

Update*Xpress*



User's Guide



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NOTE

Before using this information and the product it supports, be sure to read the general information in Appendix A, "Notices," on page 11.

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Chapter 1. Introduction

Use the IBM® UpdateXpress CD to plan for maintenance updates of most IBM @server xSeries servers. The UpdateXpress CD is supported in Microsoft® Windows 2000 and Windows NT® environments, it is easy to use, and the program provides device driver and firmware updates directly from this CD. If an automatic update is not available, UpdateXpress might supply a manual update option.

Insert the CD into your server to begin the update process.

Supported servers

This version of UpdateXpress supports the following IBM xSeries and Netfinity® servers.

Supported servers	Machine type
xSeries 200	8478
xSeries 220	8645
xSeries 230 (Netfinity 5100)	8658
xSeries 240 (Netfinity 5600)	8664
xSeries 250 (Netfinity 7600)	8665
xSeries 330	8654
xSeries 340 (Netfinity 4500)	8656
xSeries 350 (Netfinity 6000R)	8682
xSeries 370 (Netfinity 8500R)	8681

Device-driver support

UpdateXpress provides the following device-driver updates.

Windows NT

Notes:

- The letter *v* preceding a number designates a version. The letter *d* preceding a number designates the diskette version available on the Web. The letters *d* and *v* together indicate that the diskette and version numbers are the same.
- In the Onboard Ethernet Controller column (I) denotes an Intel® chip set, and (AMD) denotes an AMD chip set. *Auto* indicates that an automatic update is available.

System	Serve-RAID 4L,4M	Onboard SCSI Controller	Onboard Ethernet Controller	Onboard ASM Controller	ASM PCI Adapter	Remote Service Processor	Onboard Video Controller
x200	v4.50.05	v 1.11 (Ultra160)	d4.0 - v5.00.66(I)	N/A	N/A	N/A	v8.19.11
x220	v4.50.05	v 1.11 (Ultra160)	d4.0 -v5.00.66(I)	v1.2	v1.2	v1.2	v8.19.06

System	Serve-RAID 4L,4M	Onboard SCSI Controller	Onboard Ethernet Controller	Onboard ASM Controller	ASM PCI Adapter	Remote Service Processor	Onboard Video Controller
x230	v4.50.05	v1.11 (Ultra160)	v3.7.2 (I)-v4.14 (AMD) Manual update only	v1.2	v1.2	N/A	v8.10.06
x240	v4.50.05	v3.02.4 (7800)	v3.7.2 (I)-v4.14 (AMD) Manual update only	v1.2	v1.2	N/A	v3.26.39
x250	v4.50.05	v3.02.4 (7800)	d2.09 -v4.12 (AMD) Manual update only	v1.2	v1.2	N/A	v3.26.39
x330	v4.50.05	v 1.11 (Ultra160)	d4.0-v5.00.66.0000 (I) auto	v1.2	v1.2	N/A	v8.19.06
x340	v4.50.05	v 1.11 (Ultra160)	v4.14 (AMD) Manual update only	v1.2	v1.2	N/A	v8.19.06
x350	v4.50.05	v 1.11 (Ultra160)	d2.10 - v4.14 (AMD) Manual update only	v1.2	v1.2	N/A	v8.19.06
x370	v4.50.05 AUTO	v 1.11 (Ultra160)	N/A	v1.2	v1.2	N/A	v3.26.39

Windows 2000

Notes:

- The letter *v* preceding a number designates a version. The letter *d* preceding a number designates the diskette version available on the Web. The letters *d* and *v* together indicate that the diskette and version numbers are the same.
- In the Onboard Ethernet Controller column, (I) denotes an Intel chip set, and (AMD) denotes an AMD chip set.

System	Serve-RAID 4L,4M	Onboard SCSI Controller	Onboard Ethernet Controller	Onboard ASM Controller	ASM PCI Adapter	Remote Service Processor	Onboard Video Controller
x200	v4.50.05	N/A	d4.00-v5.00.67.000(I)	N/A	N/A	N/A	v8.19.11
x220	v4.50.05	N/A	d4.00-v5.00.67.000 (I)	v1.2	v1.2	v1.2	v8.19.06
x230	v4.50.05	N/A	v4.23 (AMD) Manual update only	N/A	N/A	N/A	N/A
x240	v4.50.05	N/A	v4.23 (AMD) Manual update only	d1.2 Manual update only	d1.2 Manual update only	d1.2 Manual update only	N/A
x250	v4.50.05	N/A	d4.23- v4.23 (AMD) Manual update only	d1.2 Manual update only	d1.2 Manual update only	N/A	N/A
x330	v4.50.05	N/A	d4.00-v5.00.67.000(I)	d1.2 Manual update only	d1.2 Manual update only	N/A	N/A
x340	v4.50.05	N/A	v4.23- v4.23 (AMD) Manual update only	d1.2 Manual update only	d1.2 Manual update only	N/A	N/A
x350	v4.50.05	N/A	d4.23- v4.23 (AMD) Manual update only	d1.2 Manual update only	d1.2 Manual update only	N/A	N/A
x370	v4.50.05	N/A	N/A	d1.2 Manual update only	d1.2 Manual update only	N/A	N/A

Firmware updates

UpdateXpress provides the following firmware updates. The firmware updates can be applied regardless of the operating system installed on your server.

System firmware updates

System	HF microcode	ServeRAID 4L,4M	BIOS	Diags	ASM controller	ASM PCI	Remote Systems Management
x200	**	vd4.50	v31A/d EXE 131A	N/A	N/A	v5/60	N/A
x220	**	vd4.50	v15A/d1.04	v7/d1.01	N/A	N/A	v16/16
x230	**	vd4.50	v40A/d8.00	v21/d2.01	v4/14/d1.13	v5/60	N/A
x240	**	vd4.50	v57A/d1.15	v63/d3.02	v4/23A/d2.16	v5/60	N/A
x250	**	vd4.50	v29A/d1.06	v40/d2.02	v5/23A/d1.24	v5/60	N/A
x330	**	vd4.50	v23A/d1.03	v12/d1.00	v4/14A/d1.02	v5/60	N/A
x340	**	vd4.50	v40A/d8.00	v21/d2.01	v4/15A/d1.13	v5/60	N/A
x350	**	vd4.50	v21A/d1.06	v20/d2.06	v5/16A/d1.13	v5/60	N/A
x370	**	vd4.50	v33A/d1.06	v23/d2.03	N/A	v4/28A	N/A

Notes:

- For the Advanced Systems Management (ASM) controller and ASM adapters, the version shown is a combination of level/build ID on the UpdateXpress CD. Build IDs change more frequently than levels, and UpdateXpress performs only level checking. Only the level will be displayed by UpdateXpress. Update this firmware when the versions are shown to be equal.
- Only ServeRAID-4L and -4M are supported by UpdateXpress. On a system with a combination of other of ServeRAID controllers (for example, 3L, 3H, or 4H), no updates will be made to the ServeRAID subsystem.
- The BIOS flash utility requires a system restart immediately after updating the system BIOS. UpdateXpress automatically restarts the system and the original firmware versions screen is displayed. The BIOS is then updated and is equal to the version on the CD, so this item will not be automatically checked by UpdateXpress.

Tape drive firmware updates

UpdateXpress provides the following certified tape drive updates.

Server	Certified tape drive firmware updates
x200	Storage Tape IBM 09N4041 12/24 GB DDS/3 4 mm Internal Tape Drive
x200	Storage Tape IBM 20L0549 10/20 GB Internal IDE Tape Drive

Server	Certified tape drive firmware updates
x220	Storage Tape IBM 09N4042 10/20GB NS20 Internal SCSI Tape Drive (TR5)
x230/x340	Storage Tape IBM 01K1320 20/40GB DLT SCSI Internal Tape Drive
x240/x330	Storage Tape IBM 01K1325 20/40GB 8mm Internal SCSI Tape Drive
x250	Storage Tape IBM 00N8016 100/200GB LTO Tape Drive
x330/x240	Storage Tape IBM 01K1325 20/40GB 8mm Internal SCSI Tape Drive
x340/x230	Storage Tape IBM 01K1325 20/40GB DLT SCSI Internal Tape Drive
x350	Storage Tape IBM 00N7990 40/80GB DLT Internal Tape Drive
x370	Storage Tape IM 00N7991 20/40GB DDS/4 4mm Internal Tape Drive

Additional information

There are additional considerations for specific device-driver and firmware support and upgrades.

ServeRAID support for 4L and 4M - version 4.50

Review the following ServeRAID device-driver and firmware considerations:

- Servers with only ServeRAID-4L, -4M, or both installed are supported automatically by UpdateXpress. The device driver and firmware/BIOS will be updated to ServeRAID version 4.50.
- On systems that have one or more other ServeRAID models, no updates will be performed to the ServeRAID subsystem.
- The UpdateXpress CD provides installation procedures, diskette images, and code from the IBM ServeRAID Support CD version 4.5 for all the operating systems supported by ServeRAID. These operating systems are:
 - Windows NT and 2000
 - Novell NetWare
 - UnixWare
 - Linux
 - SCO OpenServer
 - IBM OS/2®
- To manually update all ServeRAID software (device driver, firmware and BIOS, ASM, and clustering) refer to the readme.txt file in the SRV45 directory on the UpdateXpress CD.
- After UpdateXpress updates the device drivers, firmware, and BIOS code, you must manually update other ServeRAID software. These software offerings include:
 - IBM ServeRaid Command Line Program diskette version 4.50
 - IBM ServeRAID Manager version 4.50
 - IBM ServeRAID Cluster Solution version 4.50

Note: The IBM ServeRAID-4M Ultra160 SCSI controller and the IBM ServeRAID-4L Ultra160 SCSI controller do not support IBM OS/2 on the xSeries 240 server.

Hard disk drive microcode support

UpdateXpresss will install hard disk drive firmware updates to levels equivalent to that provided by the IBM Hard Disk Drive Update Program Version 1.11 (released to the Web on 14 February 2001).

Other tape drives

IBM Tape Drive model 09N4042 10/20GB NS20 Internal SCSI Tape (TR5) is not one of the certified tape drives identified in the table in "Tape drive firmware updates" on page 3. It might work in some situations: specifically, on a system where a ServeRAID update is not being attempted at the same time.

Chapter 2. Performing the updates

Insert the CD into the server CD-ROM drive to begin the update process.

Note: You must have the CD-ROM drive in the drive startup sequence.

Updating the device drivers

All installed and active device drivers that are supported by UpdateXpress are displayed when UpdateXpress starts. To start the device-driver update procedure, click **Continue**. UpdateXpress compares the level of the device driver on the server to the level on the CD:

- If the device driver is an earlier version than the one on the UpdateXpress CD, the device driver is selected for update.
- If the device driver is later than the version on the UpdateXpress CD, the device driver is not selectable.
- If the device driver is equal to the version on the UpdateXpress CD, the device driver is selectable for update.

The program displays a progress window, so that you will know that you have completed all the device-driver updates. UpdateXpress prompts you to restart the server with the UpdateXpress CD in the CD-ROM drive to begin the firmware-update procedure.

Updating the firmware

There are two ways to perform firmware updates:

- Automatic unattended
- Manual

Automatic unattended firmware updates

When the UpdateXpress CD starts, the firmware version window opens. This window has a 60-second countdown timer. You can view the current system firmware versions and compare these to the firmware versions available on the UpdateXpress CD.

UpdateXpress determines the level of the firmware on the server:

- If the firmware is an earlier version than the one on the UpdateXpress CD, the firmware is selected for update.
- If the firmware is later than the version on the UpdateXpress CD, the firmware is not selectable.
- If the firmware is equal to the version on the UpdateXpress CD, the firmware is selectable for update.

If you do nothing, the firmware update procedure begins after the timer reaches zero. If you want to deselect any items before the update process begins, see "Manual firmware updates" on page 8.

Note: Hard disk drive and tape firmware is always selected for update, regardless of the version, because the version numbers are not available for examination. The UpdateXpress program displays See Help in place of the version number. If you do not think you should update the firmware with the version from the CD, you can click **Stop Timer** and deselect the hard disk or tape firmware. If you choose to perform the firmware update, the UpdateXpress program displays Equal as the version after the update is complete.

The update utilities for each firmware component perform the firmware updates.

When updating is complete, UpdateXpress restarts, and the program shows you a summary of the new levels of firmware installed on your system.

Manual firmware updates

To stop the automatic process click **Stop Timer**. Then, select the firmware to update by selecting or deselecting the firmware items. After you have made your selections, click **Continue** to start the update procedure.

Special conditions

There are special conditions for some servers and firmware.

POST/BIOS flash on IBM Netfinity 6000R/ xSeries 350

The IBM Netfinity 6000R/ xSeries 350 systems have a POST/BIOS firmware flash problem that causes the system to restart. UpdateXpress cannot correct this problem because it is a problem with the flash utility. After the POST/BIOS firmware is updated and the system is restarted, the UpdateXpress firmware window (and consequently, the countdown timer) opens. If any custom selections were made initially, you must reselect the desired options, or you can allow UpdateXpress to continue, now that the POST/BIOS firmware has been updated.

Advanced Systems Management (ASM) Adapter/Controller firmware

The UpdateXpress CD supplies the latest ASM firmware level available at the time the CD was developed. The ASM firmware has an internal build ID as well as a higher-level version number for the firmware. Currently, the build ID of the ASM firmware in the system is not available for examination by UpdateXpress. When you select to install the same version of UpdateXpress ASM firmware over your current system ASM firmware "version," you will actually get the build ID as the version number.

Special conditions for Microsoft cluster server environments

UpdateXpress does not currently support updates for the Fibre Channel RAID Controller environment. You must manually update the hard disk drives attached to these adapters from diskettes. The latest versions of the hard disk drive firmware is available for download on diskettes from the IBM Support Web site at: <http://www.pc.ibm.com/support>

For a detailed description of ServeRAID Manager, refer to the *IBM ServeRAID Support* CD and access the /Books directory. For a detailed description of the Microsoft Cluster Administration (MSCS) utility, refer to the MSCS documentation.

Note: The following procedure shuts down the MSCS cluster in a manner which prevents disk resources from failing. If a disk resource failure should occur, the Cluster Administrator Utility starts background synchronization, which causes the utility to bring down both cluster nodes.

Complete the following steps to update hard disk drive firmware in a MSCS environment with a shared IBM ServeRAID controller.

1. Shutdown all applications and disconnect all users from both cluster nodes.
2. Select IBM ServeRAID (SA) Manager to view a list of arrays, logical drives, hot-spare drives, and physical drives. Click **logical drives** and check the segmented bar located at the bottom-right of the screen to determine if drive synchronization is occurring.
3. Click **Start Menu -> Programs -> Administrative Tools** to access the Cluster Administrator Utility and determine which node does not own the quorum disk.
4. From the node that does not own the quorum disk, use the Cluster Administrator Utility to bring offline all disk resources that are currently owned by this node. For example, if nodeA does not own the quorum drive, bring offline all disk resources owned by nodeA.
5. Stop the cluster service on the node that does not own the quorum disk.
6. Stop the cluster service on the node that owns the quorum disk.
7. Shut down the operating system on both systems.
8. Start one node, restart the server, and start the UpdateXpress CD. The UpdateXpress CD will automatically update all supported downlevel firmware, including hard disk drives.
9. Shut down the second node after the update is complete.

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