

IBM Director 4.21



Release Notes

Note

Before using this information and the product it supports, read the general information in "Notices," on page 27.

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Chapter 1. About this release

IBM® Director 4.21 is an upgrade release to the following versions of IBM Director:

- IBM Director 4.1
- IBM Director 4.10.2
- IBM Director 4.11
- IBM Director 4.12
- IBM Director 4.20
- IBM Director 4.20.2

The *IBM Director 4.21 Release Notes* (dir4.21_docs_relnotes.pdf) is a new document created specifically to support IBM Director 4.21. This document contains the types of information that were provided in readme.txt files for previous releases of IBM Director.

The *IBM Director 4.21 Release Notes* are provided as an addition to the IBM Director 4.20 readme file and the IBM Director 4.20.2 readme file. Make sure that you read all three documents. These documents are included on the *IBM Director 4.21* CD and are in the docs directory.

These readme files also are available from the following IBM Director Web pages:

- The IBM Director 4.20 readme file (dir4.20_readme.txt) is at
<http://www.ibm.com/pc/support/site.wss/document.do?Indocid=MIGR-55606>
- The IBM Director 4.20.2 readme file (dir4.20.2_readme.txt) is at this page:
<http://www.ibm.com/pc/support/site.wss/document.do?Indocid=MIGR-57057>

New in this release

IBM Director 4.21 adds the following new features, functions, and enhancements:

BladeCenter management

IBM Director 4.21 contains the following enhancements:

- BladeCenter™ Deployment Wizard support for the BladeCenter Telco and the Brocade Enterprise SAN Switch Module for IBM @server® BladeCenter
- Rack Manager support for the BladeCenter Telco
- Virtual Local Area Network (VLAN) configuration support for Cisco and Intel® Gigabit Ethernet Switch Modules
- Support for managing the Intelligent Platform Management Interface (IPMI) baseboard management controller in the IBM @server BladeCenter HS20, machine type 8843 server

BladeCenter switches

IBM Director 4.21 adds support for the following BladeCenter switches:

- Infiniband Switch Module
- Nortel Networks Layer 2/3 GbE Switch Module

Database

IBM Director 4.21 adds support for using PostgreSQL, version 7.4 as the IBM Director database (SUSE LINUX Enterprise Server 9 only).

General enhancements

IBM Director 4.21 adds the following new functionality:

- Ability to launch the Web interface for service processors from IBM Director Console
- Management Information Base (MIB) files for the IBM TotalStorage® DS300 and DS400
- Support for viewing blue-indicator light and firmware-level information for xSeries® servers that contain IPMI baseboard management controllers

Linux systems

IBM Director 4.21 adds support for the following features on managed systems running Linux®:

- Alert Standard Format (ASF) 2.0 on an xSeries 306 server running a 32-bit version of Linux
- Network interface card (NIC) events

Operating systems

IBM Director 4.21 adds support for the following operating systems:

IBM Director Server and IBM Director Console

- Red Hat Enterprise Linux AS and ES, version 3.0, for Intel x86
- SUSE LINUX Enterprise Server 9 for x86

IBM Director Agent

- AIX® 5L, Version 5 Release 3
- Red Hat Enterprise Linux AS and ES, version 3.0, for Intel EM64T
- Red Hat Enterprise Linux WS, version 3.0, for Intel EM64T
- SUSE LINUX Enterprise Server 9 for AMD64 and EM64T
- SUSE LINUX Enterprise Server 9 for IBM POWER™
- SUSE LINUX Enterprise Server 9 for Itanium Processor Family
- SUSE LINUX Enterprise Server 9 for x86

ServeRAID hardware and software

IBM Director 4.21 adds support for the IBM ServeRAID™-7k Ultra320 SCSI controller. It also contains an updated ServeRAID Manager task, which is based on the stand-alone version of ServeRAID Manager 7.10b.

Upward integration

IBM Director 4.21 adds the following new functionality:

- Upward integration with Microsoft® Systems Management Server (SMS) 2003
- Ability to use Secure Sockets Layer (SSL) with the upward-integration modules for IBM Tivoli® NetView® and HP OpenView

For the most recent information about hardware or software support, see the *IBM Director Hardware and Software Compatibility* document. You can download the PDF file from the IBM Director Agent Web page at http://www.ibm.com/servers/eserver/xseries/systems_management/sys_migration/ibmdiragent.html

Authorized Program Analysis Reports resolved by this release

IBM Director 4.21 resolves the following Authorized Program Analysis Reports (APARs):

IC42666

(Managed systems running Microsoft Windows® only) IBM Director Agent might have caused high microprocessor (CPU) utilization. You can confirm this problem by using Windows Task Manager to view the microprocessor utilization of the twgescli.exe program.

IC42897

(Linux only) The ServeRAID Manager task did not detect and display integrated SCSI controllers with RAID capabilities (LSI 1020 and LSI 1030 only).

IC42971

IBM Director Agent generated inaccurate temperature events.

IC43049

IBM Director Agent 4.12 did not send all events to Tivoli Enterprise Console® through Tivoli Distributed Monitors. The following events failed to work correctly:

- Temperature generated false errors.
- Tachometer did not send fan errors.
- PhysicalNetwork adapter did not send an error when the adapter was disconnected.

IC43050

IBM Tivoli Distributed Monitoring did not detect or report power supply failures.

IC43052

In an IBM Director environment that included managed systems running IBM Director Agent, versions 3.1.1 and 4.12, and IBM Director Server 4.20, the Remote Control task might have generated a Java™ exception.

IC43053

(IBM Director 4.20 only) Unattended installation did not use the response file settings.

IC43054

When IBM Director Console started, it persistently requested group information updates from IBM Director Server. When exiting from IBM Director Console, a Java exception occurred that caused IBM Director Server to stop the twgipc service.

IC43076

When using the Remote Control task, IBM Director Console 4.20 generated a Java exception.

IC43094

When using the Software Distribution task to distribute a software package to a group of managed systems, if a managed system in the group was offline, the distribution failed for the offline managed system. This failure occurred when the following options were selected in the Advanced Scheduler Options window of the Scheduler feature:

- Delay execution on unavailable systems
- Execute on systems added to the group

Online managed systems were updated successfully. The offline managed system was restarted and the distribution started to that managed system. The job status window reported a status of In Progress, but the distribution failed. When new managed systems were added to the group, distribution also failed on these managed systems.

IC43184

The IBM Director documentation lacked information about the usage limitations of the Remote Control task. See “Remote Control usage” on page 23 for this information.

IC43185

The IBM Director documentation lacked information about how to use the twgsave and twgrestore command-line commands. See “twgrestore and twgsave commands” on page 23 for this information.

IC43282

(IBM Director 4.12 only) After performing a discovery operation, IBM Director Console displayed a managed system as online; however, none of the IBM Director tasks or features worked on that managed system.

IC43288

When the upward integration modules (UIM) database scripts were run a second time on an existing database, the following error was generated and logged in the xseries_tables_rerun.log file:

```
ORA-00001: unique constraint (INVTIV.QUERYVIEWS_PK) violated
```

IC43318

(xSeries 220 server only) IBM Director Agent, versions 4.11 and 4.12, generated the following incorrect error message:

```
Memory device in bank 0 is predicting an imminent failure
```

IC43389

The BladeCenter Assistant task failed to connect to BladeCenter HS20 (machine types 1883 and 8843) blade servers or any blade servers in slot positions that followed the BladeCenter HS20 blade server.

IC43414

If IBM Director Server received duplicate events from the IPMI baseboard management controller and the Remote Supervisor Adapter II that were installed in the same server, IBM Director Server failed.

IC43416

Management Processor Assistant (MPA) events reported negative sensor values.

IC43417

(xSeries 236, 346, and 336 servers only) The Power Supply Inserted event was generated when the power supply was removed from the server.

IC43580

A Java exception occurred that caused IBM Director Server to stop the twgipc service.

IC43582

When starting the Remote Control task, a Java exception occurred that caused IBM Director Server to stop the twgipc service.

Compatibility with earlier versions

Versions of IBM Director earlier than IBM Director 3.1 are not compatible with IBM Director 4.21. Further, you cannot directly upgrade from IBM Director 3.1 or 3.11 to IBM Director 4.21. For more information, see “Upgrading from previous releases of IBM Director” on page 7.

IBM Director Server 4.21 can manage systems running IBM Director Agent, version 3.1 or later. This enables you to manage systems that are running operating systems that are not supported by IBM Director Agent 4.20.

IBM Director information resources

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

Documentation

In addition to the *IBM Director 4.21 Release Notes* and the readme files for IBM Director, versions 4.20 and 4.20.2, IBM Director 4.21 is supported by the following IBM Director 4.20 documentation which is on the *IBM Director 4.21 CD*:

- *IBM Director 4.20 Installation and Configuration Guide Third Edition, July 2004* (dir4.20_docs_install.pdf)
- *IBM Director 4.20 Systems Management Guide Third Edition, July 2004* (dir4.20_docs_sysmgt.pdf)

Note: See “Solving IBM Director problems” in either the *IBM Director 4.20 Systems Management Guide* or the *IBM Director 4.20 Installation and Configuration Guide* for additional information about known problems.

The following documents are available from the IBM Support Web site:

- *IBM Director 4.20 Events Reference* (dir4.20_events.pdf)
- *IBM Director 4.20 Upward Integration Modules Installation Guide Second Edition, July 2004* (dir4.20_docs_uim.pdf)

Except for the readme files, all documentation is in Portable Document Format (PDF). You need Adobe Acrobat Reader or Xpdf to view it. Check the IBM Support Web site regularly for updated IBM Director documentation.

World Wide Web resources

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

IBM Director 4.21

<http://www.ibm.com/pc/support/site.wss/document.do?Indocid=MIGR-58219>

Download the following IBM Director 4.21 code and information from this Web page:

- CD image
- Documentation
- IBM LM78 and system management bus (SMBus) device drivers for Linux
- Readme files
- Extensible Markup Language (XML) files for use with the Software Distribution task

Check this Web page regularly for updated readme files and documentation.

IBM Director Agent page

http://www.ibm.com/servers/eserver/xseries/systems_management/sys_migration/ibmdiragent.html

Download the IBM Director Hardware and Software Compatibility document from this Web page. This document lists supported @server and xSeries systems, as well as all supported operating systems. It is updated every 6 - 8 weeks.

IBM @server Information Center

<http://www.ibm.com/servers/library/infocenter>

Obtain information about the IBM Virtualization Engine™ and IBM Director Multiplatform.

IBM ServerProven® page

<http://www.ibm.com/pc/us/compat/index.html>

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

IBM Support page

<http://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/Electronic Support page

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

Download IBM systems-management software, including IBM Director. Check this Web page regularly for new IBM Director releases and updates.

IBM xSeries Systems Management page

http://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, Scalable Systems Manager, Server Plus Pack, and Software Distribution (Premium Edition).

Chapter 2. Installation and upgrade information

You can install and upgrade IBM Director in the following ways:

- Using the *IBM Director 4.21* CD
- Using packages downloaded from the IBM Support Web site

Before you install or upgrade IBM Director, see “Installation considerations when using Server Plus Pack extensions.”

Upgrading from previous releases of IBM Director

If you are running one of the following versions of IBM Director on a supported operating system, you can upgrade to IBM Director 4.21:

- IBM Director 4.1
- IBM Director 4.10.2
- IBM Director 4.11
- IBM Director 4.12
- IBM Director 4.20
- IBM Director 4.20.2

Note: You cannot upgrade IBM Director, version 3.1 or 3.1.1. You must uninstall version 3.1 or 3.1.1 and then install version 4.21.

IBM Director Server and IBM Director Console must be at the same release level. If you upgrade to IBM Director Server 4.21, you must upgrade all instances of IBM Director Console also.

If IBM Director Console and IBM Director Agent are installed on the same system, both software components must be at the same release level as IBM Director Server.

(Linux installations only) If you are upgrading either IBM Director Server or IBM Director Agent to version 4.21, consider the following points:

- If the IBM LM78 device driver for Linux, version 4.20, is installed on the managed system or management server, you must uninstall the device driver and then install the IBM LM78 device driver, version 4.21.
- If the IBM SMBus device driver for Linux, version 4.1, 4.11, 4.12, or 4.20, is installed on the managed system or management server, you must uninstall the device driver and then install the IBM SMBus device driver, version 4.21.

Installation considerations when using Server Plus Pack extensions

The IBM Director Server Plus Pack includes the following extensions:

- Active™ PCI Manager
- Capacity Manager
- Rack Manager
- Software Rejuvenation
- System Availability

If you include Server Plus Pack extensions in your IBM Director environment, IBM Director 4.21 requires the IBM Director Server Plus Pack, version 4.20. See Table 1 on page 8 for more information about upgrading an IBM Director environment that contains Server Plus Pack extensions.

Table 1. Server Plus Pack considerations for IBM Director 4.21

Current IBM Director environment	Server Plus Pack considerations
<ul style="list-style-type: none"> IBM Director, versions 4.20 or 4.20.2 Any of the Server Plus Pack extensions 	<p>The IBM Director 4.21 upgrade retains the extensions that you have installed.</p>
<ul style="list-style-type: none"> IBM Director, versions 4.10, 4.10.2, 4.11, or 4.12 Any of the Server Plus Pack extensions 	<p>The IBM Director 4.21 upgrade retains the extensions that you have installed. However, after the upgrade is completed, you must use the Software Distribution task to upgrade the Server Plus Pack extensions on your managed systems to version 4.20.</p> <p>Note: The Rack Manager extension does not have a component on managed systems. You must upgrade the Rack Manager component on the management server to version 4.20.</p>
<p>IBM Director, versions 3.1 or 3.1.1</p>	<p>You must uninstall IBM Director, version 3.1 or 3.1.1, before you install IBM Director 4.21. You must purchase and install the Server Plus Pack, version 4.20 when you install IBM Director 4.21.</p>

Installations and upgrades using the IBM Director CD

Important: If you want to upgrade IBM Director, version 4.20 or 4.20.2, to IBM Director 4.21, you must use the applicable packages from the IBM Support Web site. For more information, see Table 2 on page 9.

You can use the *IBM Director 4.21* CD to perform the following tasks:

- Install IBM Director 4.21
- Upgrade an existing IBM Director installation, version 4.10, 4.11, or 4.12, to version 4.21

For information about installing or upgrading IBM Director 4.21, see the *IBM Director 4.20 Installation and Configuration Guide*.

Installations and upgrades using packages from the IBM Support Web site

This release of IBM Director provides packages that you can use to install or upgrade IBM Director components running on Windows, AIX, or Linux. You can download these packages from the following IBM Support Web page:
<http://www.ibm.com/pc/support/site.wss/document.do?Indocid=MIGR-58219>

Note: For a list of the operating systems supported by IBM Director, see the *IBM Director Hardware and Software Compatibility* document at
http://www.ibm.com/servers/eserver/xseries/systems_management/sys_migration/ibmdiragent.html.

The packages contain self-extracting executable files.

Note: You can use the provided XML files with IBM Director Update Assistant to install your upgrade packages. For information on how to upgrade IBM

Director Agent using the IBM Director Update Assistant, see the *IBM Director 4.20 Installation and Configuration Guide*.

Table 2 lists the packages that you can use to upgrade IBM Director, version 4.20 or 4.20.2, for Windows (32-bit or 64-bit) to version 4.21.

Table 2. Packages that provide an upgrade to a current installation

If you want to:	Use this package:	Files in the package
Upgrade IBM Director Agent, version 4.20 or 4.20.2, for Windows to version 4.21	dir4.21_agent_patch_windows.zip	<ul style="list-style-type: none"> IBMDirectorAgentPatch4.21.exe diragentpatch_windows.xml IBMDirectorAgentPatch4.21.msp
Upgrade IBM Director Agent, version 4.20 or 4.20.2, for Windows (64-bit) to version 4.21	dir4.21_agent_patch_windows64.zip	<ul style="list-style-type: none"> IBMDirectorAgentPatch4.21.exe diragentpatch_windows64.xml IBMDirectorAgentPatch4.21.msp
Upgrade IBM Director Console, version 4.20 or 4.20.2, for Windows to version 4.21	dir4.21_console_patch_windows.zip	<ul style="list-style-type: none"> IBMDirectorConsolePatch4.21.exe IBMDirectorConsolePatch4.21.msp
Upgrade IBM Director Server, version 4.20 or 4.20.2, for Windows to version 4.21	dir4.21_server_patch_windows.zip	<ul style="list-style-type: none"> IBMDirectorServerPatch4.21.exe IBMDirectorServerPatch4.21.msp

Table 3 lists packages that you can use to:

- Install IBM Director 4.21 for Windows (32-bit or 64-bit)
- Upgrade an existing IBM Director installation, versions 4.1, 4.10.2, 4.11, 4.12, for Windows (32-bit or 64-bit) to version 4.21.

Notes:

1. You cannot use these packages to upgrade existing IBM Director components, version 4.20 or 4.20.2. Instead, use the IBM Director for Windows upgrade (see Table 2).
2. You cannot upgrade IBM Director, version 3.1 or 3.1.1. You must uninstall version 3.1 or 3.1.1 and then install version 4.21.

Table 3. Packages that provide a full installation of IBM Director 4.21

If you want to:	Use this package:	Files in the package
<ul style="list-style-type: none"> • Install IBM Director Agent 4.21 for Windows • Upgrade IBM Director Agent, versions 4.1, 4.10.2, 4.11, or 4.12, for Windows to version 4.21 	dir4.21_agent_windows.zip	<ul style="list-style-type: none"> IBMDirectorAgent4.21.exe diragent_windows.xml diragent_windows_xx.xml ¹ diragent.rsp
<ul style="list-style-type: none"> • Install IBM Director Agent 4.21 for Windows (64-bit) • Upgrade IBM Director Agent, versions 4.1, 4.10.2, 4.11, or 4.12, for Windows (64-bit) to version 4.21 	dir4.21_agent_windows64.zip	<ul style="list-style-type: none"> IBMDirectorAgent4.21.exe diragent_windows64.xml diragent_windows64_xx.xml ¹ diragent.rsp
<ul style="list-style-type: none"> • Install IBM Director Console 4.21 for Windows • Upgrade IBM Director Console, versions 4.1, 4.10.2, 4.11, or 4.12, for Windows to version 4.21 	dir4.21_console_windows.zip	<ul style="list-style-type: none"> IBMDirectorConsole4.21.exe dircon.rsp

Table 3. Packages that provide a full installation of IBM Director 4.21 (continued)

If you want to:	Use this package:	Files in the package
<ul style="list-style-type: none"> Install IBM Director Server 4.21 for Windows Upgrade IBM Director Server, versions 4.1, 4.10.2, 4.11, or 4.12, for Windows to version 4.21 	dir4.21_server_windows.zip	IBMDirectorServer4.21.exe Note: This file does not support unattended or silent installations.
1. Where xx indicates the language for the installation: <ul style="list-style-type: none"> de is German es is Spanish fr is French ja is Japanese ko is Korean zh_CN is Simplified Chinese zh_TW is Traditional Chinese Note: The English installation file names do not contain a language indicator.		

Table 4 lists the packages that you can use for systems running AIX and Linux.

Table 4. Packages for systems running AIX and Linux

If you want to:	Use this package:	Files in the package
<ul style="list-style-type: none"> Install IBM Director Agent 4.21 for AIX Upgrade IBM Director Agent, versions 4.1, 4.10.2, 4.11, 4.12, 4.20, or 4.20.2, for AIX to version 4.21 	dir4.21_agent_aix.tar	IBMDirectorAgent4.21-1.bin
<ul style="list-style-type: none"> Install IBM Director Agent 4.21 for Linux Upgrade IBM Director Agent, versions 4.1, 4.10.2, 4.11, 4.12, 4.20 or 4.20.2, for Linux to version 4.21 	dir4.21_agent_linux.tar.gz	<ul style="list-style-type: none"> IBMDirectorAgent4.21-1.sh diragentpatch_linux.xml diragentpatch_linux_xx.xml ¹ diragent_linux.xml diragent_linux_xx.xml ¹ dirinstall.alt
<ul style="list-style-type: none"> Install IBM Director Console 4.21 for Linux Upgrade IBM Director Console, versions 4.1, 4.10.2, 4.11, 4.12, 4.20 or 4.20.2, for Linux to version 4.21 	dir4.21_console_linux.tar.gz	<ul style="list-style-type: none"> IBMDirectorConsole4.21-1.sh dirinstall.alt
Upgrade IBM Director Agent and IBM Director Console, versions 4.1, 4.10.2, 4.11, 4.12, 4.20 or 4.20.2, for Linux to version 4.21 Note: You must use this package on any system that has both IBM Director Agent and IBM Director Console installed.	dir4.21_agentconsoleupgrade_linux.tar.gz	<ul style="list-style-type: none"> IBMDirectorAgentConsolePatch 4.21-1.sh dirpatch

Table 4. Packages for systems running AIX and Linux (continued)

If you want to:	Use this package:	Files in the package
<ul style="list-style-type: none"> Install IBM Director Server 4.21 for Linux Upgrade IBM Director Server, versions 4.1, 4.10.2, 4.11, 4.12, 4.20 or 4.20.2, for Linux to version 4.21 	dir4.21_server_linux.tar.gz	<ul style="list-style-type: none"> IBMDirectorServer4.21-1.sh dirinstall.alt
<ul style="list-style-type: none"> Install IBM Director Agent 4.21 for Power Linux Upgrade IBM Director Agent, versions 4.1, 4.10.2, 4.11, 4.12, 4.20 or 4.20.2, for Power Linux to version 4.21 	dir4.21_agent_ppclinux.tar.gz	<ul style="list-style-type: none"> IBMDirectorAgent4.21-1.sh diragentpatch_plinux.xml diragentpatch_plinux_xx.xml ¹ diragent_plinux.xml diragent_plinux_xx.xml ¹ dirinstall.alt
<ul style="list-style-type: none"> Install IBM Director Agent 4.21 for Linux on 64-bit Itanium processors Upgrade IBM Director Agent, versions 4.1, 4.10.2, 4.11, 4.12, 4.20 or 4.20.2, for Linux on 64-bit Itanium processors to version 4.21 	dir4.21_agent_linux64.tar.gz	<ul style="list-style-type: none"> IBMDirectorAgent4.21-1.sh diragentpatch_linux64.xml diragentpatch_linux64_xx.xml ¹ diragent_linux64.xml diragent_linux64_xx.xml ¹ dirinstall.alt
<p>1. Where xx indicates the language for the installation:</p> <ul style="list-style-type: none"> de is German es is Spanish fr is French ja is Japanese ko is Korean zh_CN is Simplified Chinese zh_TW is Traditional Chinese <p>Note: The English installation file names do not contain a language indicator.</p>		

Installing or upgrading on Windows

Note: The Microsoft software patch (MSP) files are provided for customers that prefer to use Windows Installer and understand how to use Windows Installer upgrade package files.

Installing an IBM Director 4.21 upgrade on Windows

Complete the following steps to install an IBM Director upgrade on a system running Windows:

1. Select the applicable package for your upgrade (see Table 2 on page 9).
2. From a command prompt, type one of the following case-sensitive commands and press Enter:

If you want to perform:	Type this command:
A standard upgrade	<i>filename.exe</i>
An unattended upgrade	<i>filename.exe /V' /qb</i>
A silent upgrade	<i>filename.exe /S /V' /qn</i>

where *filename.exe* is the name of the executable file.

Note: A *standard* installation invokes the InstallShield wizard. An *unattended* installation shows the progress of the installation but does not require any user input. A *silent* installation suppresses all output to the screen during installation.

Installing IBM Director 4.21 on Windows

Complete the following steps to install IBM Director 4.21 on a system running Windows:

1. Select the appropriate package for your installation (see Table 3 on page 9).
2. If you do not want to customize the default installation options, go to step 5.

Note: Unattended and silent installations are not supported for the IBM Director Server installation.

3. If you want to customize the default installation options, open the `diragent.rsp` file in an ASCII text editor.
4. Modify and save the `diragent.rsp` file. This file follows the Windows INI file format and is fully commented.
5. From the command prompt, type one of the following case-sensitive commands and press Enter:

If you want to perform:	Type this command:
A standard installation	<code>filename.exe</code>
An unattended installation	<code>filename.exe -a UNATTENDED RSP="responsefile.rsp"</code>
A silent installation	<code>filename.exe -s -a SILENT RSP="responsefile.rsp"</code>

where:

- `filename.exe` where `filename.exe` is the name of the executable file.
- RSP is an optional parameter that you can use to specify a customized response file.
- `responsefile.rsp` is the path and name of the customized response file that you created in step 4.

Note: A *standard* installation invokes the InstallShield wizard. An *unattended* installation shows the progress of the installation but does not require any user input. A *silent* installation suppresses all output to the screen during installation.

Installing and upgrading on AIX or Linux

This section provides instructions for installing and upgrading IBM Director on systems running AIX or Linux.

Installing IBM Director Agent, IBM Director Console, or IBM Director Server, version 4.21, on Linux

Complete the following steps to install IBM Director on a system running Linux:

1. Select the applicable package for your installation (see Table 4 on page 10).
2. If you do not want to customize the default installation options, go to step 5.
3. If you want to customize the default installation options, open the `dirinstall.alt` file in an ASCII text editor.
4. Modify and save the file. This file is fully commented.

5. (Optional) To save the RPM files, from a command prompt, type the following command and press Enter:

```
filename -x directory
```

where *filename* is the name of the executable file, and *directory* is the fully qualified name of the directory to which you want to write the RPM files.

6. To install IBM Director, type the following command and press Enter:

```
filename -r installfile
```

where:

- *filename* is the name of the executable file.
- *-r installfile* is an optional parameter that you can use to specify a customized installation script, and *installfile* is the fully qualified name of the installation script.

Installing the IBM Director Agent and IBM Director Console upgrade, version 4.21, on Linux

Complete the following steps to upgrade a system running Linux and both IBM Director Agent and IBM Director Console:

1. If you do not want to customize the default installation options, go to step 4.
2. If you want to customize the default installation options, open the dirpatch file in an ASCII text editor.
3. Modify and save the file. This file is fully commented.
4. (Optional) To save the RPM files, from a command prompt, type the following command and press Enter:

```
filename -x directory
```

where *filename* is the name of the executable file, and *directory* is the fully qualified name of the directory to which you want to write the RPM files.

5. To install IBM Director, type the following command and press Enter:

```
filename -r installfile
```

where:

- *filename* is the name of the executable file.
- *-r installfile* is an optional parameter that you can use to specify a customized installation script, and *installfile* is the fully qualified name of the installation script.

Uninstallation information

For information about uninstalling IBM Director 4.21, use the procedures in the *IBM Director 4.20 Installation and Configuration Guide*.

For installations that include the BladeCenter SAN Utility Extension for IBM Director, you must uninstall this extension before uninstalling IBM Director Server or IBM Director Console. If you do not uninstall the BladeCenter SAN Utility Extension for IBM Director, a later reinstallation of IBM Director Server or IBM Director Console will succeed, but IBM Director Server or IBM Director Console will fail to start.

For these uninstallation instructions, see the readme file for the BladeCenter SAN Utility Extension for IBM Director that is installed on your system. Once available, you can download the appropriate BladeCenter SAN Utility Extension for IBM Director and its readme file from the QLogic Web page at http://www.qlogic.com/support/oem_detail_all.asp?oemid=324.

Chapter 3. Limitations, general problems, and workarounds

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

Limitations

IBM Director 4.21 has the following limitations:

BladeCenter Deployment wizard

The Advanced Settings button in the BladeCenter Deployment wizard currently is not enabled for the following switches:

- Brocade Enterprise SAN Switch Module for IBM @server BladeCenter
- Brocade Entry SAN Switch Module for IBM @server BladeCenter
- Intel Gigabit Ethernet Switch Module for IBM @server BladeCenter T
- Topspin IB Switch Module for IBM @server BladeCenter

Fabric Manager Plug-in for IBM Director

The Fabric Manager Plug-in for IBM Director provides support for the following switches:

- Brocade Enterprise SAN Switch Module for IBM @server BladeCenter
- Brocade Entry SAN Switch Module for IBM @server BladeCenter

The plug-in does not ship with IBM Director but can be downloaded from the IBM Support Web site at <http://www.ibm.com/pc/support>. It contains components for both IBM Director Server and IBM Director Console. It also requires that Java Virtual Machine (JVM), version 5.00.3802 or later, is installed.

Note: For Linux installations, the following limitations apply:

- Only the IBM Director Server component is supported
- Only SUSE LINUX Enterprise Server 9 is supported

IBM @server 326 servers

(SUSE LINUX Enterprise Server 9 for AMD64 only) The following functions and features are not available:

- In-band communication of hardware alerts
- Management Processor Assistant task

Red Hat Package Manager files for IPMI device drivers

The supporting Red Hat Package Manager (RPM) files for IPMI device drivers and mapping layers currently are not shipped with IBM Director. Check the IBM Support Web site at <http://www.ibm.com/pc/support> for available updates.

ServeRAID Manager

ServeRAID Manager is not supported when IBM Director 4.21 is running on the following operating systems:

- Red Hat Enterprise Linux 3.0, Update 3
- SUSE LINUX Enterprise Server 9

Upward integration with Microsoft Systems Management Server 2003

IBM Director Agent 4.21 must be installed on all managed systems to support upward integration with Microsoft Systems Management Server (SMS) 2003. This limitation occurs because SMS 2003 gathers information from managed systems differently than previous SMS versions; these changes prevent SMS 2003 from communicating with managed systems that are running versions of IBM Director Agent earlier than 4.21.

General problems

This section contains information about general problems:

Red Hat Enterprise Linux 3.0, Update 3 installations

The following problems have been seen when using this operating system with IBM Director 4.21:

- When IBM Director Server and IBM Director Console are installed on separate systems that are on separate network segments, communication between the two systems fails if one of the systems is using a firewall. When Red Hat Enterprise Linux 3.0, Update 3 is installed, the firewall is enabled by default.
- Sometimes inventory collection fails for a managed system or events from a managed system are not returned as expected. This can happen when the CIM server used by that managed system is unexpectedly shut down. To determine if this scenario has occurred, check to see if the cimserver process is running on the managed system. If this process is not running, the CIM server has shut down. In this case, contact your IBM service representative.

ServeRAID Manager help system

Note: IBM Director Console only

The Search function in the ServeRAID Manager help system has the following problems with IBM Director Console:

- For management consoles running Linux, the Search function causes IBM Director Console to fail.
- For management consoles running Windows, the Search function fails.

Using Software Distribution to install an IBM Director Agent upgrade

Note: Managed systems running Windows only

In the Options pane of IBM Director Update Assistant, you can specify an alternative response file by typing the path name in the **Alternate Response File** field. This field must be left blank when creating a software package that contains a patch to IBM Director Agent, or the software distribution and installation will fail.

Web-based Access

Note: IBM Director UIM for Microsoft SMS only

Web-based Access requires the Microsoft Java Virtual Machine (JVM). This JVM might not be available for managed systems running Microsoft Windows Server 2003.

xSeries 445 servers

Note: xSeries 445 servers that have an attached remote I/O enclosure and use Active PCI Manager only

Make sure that the xSeries 445 server is running the latest BIOS. Otherwise, Active PCI Manager might not recognize slots in the server correctly. You can download the latest BIOS from <http://www.ibm.com/pc/support>.

Workarounds

This section contains workarounds for the following problems:

- An inability to access RDM help from IBM Director 4.20 or later
- Difficulty deleting logical drives using ServeRAID Manager
- Errors that occur when you run a BladeCenter Deployment wizard profile against a BladeCenter chassis that has SNMPv3 agents enabled
- Alert Standard Format (ASF) 2.0 is disabled on xSeries 306 servers running SUSE LINUX Enterprise Server 8 (Service Pack 3)

Accessing the RDM help from IBM Director 4.20 or later

You cannot access the Remote Deployment Manager (RDM) help from IBM Director Console in the following situations:

- An installation that includes IBM Director, version 4.20 or 4.20.2, and RDM 4.11 (including any of the RDM 4.11 Updates 1, 2, or 3)
- An installation that includes IBM Director 4.12 and RDM 4.11 (including any of the RDM 4.11 Updates 1, 2, or 3) is upgraded to use IBM Director, version 4.20 or 4.20.2

Complete the following steps to access the RDM help files:

1. Navigate to the *director_install\classes\doc\ibm* directory, where *director_install* is the directory where IBM Director is installed.
2. Move the *rdm* directory to the *director_install\classes\doc\en\ibm* directory.

Deleting logical drives from an IBM ServeRAID-7t Serial ATA controller

(IBM ServeRAID-7t Serial ATA (SATA) controllers only) After you have restarted a managed system that has a ServeRAID-7t controller, you cannot delete any logical drives using the ServeRAID Manager task. To delete a logical drive, use one of the following programs:

ServeRAID Manager (Standalone Edition) in startable-CD mode

You can access this program by starting the server with the *ServeRAID Support* CD in the CD drive.

Adaptec RAID Configuration Utility

You can access this program during system startup by pressing Ctrl+A.

Disabling SNMPv3 agents for a BladeCenter Chassis

If you use a BladeCenter Deployment wizard profile to set Simple Network Management Protocol (SNMP) information, an error occurs when a BladeCenter chassis has SNMPv3 agents enabled. You can disable these agents only by using the BladeCenter Management Module Web interface.

Complete the following steps to disable SNMPv3 agents for a BladeCenter chassis:

1. Open a Web browser. In the address field, type the IP address or host name defined for the management-module remote connection. The Enter Network Password window opens.
2. Type your user name and password. The BladeCenter Management Module window opens.
3. In the SNMP section, in the **SNMPv3 agent** field, select **Disabled**.
4. Scroll down to the bottom of the Management Module window, and click **Save**.
5. In the left frame, click **MM Control** → **Restart MM**.

Enabling Alert Standard Format for xSeries 306 servers running SUSE LINUX

Note: This information applies to xSeries 306 servers running SUSE LINUX Enterprise Server 8 (Service Pack 3) only.

Complete the following steps to enable Alert Standard Format (ASF) 2.0 support:

1. Download the following file from the IBM Support Web site:
Linux RPMs for ASF 2.0 Support for IBM Director Agent - for Intel-based GbE

This file includes the ASF20RPM.zip file.
2. Unzip the ZIP file and install the RPM files.

Chapter 4. Updates to the IBM Director 4.20 documentation

This chapter provides information about the changes to the IBM Director 4.20 documentation and online help.

Exporting and importing threshold tasks

This section replaces the “Exporting and importing threshold tasks” section in Chapter 23, “Resource Monitors,” of the *IBM Director 4.20 Systems Management Guide*.

You can export a threshold task for use on another management console. Complete the following steps to export a threshold task:

1. In the IBM Director Console Tasks pane, expand the **Resource Monitors** task.
2. Double-click the **All Available Thresholds** icon. The All Available Thresholds window opens.
3. Right-click the threshold that you want to export to a task, and click **Export to Task**. The Export task window opens.
4. Type a name for the task and click **OK**. The task is displayed under the **Resource Monitors** task.
5. Double-click the task. The All Available Thresholds window opens.
6. Click **File** → **Export to File**. The Export to File window opens.
7. Select the path for the file and then type a file name in the **File Name** field. The correct extension (.thrshplan) is added automatically.
8. Click **OK**.

Complete the following steps to import a threshold task:

1. In the IBM Director Console Tasks pane, right-click **Resource Monitors** and click **Import Plan from File**. The Import Threshold Plan from File window opens.
2. Type a file name in the **File Name** field or navigate to the file and select the file name.
3. Click **OK**.
4. In the Import Threshold Plan from File window, select the plan name and click **Action** → **Create New Task**.

Help for network driver configuration

The following information is an addition to the online help for network driver configuration (twgipccf.exe).

Changing the network driver configuration on a managed system so that a different network interface card (NIC) is enabled will disrupt any active communication between IBM Director Server and IBM Director Agent. It can take several minutes before communication is reestablished.

For example, in such a situation, communications from a remote-control session are stopped. You must close the remote-control session, wait a few minutes for communication to be reestablished with the newly-configured network driver, and then start a new remote-control session with the managed system.

IBM LM78 and SMBus device drivers for Linux

This material replaces the “IBM LM78 and SMBus device drivers for Linux” sections that appear in the following chapters of the *IBM Director 4.20 Installation and Configuration Guide*:

- Chapter 4, “Installing IBM Director Server”
- Chapter 6, “Installing IBM Director Agent”
- Chapter 10, “Upgrading IBM Director Server”
- Chapter 12, “Upgrading IBM Director Agent”

If you plan to install or upgrade IBM Director Server or IBM Director Agent on an xSeries server running Linux, you might need to install the LM78 device driver, the SMBus device driver, or both. These device drivers ensure that certain IBM Director tasks and functions work correctly.

Overview of the IBM LM78 and SMBus device drivers for Linux

Table 5 explains when the LM78 and SMBus device drivers need to be installed and their functions.

Table 5. IBM LM78 and SMBus device drivers for Linux

Device driver	When it is needed	What it does
LM78	If either of the following conditions apply: <ul style="list-style-type: none">• You plan to install IBM Director Server or IBM Director Agent on one of the following servers:<ul style="list-style-type: none">– @server BladeCenter HS20, machine type 8832– @server BladeCenter HS20, machine type 8843– @server BladeCenter HS40, machine type 8839– xSeries 225, machine type 8647– xSeries 226, machine type 8836– xSeries 236, machine type 8841– xSeries 336, machine type 8837– xSeries 346, machine type 8840• The server contains an integrated systems management processor (ISMP).	The LM78 device driver ensures that IBM Director Server receives memory and processor Predictive Failure Analysis® (PFA) alerts.
SMBus	If the server does not contain one of the following service processors: <ul style="list-style-type: none">• IPMI baseboard management controller• Remote Supervisor Adapter• Remote Supervisor Adapter II	The SMBus device driver ensures that the Management Processor Assistant tasks and System Health Monitoring function properly.

Downloading and installing the LM78 and SMBus device drivers

You must perform the following steps to install either the IBM LM78 or SMBus device driver:

1. Download the applicable device driver. Each device driver is packaged in a TAR.GZ file that contains the source Red Hat Package Manager (RPM) file.
2. Build the binary RPM file.
3. Install the binary RPM file on the system on which you will install IBM Director Server or IBM Director Agent.

Downloading the IBM LM78 and SMBus device drivers

The following TAR.GZ files contain the source RPM files for the LM78 and SMBus device drivers:

- `dir4.21_lm78_linux.tar.gz`
- `dir4.21_smb_linux.tar.gz`

You can download the files from the IBM Director 4.21 Web page at <http://www.ibm.com/pc/support/site.wss/document.do?Indocid=MIGR-58219>

Building the binary RPM file

You must build the binary RPM file on a system with the same kernel version and hardware configuration as the system on which you will install IBM Director Server or IBM Director Agent. Make sure that the build system has the same number of processors.

Complete the following steps to build the binary RPM file:

1. Make sure that the following conditions are met:
 - The system has Linux development and build capability.
 - The Linux kernel source is installed and properly configured.
 - Any earlier versions of the Linux device driver have been uninstalled.
2. Copy one of the following files to the SOURCES directory:

For the LM78 device driver	<code>ibmlm78-4.21-1.tgz</code>
For SMBus device driver	<code>ibmsmb-4.21-1.tgz</code>

3. From a command prompt, change to the SOURCES directory.
4. Type the following command and press Enter:

```
rpmbuild -tb driver-4.21-1.tgz
```

where *driver* is either `ibmlm78` or `ibmsmb`.

Running this command creates a binary RPM file in the `RPMS/architecture` directory, where *architecture* is one of the following strings:

- `i386` (32-bit operating systems)
- `X86_64` (64-bit operating systems)

Installing the binary RPM file

You can install the binary RPM file either on the server on which it was built or on another server that has the same Linux kernel and hardware configuration.

Complete the following steps to install the binary RPM file:

1. If you built the binary RPM file on another server, complete the following steps:
 - a. Make sure that any earlier versions of the device driver have been uninstalled from the server on which you will install the binary RPM file.
 - b. Copy the binary RPM file to an `RPMS/architecture` directory, where *architecture* is either `i386` (32-bit operating system) or `X86_64` (64-bit operating system).
2. Change to the `RPMS/architecture` directory.

- To install the device driver, from a command prompt, type the following command and press Enter:

```
rpm -ivh driver-4.21-1.architecture.rpm
```

where *driver* is either *ibmlm78* or *ibmsmb*, and *architecture* is either *i386* (32-bit operating system) or *X86_64* (64-bit operating system).

Issuing this command accomplishes the following tasks:

- Uncompresses and untars the archive into the `/usr/local/driver` directory
- Copies the device driver, shared library, and all configuration files to the appropriate locations
- Loads and starts the device driver

New events

The following table lists the new events in IBM Director 4.21. When you create an event action plan, you use the Simple Event Filter Builder notebook to customize the filter. The Event Type page in this notebook displays a tree that you can use to navigate the hierarchy of events available in IBM Director. The root option is a top-level node in the Event Type tree. For more information about events and event action plan, see the *IBM Director 4.20 Systems Management Guide*.

Table 6. MPA events added in IBM Director 4.21

Root option in tree	Suboption node levels		
MPA	Component	BUS	Communication
		CPU	Failed
		SMP Expansion Module	Disabled
		Management Processor	<ul style="list-style-type: none"> • Inserted • Removed • Active
		Hardware Information	<ul style="list-style-type: none"> • Crash Dump • Initiated • Aborted • Completed
		OS Image	<ul style="list-style-type: none"> • Crash Dump • Initiated • Aborted • Completed • Redundancy • Restart • Test • Active • Inserted • Removed
		Processor Blade	<ul style="list-style-type: none"> • Communication • Capacity on Demand • Enabled
		Server	<ul style="list-style-type: none"> • Configuration • State
		I/O Module	Post
	Platform	Scalable Partition	
Scalable Node		Test	

Remote Control usage

The following material is an addition to Chapter 21, “Remote Control,” in the *IBM Director 4.20 Systems Management Guide*.

There are no restrictions on the number of remote-control sessions that can be running simultaneously. It is a best practice, however, to limit the number of session in the active or monitor state. Consider the following recommendations:

- Limit the number of sessions in the active state to five
- Limit the total number of sessions in either the active or monitor state to 10

Sessions in the suspend state use minimal resources and do not increase network traffic, so there is no need to limit the number of these sessions.

Restricting anonymous command execution

This section replaces the “Restricting anonymous command execution” section in Chapter 19, “Process Management,” in the *IBM Director 4.20 Systems Management Guide*.

For managed systems running Windows, complete the following steps to require a user ID and password:

1. At a command line, type the following string and press Enter:

```
regedit
```

2. Navigate to the following registry entry:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Tivoli\Director\CurrentVersion
```

3. Double-click **RestrictAnonCmdExec**.
4. In the **Value** data field, change **0** to **1**.
5. Click **OK**. The changes take effect immediately.

twgrestore and twgsave commands

This section contains information about the twgrestore and twgsave commands.

Note: For Linux systems, these commands must be run from the *installation/bin* directory, where *installation* is the directory where IBM Director is installed.

twgrestore

The twgrestore commands restores the IBM Director persistent data on a managed system or a management server. The data is restored from the directory that you specify. This command must be run locally from the system on which you want to restore data. The data that you restore must be from the same version of IBM Director that is installed. Before you run this command, stop all IBM Director processes that are running on the system.

Syntax

```
twgrestore [-t] directory
```

Parameters

Parameter	Description
-t	Restores the persistent data, but does not include the system unique identifier or system name.
<i>directory</i>	Indicates the location of the persistent data that you want to restore.

Exit status

Value	Description
0	The command completed successfully.
1	The parameter is not recognized.
2	The service is still running.
3	The tar command failed.
15	The command could not access the directory specified.

Examples

To restore the IBM Director persistent data from the specified directory, type the following command and press Enter:

```
twgrestore /opt/IBM/director.save.1
```

To restore the IBM Director persistent data from the specified directory and exclude the unique identifier and name, type the following command and press Enter:

```
twgrestore -t restore /opt/IBM/director.save.1
```

twgsave

The twgsave command saves the IBM Director persistent data on a managed system or a management server to the *installation.save.n* directory, where *installation* is the directory where IBM Director is installed, and *n* is an integer starting at 1 that is incremented each time the twgsave command is run. For example, if IBM Director is installed in the default directory, the directory that is used is */opt/IBM/director.save.1*. The persistent data includes configuration and working IBM Director data. It does not include database information. This command must be run locally from the system on which you want to save data. Before you run this command, stop all IBM Director processes that are running on the system.

Syntax

```
twgsave [-s]
```

Parameters

Parameter	Description
-s	Excludes software packages that are used by the Software Distribution task from the saved data.

Exit status

Value	Description
0	The command completed successfully.
1	An invalid argument was used.

Value	Description
2	The service is still running.
15	The directory could not be found.

Examples

To save the IBM Director persistent data, type the following command and press Enter:

```
twgsave
```

To save the IBM Director persistent data not including software packages, type the following command and press Enter:

```
twgsave -s
```

Using PostgreSQL as the IBM Director database

IBM Director, versions 4.20 and later, only supports the versions of PostgreSQL that are shipped with the supported Linux distributions.

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