1.2
z/VM® Center	5.20.2, 5.20.1

Chapter 3. System requirements

For information about hardware and software compatibility, see the detailed system requirements for IBM Director in the "Planning" section of the information center.

⮕ Planning (publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/ diricinfo_5.20/fqm0_r_planning.html)

⮕ Specified operating environments

⮕ Hardware requirements for IBM Director
⮕ Supported hardware
⮕ Network requirements
⮕ Supported operating systems
⮕ Supported database applications

Chapter 4. Installing IBM Director 5.20.3

For step-by-step installation instructions, see these topics in the information center.

Planning (publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo_5.20/fqm0_r_planning.html)

Planning to install IBM Director

Planning to update IBM Director

Installing (publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo_5.20/fqm0_r_installing.html)

Preparing to install IBM Director

Installing IBM Director using the Express installation

Installing IBM Director using the Standard installation

Installing IBM Director with existing management software

Changing IBM Director installation options

Upgrading and updating IBM Director

Initially configuring IBM Director

Chapter 5. Known problems

Known problems, limitations, and workarounds for IBM Director are documented in the "Troubleshooting" section of the information center. The information center is updated monthly and contains the most current information about problems that have been discovered or resolved. By searching the information center, you can quickly find workarounds or solutions to problems.

Limitations and workarounds

Limitations and workarounds for this release of IBM Director are described in the information center at the following address: publib.boulder.ibm.com/infocenter/ eserver/v1r2/topic/diricinfo_5.20/fqm0_r_tbs_limitations_and_workarounds.html.

Installation limitations in IBM Director

The following topics describe known issues with installing IBM Director as of the time of publication. For the latest information about installation limitations for IBM Director, see the "Installation limitations" topic in the information center at the following address: publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/ diricinfo_5.20/fqm0_r_tbs_install_limitations.html.

IBM Director Agent is offline after upgrading on SUSE Linux Enterprise Server 9

This limitation affects IBM Director Agent, version 5.20 or later, running on SUSE Linux Enterprise Server 9.

Problem

After upgrading IBM Director Agent from version 5.10.2 or earlier to version 5.20 or later, IBM Director Console shows the managed system as offline.

Resolution

In IBM Director Console, delete the managed system and then rediscover it.

When installing IBM Director Console on AIX 5.3, a superfluous warning message displays

This limitation affects installation of IBM Director Console on AIX® AIX 5L™, Version 5.3.

Problem

When installing IBM Director Console on a system running AIX 5.3, the following superfluous warning message is displayed.

```
WARNING: File /opt/ibm/director/classes/com/tivioli/twg/softwaredist/TWGFtp.properties
is also owned by fileset IBM.Director.Agent.IBMDirA
```

Explanation

This message is harmless. No action needs to be taken.

ServeRAID Manager does not work if IBM Director is installed on a different drive than the operating system

This limitation affects IBM Director Server, IBM Director Agent, and IBM Director Core Services installations on Windows with the ServeRAID Manager extension installed. Affected versions of the ServeRAID Manager extension include V8.15 through V8.40. **This problem is resolved in IBM Director version 5.20.2.**

Problem

The ServeRAID Manager extension for IBM Director is always installed on the same logical or physical drive as IBM Director. If this drive is not the same as the drive on which the operating system is installed, the ServeRAID Manager task will not be started.

Instead, attempting to start the ServeRAID Manager task will generate the following error message:

```
Task Not Supported
```

Resolution

If you will be installing the ServeRAID Manager extension on a Windows operating system, you must install IBM Director Server, IBM Director Agent, or IBM Director Core Services on the same drive as the operating system.

Screen readers that do not support Java applications might not read the Database Configuration window

This limitation affects installation and database configuration tasks performed using a screen reader.

Problem

When using a screen reader that does not support Java™ applications during IBM Director installation, the reader will probably not be able to read the contents of the Database Configuration window, because it is a Java-based interface.

Explanation

The Database Configuration window requires a screen reader that supports Java applications because it is a Java-based interface.

Resolution

Use the following procedure to finish the installation with a non-Java screen reader:

1. Using your screen reader, find the window whose title bar reads "IBM Director database configuration", and press **Enter**.
2. The screen reader indicates that the next window is the Apache configuration window. Press **Enter** again.
3. Finish the installation as directed.
4. After installation is complete and you obtain a Java screen reader, you can access and change the database configuration settings by entering the following command in the command prompt window:
   ```
   cfgdb
   ```

Cannot move the keyboard focus to scroll bars

This limitation affects installing IBM Director on Windows.

Problem

When you install IBM Director by using the keyboard functions to navigate, if High contrast color and Large or Extra Large font settings are enabled, you cannot move the keyboard focus to the scroll bars in the installation windows.

Also, some components and text do not display in the windows that are displayed during installation.

Resolution

To access the scroll bars using the keyboard, use the Windows MouseKeys feature. You can use the MouseKeys feature to move the mouse pointer by using the arrow keys on the keyboard.

Installing Web-based Access after installing IBM Director version 5.20 or later causes errors

This limitation affects IBM Director version 5.20 or later.

Problem

Do not install Web-based Access 5.10 on a system that has IBM Director 5.20 installed. Web-based Access will install without error, but will overwrite required 5.20 installation files, which will cause errors when you run IBM Director.

Explanation

Some common files used by both Web-based Access and IBM Director are overwritten when Web-based Access is installed.

Support for Web-based Access is not continued in version 5.20. You can continue to use existing version 5.10 installations of IBM Director Agent if this function is needed.

Resolution

If you install Web-based Access after installing IBM Director 5.20 or later, you will need to uninstall IBM Director and then install IBM Director again.

Uninstalling IBM Director Core Services does not remove DSA

This limitation affects uninstalling IBM Director Core Services on a managed system running Red Hat Linux 5.

Problem

DSA is not removed when uninstalling IBM Director Core Services on a managed system running Red Hat Linux 5.

Resolution

To manually remove DSA, use the **rpm -e dsa-rhel5** command.

The cimlistener service is not started after installing IBM Director Core Services or IBM Director Agent

This problem affects IBM Director Core Services and IBM Director Agent, version 5.20.1, running on VMware (versions 2.5.4 or 2.5.5) or Red Hat Enterprise Linux (versions 3.9 or 4.5).

Problem

After installing IBM Director Core Services or IBM Director Agent on a managed system, the cimlistener service is not running. As a result, events are not sent from the managed system to IBM Director Server.

This occurs only after installation if the managed system has not been restarted.

Explanation

This is a limitation.

Resolution

After installing IBM Director Core Services or IBM Director Agent, shut down and restart the managed system. The cimlistener service will be started.

Toolbar preferences are lost when upgrading to version 5.20 or later

This problem affects upgrading IBM Director Console from versions 5.10, 5.10.1, 5.10.2, and 5.10.3 to version 5.20 or later.

Problem

After upgrading IBM Director Console from version 5.10, 5.10.1, 5.10.2, or 5.10.3 to version 5.20 or later, the toolbar in IBM Director Console has the default configuration of buttons. Any customizations that were made using the earlier version of IBM Director Console are lost.

Explanation

This is a limitation.

Resolution

After upgrading, click **Options** → **Console Preferences**, and then click **Toolbar Preferences** to configure the toolbar for IBM Director Console.

Some tasks do not work after installing IBM Director Agent

This problem affects IBM Director Agent installations on managed systems running Windows. This appears to affect all supported versions of the Windows operating system.

Problem

After installing IBM Director Agent on a managed system running Windows, some IBM Director tasks on the managed system do not work. The following tasks are known to be affected:

- Inventory (firmware information is not collected)
- Network Configuration
- System Accounts
- Other tasks requiring use of the CIMOM on Windows

Explanation

This is a limitation.

Installation of IBM Director Agent updates the PATH environment variable, but Windows services do not notice the change until the system is restarted.

Resolution

After installing IBM Director Agent on a managed system running Windows, shut down and restart the managed system.

Installing IBM Director Core Services on Windows Vista generates warnings in the Windows application log

This limitation affects installing IBM Director Core Services on Windows Vista.

Problem

After installing IBM Director Core Services on Windows Vista, the following warnings appear in the Windows application log:

Event ID: 1001
Source: MsiInstaller
Level: Warning
> Detection of product '{B59F55A6-598C-439D-ADB5-EFC57BADD5D9}', feature 'CoreServices' failed during request for component '{16050694-5833-4FE5-923C-3E4504C26503}'

Event ID: 1004
Source: MsiInstaller
Level: Warning
> Detection of product '{B59F55A6-598C-439D-ADB5-EFC57BADD5D9}', feature 'CoreServices', component '{63E949F6-03BC-5C40-A01F-C8B3B9A1E18E}' failed. The resource '' does not exist.

Explanation

This is a limitation. This message does not indicate an actual problem with the installation of IBM Director Core Services.

Inventory is missing after installing IBM Director Core Services

This limitation affects IBM Director Core Services installed on IBM System x3950 M2, machine type 7141 with VMware version 3.0.2, SUSE Linux Enterprise Server 9, Service Pack 4, or SUSE Linux Enterprise Server 10 for x86. This limitation affects IBM Director version 5.20.2.

Problem

After collecting inventory, some inventory data is missing.

Additionally, the cimserver service on the managed system might stop unexpectedly, causing the managed system to be reported as offline.

Resolution

After installing IBM Director Core Services, run the following command:

```
/opt/ibm/icc/cimom/bin/cimprovider -d -m SCSIDev_Module
```

This problem is resolved for 5.20.2 Service Update 1 and later.

Messages are garbled for double-byte character sets in installation and IBM Director Console windows

This problem affects installation and IBM Director Console for version 5.20.2 on Red Hat Enterprise Linux, version 5.1 and SUSE Linux Enterprise Server 9, Service Pack 4.

Problem

After installing Red Hat Enterprise Linux, version 5.1 or SUSE Linux Enterprise Server 9, Service Pack 4 with a double-byte character set (such as Japanese or Chinese), when you install IBM Director Console, either by itself or as part of an IBM Director Server installation, some installation windows have garbled characters. After installation, IBM Director Console contains garbled characters.

Explanation

This is a limitation caused by a problem in the installed Java Runtime Environment for IBM Director 5.20.2.

Resolution

For Red Hat Enterprise Linux, version 5.1, use the following workaround to create a symbolic link to the correct font.properties file. Type the following commands *before* installing IBM Director Console:

```
mkdir -p /opt/ibm/director/jre/lib/
cd /opt/ibm/director/jre/lib/
ln -s font.properties.langauge_id.Redhat5  font.properties.langauge_id.Redhat5.1
```

where *langauge_id* is the language identifier part of the font.properties file name. The language identifiers for Japanese and Chinese are listed in the following table.

Language	Identifier part of the font.properties file name
Japanese	ja
Traditional Chinese	zh_TW.UTF-8

Cannot install IBM Director Agent on Red Hat Enterprise Linux, version 5.1

This limitation affects installing IBM Director Agent version 5.20.2 on a managed system running Red Hat Enterprise Linux, version 5.1 that has a LSI 1078 IR RAID controller installed.

Problem

Installation does not succeed.

Explanation

This is a limitation in the current version of the LSI provider.

An error occurs after installing IBM Director Agent with RDM

This problem affects Remote Deployment Manager (RDM) clone installation of IBM Director Agent on managed systems running Windows.

Problem

If you use RDM to perform a Windows clone install of IBM Director Agent, after shutting down and restarting the managed system, you might see an error message requesting you to send a report to Microsoft. On subsequent restarts of the managed system, the error message does not appear.

Both RDM and IBM Director Agent function normally despite the error message.

Resolution

To prevent this problem, configure RDM to reboot the managed system *before* installing IBM Director Agent. In the Remote Deployment Manager - Windows Clone Install window, click the Setup tab and select **Reboot** for the application that is installed before IBM Director Agent.

Tip: You can create a "dummy" application if IBM Director Agent is the first or only application to be installed.

If this problem occurs, close the error report window.

You must manually stop RDM before installing Service Updates

This problem affects installing IBM Director Service Updates when the Remote Deployment Manager (RDM) extension is also installed.

Problem

If you are running Remote Deployment Manager (RDM), you must manually stop RDM before installing an IBM Director Service Update, and then start RDM again after the Service Update is installed.

Explanation

This is a limitation.

You cannot promote IBM Director Core Services to IBM Director Agent on Linux with Xen

This limitation affects installing IBM Director Agent on Level-1 managed systems running with the Xen kernel.

Problem

If you have previously installed IBM Director Core Services on a Level-1 managed system running with the Xen kernel, installing IBM Director Agent on the managed system does not succeed. An error message like the following one is displayed:

```
Promotion of an IBM Director Core Services with Xen support
to an IBM Director Agent is not supported.
```

Explanation

When IBM Director Core Services is installed, it installs two providers (cmpi-xen and ibmvm-imagesupport) that cause conflicts when you later install IBM Director Agent.

Resolution

Uninstall IBM Director Core Services, and then install IBM Director Agent.

IPMI driver warning appears when installing on Windows Server 2008

This problem affects installation of IBM Director Core Services version 5.20.2 on managed systems running Windows Server 2008.

Problem

Windows Server 2008 is supported for IBM Director Core Services versions 5.20.2 SU1 and 5.20.2 SU2. In order to install IBM Director Core Services versions 5.20.2 SU1 or 5.20.2 SU2 on Windows Server 2008, it is necessary to install IBM Director Core Services 5.20.2 on Windows Server 2008 and then install the service update.

When you install IBM Director Core Services 5.20.2 on Windows Server 2008, the following warning message is displayed:

```
**** IBM_WARNING - Detected system support for IPMI, but encountered potential issue
with the IPMI driver stack. Check the dirinst.log for details.
```

Explanation

The installation package for IBM Director Core Services 5.20.2 does not correctly detect the Microsoft IPMI driver on Windows Server 2008 because version 5.20.2 is not supported on Windows Server 2008.

However, the Microsoft IPMI driver on Windows Server 2008 is supported for versions 5.20.2 SU1 and 5.20.2 SU2, so this message can safely be ignored.

Error messages displayed when uninstalling IBM Director Server after uninstalling ServeRAID Manager

This problem affects uninstalling IBM Director Server on a management server running Linux on which ServeRAID Manager was installed and then uninstalled.

Problem

When you uninstall IBM Director Server, you must first uninstall any installed extensions to IBM Director that are on the management server. However, after a

successful uninstallation of the ServeRAID Manager extension, the following error message can appear when uninstalling IBM Director Server:

```
Error: Batch File /opt/ibm/icc/cimom/bin/defaultHandlersUnsubscribe.dat
cannot be opened.
```

Explanation

This is a limitation. The error should be disregarded. IBM Director Server will be uninstalled.

Uninstalling IBM Director does not uninstall the LSI MegaRAID provider

This problem occurs when uninstalling IBM Director Core Services, IBM Director Agent, or IBM Director Server on systems that have the LSI MegaRAID provider installed.

Problem

Before uninstalling IBM Director, you should uninstall the LSI MegaRAID provider if it is installed. However, the IBM Director uninstallation process does not detect whether or not the LSI MegaRAID provider is installed, so IBM Director can be uninstalled without uninstalling the LSI MegaRAID provider.

Explanation

This is a limitation.

Resolution

1. Manually check to see whether or not the LSI MegaRAID provider is installed:
   - **Linux managed systems:** Type the following command:
     ```
     rpm -qa | grep lsi_mr
     ```
   - **32–bit Windows managed systems:** From a command line, type `regedit` to open the registry editor. Then, check for the following key:
     ```
     HKEY_LOCAL_MACHINE\SOFTWARE\LSI\SBMA\CurrentVersion
     ```
   - **64–bit Windows managed systems:** From a command line, type `regedit` to open the registry editor. Then, check for the following key:
     ```
     HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\LSI\SBMA\CurrentVersion
     ```
2. If the LSI MegaRAID provider is installed, uninstall it.

Cannot update SSPT on Windows to 5.20.3 or 5.20.2

This problem affects updating the IBM Server Storage Provisioning Tool to versions 5.20.3 and 5.20.2 from a previous version on the Windows operating system.

Problem

If you have a previous version of IBM Server Storage Provisioning Tool installed on Windows and subsequently try to install IBM Server Storage Provisioning Tool, version 5.20.3 or 5.20.2, the installation will not succeed, and the following error is displayed:

```
A network error occurred while trying to read ...msi).
```

Explanation

This is a limitation caused by a change to the MSI product name in both versions 5.20.3 and 5.20.2.

Resolution

To upgrade IBM Server Storage Provisioning Tool, first uninstall the previous version of IBM Server Storage Provisioning Tool, and then install the newer version.

Alternatively, if it is impractical to completely uninstall the previous version of IBM Server Storage Provisioning Tool (for instance, if the IBM Remote Deployment Manager extension is installed), perform the following procedure on each management server or management console that you are updating:

1. Upgrade IBM Director Server (on the management server) or IBM Director Console (on a management console) to the version corresponding to the version of IBM Server Storage Provisioning Tool to which you will be upgrading.
2. Click **Start** → **Run**, and then type `regedit` and click **OK**.
3. In the Registry Editor, locate one of the following keys (the path can be different, depending on your version of Windows):
   - HKEY_CLASSES_ROOT/Installer/Options/Products/ 90FEBDE69872841499F204ABDC462A3/SourceList/PackageName
   - HKEY_CLASSES_ROOT/Installer/Products/ 90FEBDE69872841499F204ABDC462A3/SourceList/PackageName
4. Change the value of the key (this value must be typed exactly as shown):
   - **Upgrading to version 5.20.3:** Change the value to `IBM(R) Server Storage Previsioning Tool`
   - **Upgrading to version 5.20.2:** Change the value to `IBM® Server Storage Provisioning Tool`

     Tip: To enter the ® character, type ALT+0174 using the numeric keypad.
5. Install the new version of the server component of IBM Server Storage Provisioning Tool (on the management server) or the console component of IBM Server Storage Provisioning Tool (on a management console).

Must uninstall LSI MegaRAID provider before upgrading from 5.20.2 to 5.20.3

This problem affects upgrades of IBM Director Core Services and IBM Director Agent on x86–based managed systems running Linux that have an LSI 1078 MegaRAID controller installed.

Problem

On managed systems that have an LSI 1078 MegaRAID controller installed, you must install the LSI MegaRAID provider after installing IBM Director Agent or IBM Director Core Services. If you upgrade the managed system from version 5.20.2 to version 5.20.3 without first uninstalling the LSI MegaRAID provider and then installing the new version of the LSI MegaRAID provider after upgrading, the LSI MegaRAID provider does not work.

Resolution

If you are upgrading IBM Director Agent or IBM Director Core Services from version 5.20.2 to version 5.20.3 and the LSI MegaRAID provider for version 5.20.2 is installed, your upgrade must be performed the sequence described by the following steps:

1. Uninstall the LSI MegaRAID provider package that was previously installed. Type the following command:

   `rpm -ev package_name`

   where *package_name* is the file name of the installed LSI MegaRAID provider package.

2. Optionally, issue the following commands to clean the CIM repository:

   ```
   rm -rf $CIMOM_ROOTDIR/repository/root#LSI_MR_1_2_0
   rm -rf $CIMOM_ROOTDIR/repository/root#PG_InterOp/classes/LSIESG_*
   /etc/init.d/cimserverd restart
   ```

3. Install IBM Director Agent 5.20.3 or IBM Director Core Services 5.20.3.

4. Install the new version of the LSI MegaRAID provider. Type the following command:

   `rpm -ivh package_name`

   where *package_name* is the file name of the installation package. The status of the installation is displayed.

See "Installing the LSI MegaRAID provider for Windows or Linux" for additional information, including the LSI MegaRAID provider package names.

Appendix A. Related information

Besides this documentation, there is additional information related to IBM Director.

IBM Director resources on the World Wide Web

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

IBM Director information center
> publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/diricinfo_5.20/ fqm0_main.html

> This information center is updated periodically. It contains the most current documentation on a wide range of topics.

IBM Director extension information centers

> These information centers are updated periodically. They contain the most current documentation on a wide range of topics.
> - **Capacity Manager:**
>   publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/capman_5.20/ fqn0_main.html
> - **External Application Launch Wizard:**
>   publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/ealwiz_5.20/ frj0_main.html
> - **Hardware Management Console (HMC):**
>   publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/hmc_5.20/ frk0_main.html
> - **ServeRAID Manager:**
>   publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/serveraid_5.20/ fqy0_main.html
> - **Software Distribution Premium Edition:**
>   publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/swdistpe_5.20/ frl0_main.html
> - **System Availability:**
>   publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/sysavail_5.20/ fqq0_main.html
> - **z/VM Center:**
>   publib.boulder.ibm.com/infocenter/eserver/v1r2/topic/zvmcenter_5.20/ zvm0_main.html

IBM Director Web site on ibm.com®
> www.ibm.com/systems/management/director/

> The IBM Director Web site on ibm.com has links to downloads and documentation for all currently supported versions of IBM Director. Information on this site includes:
> - Downloads and documentation for the following IBM Director releases:
>   - IBM Director 5.20.3
>   - IBM Director 5.20.2
>   - IBM Director 5.20.1
>   - IBM Director 5.20

- IBM Director 5.10.3
- IBM Director 5.10.2
- IBM Director 5.10.1
- IBM Director 5.10
- IBM Director 4.22
- IBM Director 4.22 Upward Integration Modules (UIMs)
- IBM Director 4.21
- IBM Director 4.20

- *IBM Director Hardware and Software Support Guide*, which lists supported IBM systems and all supported operating systems. It is updated every 6 to 8 weeks.
- Printable documentation for IBM Director is available in Portable Document Format (PDF) in several languages.

IBM Director Software Developers Kit information center

publib.boulder.ibm.com/infocenter/dirinfo/toolkit/index.jsp

The IBM Director Software Developers Kit (SDK) information center provides information about the IBM Director SDK, which is a set of tools and documentation to help extend the capabilities of IBM Director by using the APIs and CLIs, creating tasks, and launching tools from the IBM Director user interface.

IBM Systems Software information center

www.ibm.com/servers/library/infocenter/

This Web page provides information about IBM Director, External Application Launch Wizard, IBM Virtualization Manager, and other topics.

IBM ServerProven® page

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

This Web page provides information about the hardware compatibility of IBM System x, BladeCenter®, and IntelliStation® with IBM Director.

IBM Servers

www.ibm.com/servers/

This Web page on ibm.com links to information, downloads, and IBM Director extensions, such as Remote Deployment Manager, Capacity Manager, Systems Availability and Software Distribution (Premium Edition), for the following IBM products:
- IBM BladeCenter
- IBM System i™
- IBM System p™
- IBM System x
- IBM System z™

IBM forums

www.ibm.com/developerworks/forums/dw_esforums.jsp

This Web page on ibm.com links to several forums, available as Web pages or using Rich Site Summary (RSS) feeds, in which users can discuss technology issues relating to IBM servers.

Three of these forums are of particular interest to IBM Director users:

System x IBM Director forum

www.ibm.com/developerworks/forums/dw_forum.jsp?forum=759&cat=53

A forum for discussing any IBM Director topics. This Web page includes a link for obtaining the forum using a Rich Site Summary (RSS) feed.

System x Server forum
www.ibm.com/developerworks/forums/dw_forum.jsp?forum=740&cat=53

A forum for discussing System x server topics, including questions related to drivers, firmware, operating systems, clustering, and storage. This Web page includes a link for obtaining the forum using a Rich Site Summary (RSS) feed.

IBM Director SDK forum
www.ibm.com/developerworks/forums/dw_forum.jsp?forum=849&cat=53

A forum for discussing the use of the IBM Director Software Developers Kit (SDK) to extend the functionality of IBM Director to meet your specific needs. This Web page includes a link for obtaining the forum using a Rich Site Summary (RSS) feed.

IBM Redbooks® publications

www.ibm.com/redbooks/

You can download the following documents from the IBM Redbooks Web page. You can also search this Web page for documents that focus on specific IBM hardware; such documents often contain systems-management material.

Notes:
1. Be sure to note the date of publication and to determine the level of IBM Director software to which the Redbooks publication refers.
2. You need Adobe® Acrobat Reader to view or print these PDF files. You can download a copy from the Adobe Web site at www.adobe.com/products/acrobat/readstep.html.

- *Creating a Report of the Tables in the IBM Director 4.1 Database* (TIPS0185)
- *Implementing IBM Director 5.20* (SG24-6188)
- *Integrating IBM Director with Enterprise Management Solutions* (SG24-5388)
- *Managing IBM TotalStorage® NAS with IBM Director* (SG24-6830)
- *Managing Linux Guests Using IBM Director and z/VM Center* (SG24-6830)
- *Monitoring Redundant Uninterruptible Power Supplies Using IBM Director* (REDP-3827)
- *Using the IBM Director cimsubscribe Utility* (REDP-4123-00)
- *Virtualization on the IBM System x3950 Server* (SG24-7190-00)
- *iSeries® Systems Management Handbook* (REDP-4070)

Remote Supervisor Adapter

The following Web pages provide resources for understanding and using Remote Supervisor Adapters with IBM Director:

Remote Supervisor Adapter overview
www.ibm.com/support/docview.wss?uid=psg1MIGR-4UKSML

This Web page contains links to the *Remote Supervisor Adapter User's Guide* and the *Remote Supervisor Adapter Installation Guide*.

Remote Supervisor Adapter II overview
www.ibm.com/support/docview.wss?uid=psg1MIGR-50116

This Web page contains information about the Remote Supervisor Adapter II.

Other documents

For planning purposes, the *Planning and Installation Guide - IBM BladeCenter (Type 8677)* might be of interest.

Appendix B. Getting help and support

If you need help, service, or technical assistance or just want more information about IBM products, you will find a wide variety of sources available from IBM to assist you. This section contains information about where to go for additional information about IBM and IBM products, and whom to call for service, if it is necessary.

Before you call

Before you call, make sure that you have taken these steps to try to solve the problem yourself:

- Check all cables to make sure that they are connected.
- Check the power switches to make sure that the system is turned on.
- Use the troubleshooting information in your system documentation and the diagnostic tools that are included with your system. You can find information about diagnostic tools for BladeCenter and System x systems in the *Problem Determination Service Guide* on the IBM *System x Documentation* CD. You can find information about diagnostic tools for IntelliStation in the IntelliStation *Hardware Maintenance Manual* at the IBM Support Web site.
- Go to the IBM Support Web site at www.ibm.com/support/us to check for technical information, hints, tips, and new device drivers or to submit a request for information.

You can solve many problems without outside assistance by following the troubleshooting procedures that IBM provides in the online help or in the publications that are provided with your system and software. The information that is included with your system also describes the diagnostic tests that you can perform. Most BladeCenter, System x, and IntelliStation systems, operating systems, and programs includes information that contains troubleshooting procedures and explanations of error messages and error codes. If you suspect a software problem, see the information for the operating system or program.

Using the hardware documentation

Information about your IBM BladeCenter, System x, or IntelliStation system and any preinstalled software is available in the documentation that is included with your system. That documentation includes printed books, online books, readme files, and help files.

See the troubleshooting information in your system documentation for instructions for using the diagnostic programs. The troubleshooting information or the diagnostic programs might tell you that you need additional or updated device drivers or other software. IBM maintains pages on the World Wide Web where you can get the latest technical information and download device drivers and updates. To access these pages, go to www.ibm.com/support/us and follow the instructions. Also, you can order publications through the IBM Publications Ordering System at www.ibm.com/planetwide/.

Getting information from the World Wide Web

On the World Wide Web, the IBM Web site has up-to-date information about IBM BladeCenter, System i, System p, System x, System z, and IntelliStation products, services, and support.

Use the following Web addresses for the applicable product information.

IBM product	Web address
BladeCenter products	www.ibm.com/servers/eserver/support/bladecenter/
IntelliStation workstations	www.ibm.com/servers/intellistation/pro/already.html
System i systems	www.ibm.com/servers/eserver/support/iseries/
System p servers	www.ibm.com/servers/eserver/support/unixservers/
System x servers	www.ibm.com/servers/eserver/support/xseries/index.html
System z mainframes	www.ibm.com/servers/eserver/support/zseries/

You can find service information for your IBM products, including supported options, at www.ibm.com/support/us.

Also, you can find information about IBM Director in the IBM Systems forum at www.ibm.com/developerworks/forums/dw_forum.jsp?forum=759&cat=53.

Software service and support

IBM provides a wide range of support products for IBM Director software.

For installations on IBM BladeCenter products

If you install and use IBM Director Server on BladeCenter products, you can purchase the Implementation Services ServicePac® for BladeCenter and xSeries® for service and support of IBM Director Server.

For installations on System i technology

Through IBM Software Maintenance (SWMA), you can get assistance with usage, configuration, and software problems with System i technology. Fixes and updates are part of the warranty of the SWMA product and are included in your license for this product.

For installations on System p servers

Through IBM Software Maintenance (SWMA), for a fee, you can get telephone or electronic assistance with usage, configuration, and software problems with System p servers. Fixes and updates are part of the warranty of the SWMA product and are included in your license for this product.

Note: When ordering or downloading only IBM Director Server, SWMA is optional and must be ordered specifically.

For installations on System x servers and IntelliStation workstations
Through IBM Support Line, for a fee, you can get telephone assistance with usage, configuration, and software problems. You also can purchase Enhanced Technical Support (ETS), which is a proactive support option to Support Line for System x servers.

Through IBM Software Maintenance (SWMA), for a fee, you can get telephone or electronic assistance with usage, configuration, and software problems with System x servers. Fixes and updates are part of the warranty of the SWMA product and are included in your license for this product.

If you install and use IBM Director Server on System x servers, you can purchase the Implementation Services ServicePac for BladeCenter and xSeries for service and support of IBM Director Server.

For installations on System z mainframes

Through IBM Service and Subscription (S&S), for a fee, you can get telephone or electronic assistance for software problems with System z mainframes. Fixes and updates are part of the warranty of this product and are included in your license for this product.

For installations on non-IBM hardware

If you want to install and run IBM Director Server on non-IBM hardware, you must purchase a license for IBM Director Server. However, this license does not entitle you to service and support of IBM Director Server. You can purchase service and support separately from Support Line. You also can purchase Enhanced Technical Support (ETS), which is a proactive support option to Support Line for non-IBM x86 systems.

For information about which products are supported by Support Line in your country or region, go to www.ibm.com/services/us/its/pdf/ remotesupportxseries.pdf. For more information about Support Line and other IBM services, go to www.ibm.com/services/us/index.wss, or go to www.ibm.com/planetwide/ for support telephone numbers. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

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IBM Systems
IBM Director Release Notes
Version 5.20.3

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