



Installing a new DS3000 series storage subsystem with SATA hard disk drives

This Technical Update supplements the documentation that comes with your IBM® System Storage™ DS3000 series storage subsystem.

The DS3000 storage subsystem requires controller firmware level 06.70.22.00 or later to recognize and use SATA hard disk drives. When you install a new DS3000 storage subsystem with only SATA disk drives, the DS3000 controllers might not be at this prerequisite firmware level, and if they are not, you must follow the firmware upgrade procedures in this document.

Note: This document does not apply to any previously installed and operating DS3000 storage subsystem that you want to upgrade to firmware level 06.70.22.00 or to a new DS3000 storage subsystem with at least one SAS hard disk drive. If this document does not apply to your storage subsystem, to upgrade the controller firmware, see the documentation that comes with the DS3000 storage subsystem.

Overview

Use the procedures in the following sections for either a DS3000 single-controller or a DS3000 dual-controller environment.

For a DS3000 single-controller storage subsystem, complete the following procedures:

1. "Determining whether to upgrade the controller firmware" on page 2
2. "Downloading firmware" on page 3
3. "Upgrading controller A firmware" on page 4
4. "Completing the firmware upgrade process" on page 9

For a DS3000 dual-controller storage subsystem, complete the following procedures:

1. "Determining whether to upgrade the controller firmware" on page 2
2. "Downloading firmware" on page 3
3. "Upgrading controller A firmware" on page 4
4. "Upgrading controller B firmware" on page 8
5. "Completing the firmware upgrade process" on page 9

Notes:

1. A dual-controller DS3400 storage subsystem is used to document the procedures in this document.
2. The procedures in this document take approximately 90 minutes to be completed.

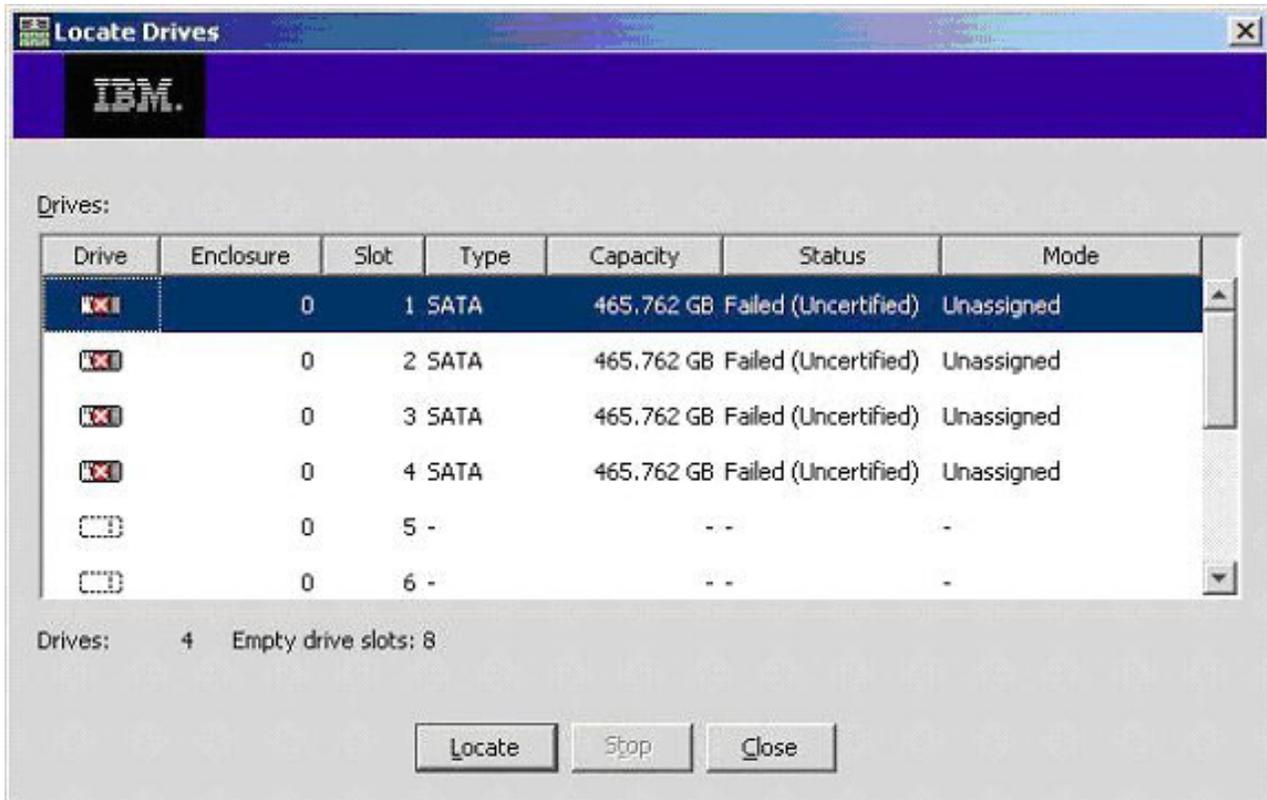
Determining whether to upgrade the controller firmware

DS3000 storage subsystems with serial numbers earlier than the numbers in the following table require an upgrade to controller firmware level 06.70.22.00 or later.

Table 1. DS3000 storage subsystems serial numbers

Description	Machine type and model	Serial number
DS3200 single controller model	1726-21X	1726HC2131172G
DS3200 dual controller model	1726-22X	1726HC2130186X
DS3300 single controller model	1726-31X	1726HC3132568N
DS3300 dual controller model	1726-32X	1726HC3133088S
DS3400 single controller model	1726-41X	1726HC4131690S
DS3400 dual controller model	1726-42X	1726HC4130921E

After you turn on a DS3000 storage subsystem that is *not* at the prerequisite firmware level and that has only SATA hard disk drives, the DS3000 controllers are displayed in the Storage Manager software as one or two separate controllers, and the hard disk drive status is shown as Failed (Uncertified).

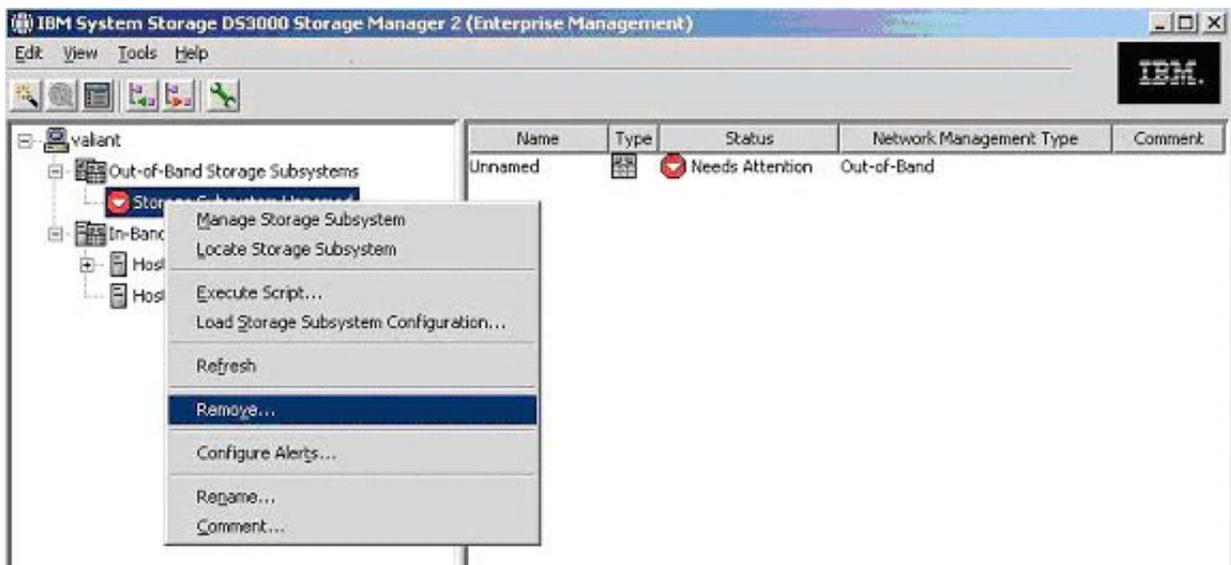


Downloading firmware

To download the controller firmware, NVSRAM, and Storage Manager package file, complete the following steps:

1. Go to <http://www.ibm.com/servers/storage/support/disk/>.
2. On the "Support for Disk systems" page, under **Entry-level disk systems**, click **DS3200, DS3300, or DS3400**.
3. On the Support page, click the **Download** tab.
4. Click **Storage Manager, firmware, HBA and tools (including readmes)**.
5. Select the latest controller firmware level (06.70.22.00 or later) and download it to a directory on your workstation.
6. Click the **Storage Mgr** tab to download the Storage Manager software for the operating system that you will use to manage the DS3000 storage subsystem.
7. Start the Storage Manager software.
8. From the Enterprise Management window, right click the DS3000 storage subsystem and click **Remove** to remove the DS3000 storage subsystem that has a Needs Attention status.

Note: You must remove the DS3000 storage subsystem in the Storage Manager software before you turn off the DS3000 storage subsystem in "Upgrading controller A firmware" on page 4.



Upgrading controller A firmware

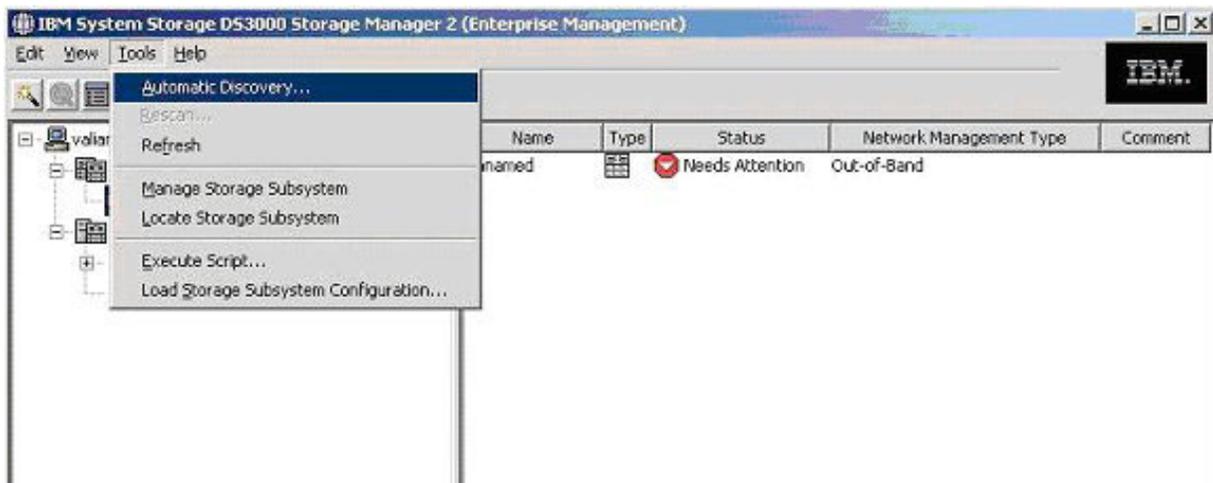
This section contains the instructions for upgrading controller firmware level 6.17.31.00 or 6.50.02.00 to level 06.70.22.00 with the latest NVSRAM.

Notes:

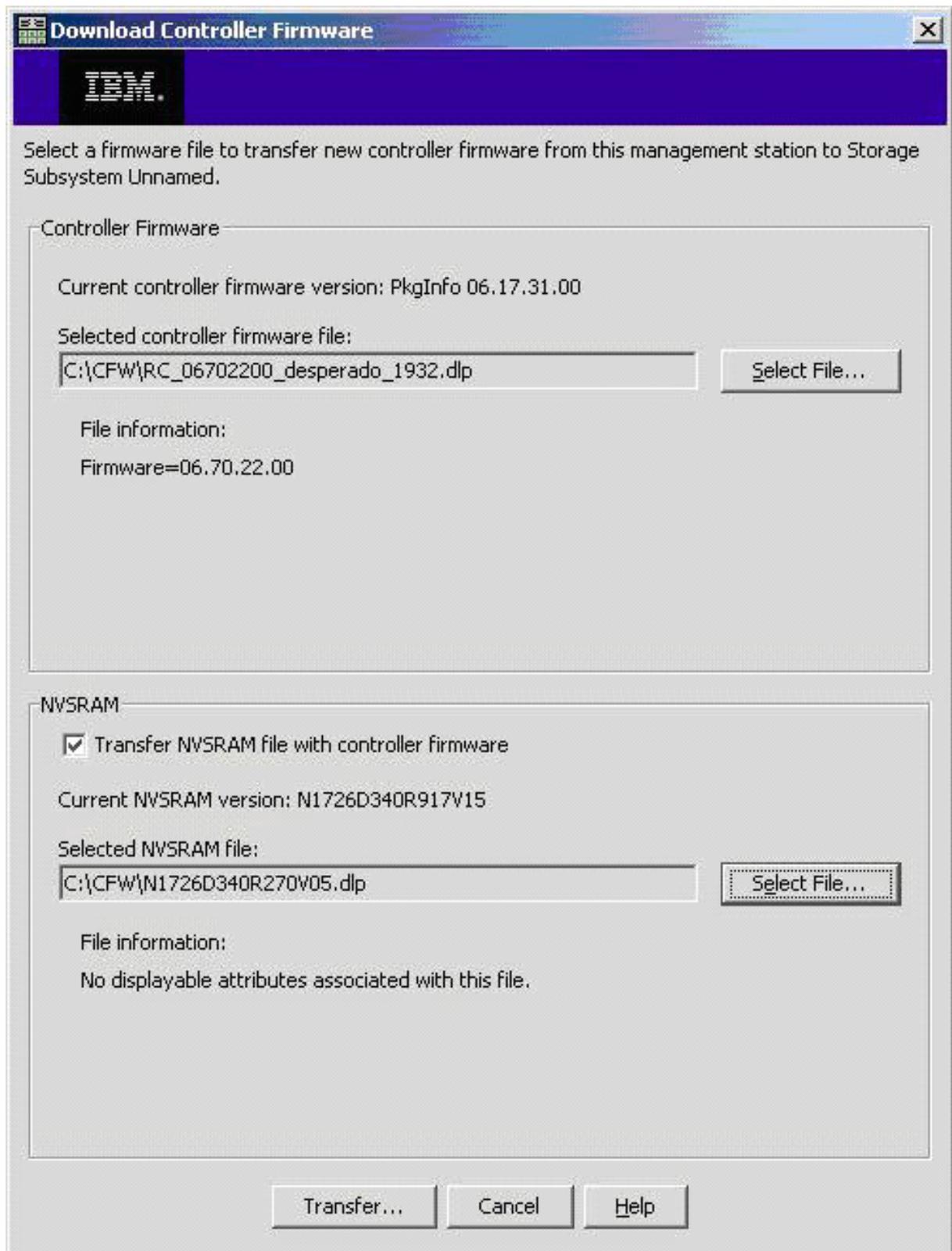
1. Before you begin the firmware upgrade procedures in the following sections, make sure that the DS3000 controllers are attached to a host server by using an Ethernet connection and use out-of-band management.
2. The Storage Manager software Automatic Discovery scans only within the same subnet.
3. You must validate the network connection between the management station and the DS3000 storage subsystem.
4. The default IP address of controller A is 192.168.128.101 and of controller B is 192.168.128.102.

To upgrade the controller A firmware, complete the following steps:

1. Turn off the DS3000 storage subsystem.
2. In a dual-controller storage subsystem, remove controller B. (As you face the rear of the storage subsystem, controller A is the left controller and controller B is the right controller.)
3. Remove all the hard disk drives from the DS3000 storage subsystem.
4. Turn on the DS3000 storage subsystem.
5. Wait 5 minutes for the DS3000 storage subsystem to complete POST.
6. From the Storage Manager software, click **Tools** → **Automatic Discovery** to discover the DS3000 storage subsystem.



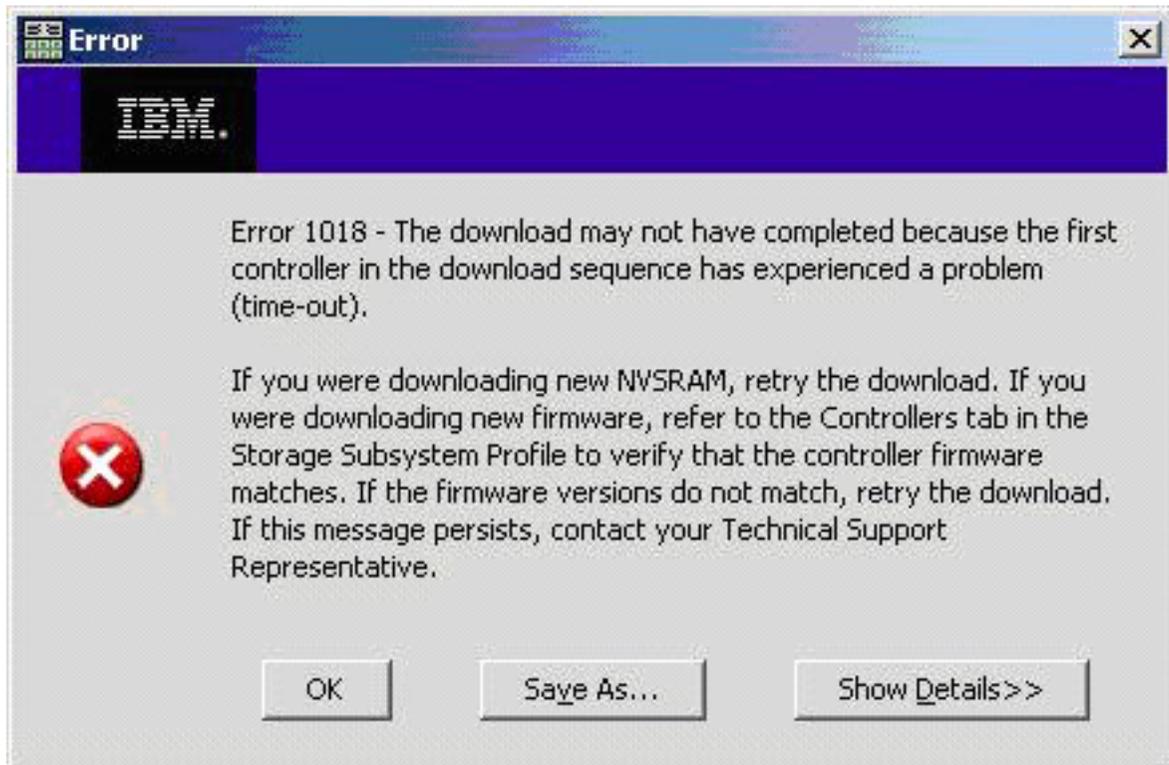
7. Select the DS3000 storage subsystem that is partially managed and is displayed at the top of the page.
8. Click the **Support** tab.
9. Click **Download Controller Firmware**.



10. Click **Select File** in the Controller Firmware section to go to the directory where you have downloaded the controller firmware.
11. Select the **Transfer NVSRAM file with controller Firmware** check box.

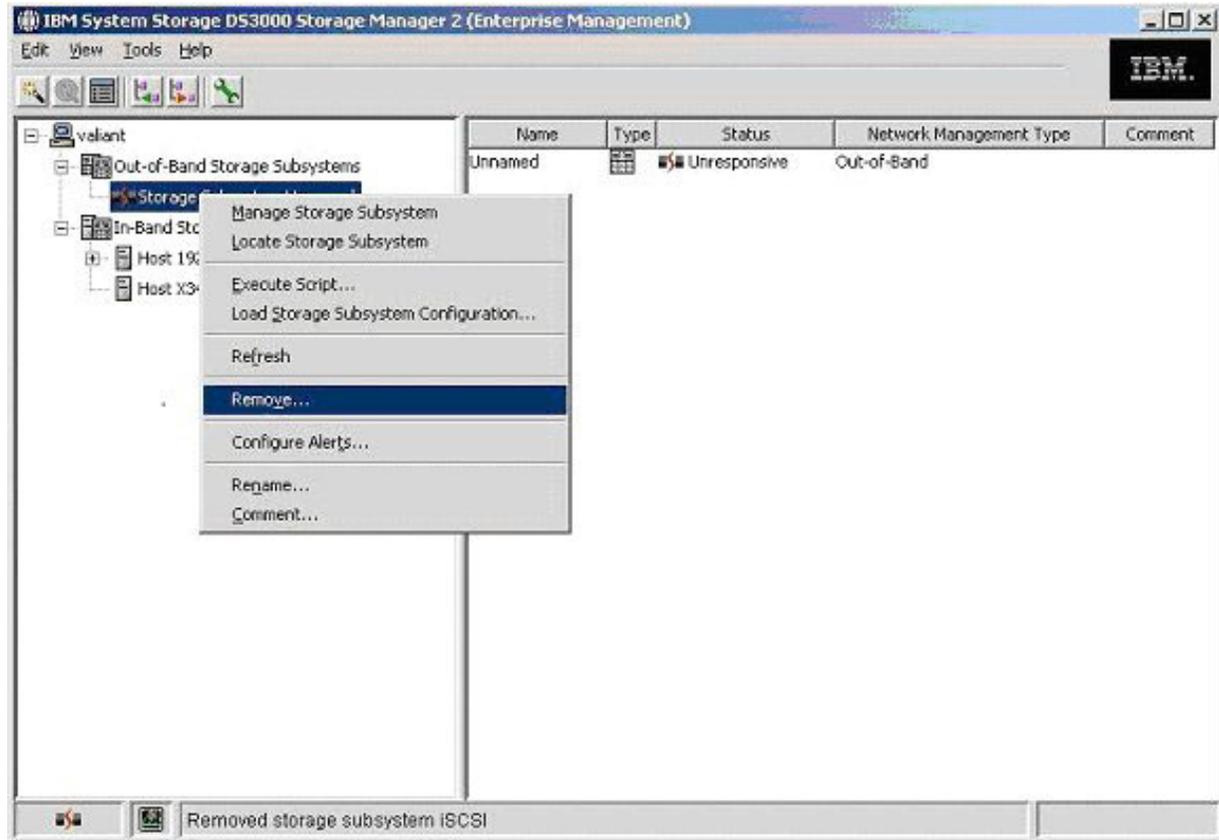
12. Click **Select File** in the NVSRAM section to go to the directory where you have downloaded the NVSRAM file.
13. Click **Transfer**.
14. In the confirmation window, click **Yes**.
The download will timeout with an Error 1018.

Note: The timeout can take up to 20 minutes.

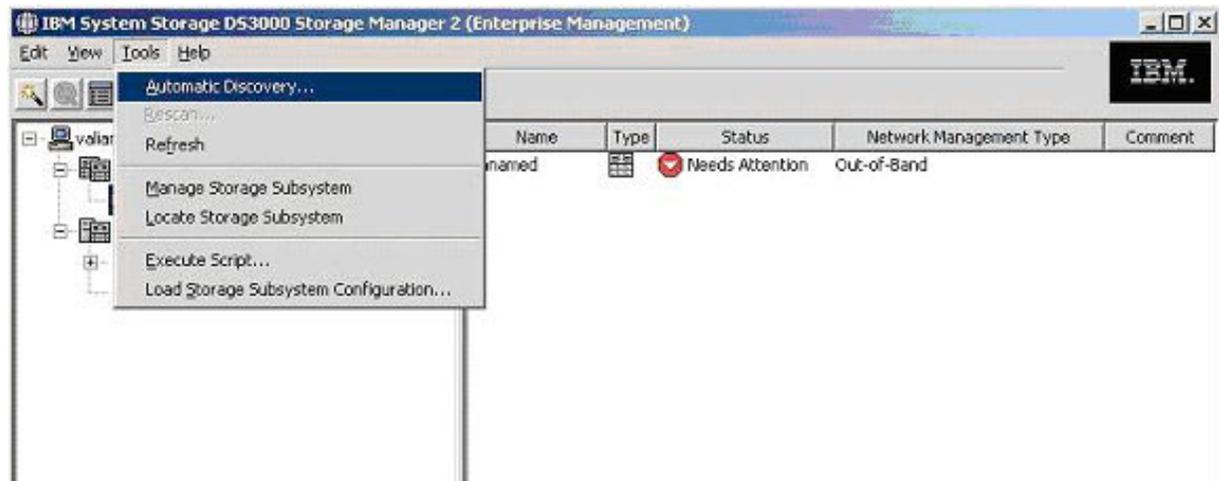


15. Click **OK** to close the Error window.
16. Close the Subsystem Management window.

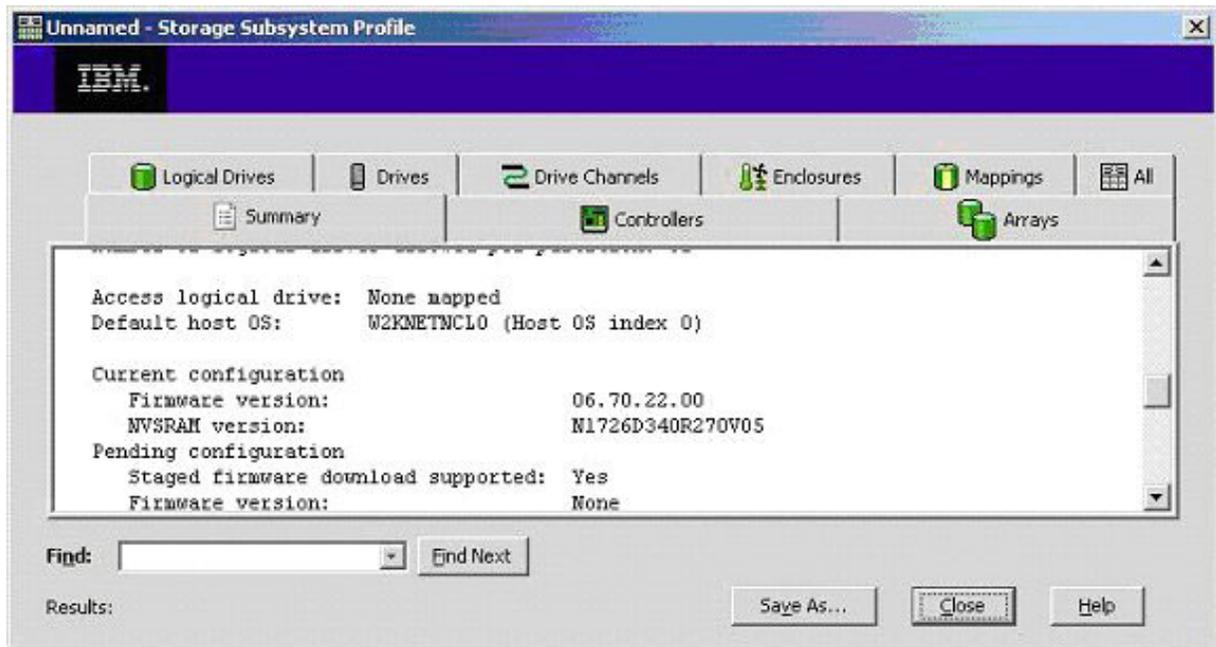
- On the Enterprise Management window, right-click the DS3000 storage subsystem and click **Remove** to remove the DS3000 storage subsystem that has a status of Unresponsive.



- Click **Tools** → **Automatic Discovery** to rediscover the DS3000 storage subsystem.



- Make sure that the controller firmware and NVSRAM are at the latest level by selecting the DS3000 Storage Subsystem Profile.



If you have a single-controller storage subsystem, go to step 1 in “Completing the firmware upgrade process” on page 9.

Upgrading controller B firmware

The following procedure is for a dual-controller DS3000 storage subsystem only.

To update the firmware on controller B, complete the following steps:

1. Turn off the DS3000 storage subsystem.
2. Remove controller A. (As you face the rear of the storage subsystem, controller A is the left controller and controller B is the right controller.)
3. Make sure that controller B is installed.
4. Turn on the DS3000 storage subsystem.
5. Wait 5 minutes for the DS3000 storage subsystem to complete POST.
6. From the Storage Manager software, click **Tools** → **Automatic Discovery** to rediscover the DS3000 storage subsystem.
7. Select the DS3000 storage subsystem that is partially managed and that is displayed at the top of the page.
8. Click the **Support** tab.
9. Click **Download Controller Firmware**.
10. Click **Select File** in the Controller Firmware section to go to the directory where you have downloaded the controller firmware.
11. Select the **Transfer NVSRAM file with controller Firmware** check box.
12. Click **Select File** in the NVSRAM section to go to the directory where you have downloaded the NVSRAM file.
13. Click **Transfer**.
14. In the Confirmation window, click **Yes**.

The download will timeout with an Error 1018.

Note: The timeout can take up to 20 minutes.

15. Click **OK** to close the Error window.
16. Close the Subsystem Management window.
17. Make sure that the controller firmware and NVSRAM are at the latest level by selecting the DS3000 Storage Subsystem Profile.

Completing the firmware upgrade process

To complete the firmware upgrade process, complete the following steps:

1. Turn off the DS3000 storage subsystem.
2. (Dual-controller storage subsystem only) Insert controller A.
3. Install the SATA hard disk drives.
4. Turn on the DS3000 storage subsystem.
5. Wait 5 minutes for the DS3000 storage subsystem to complete POST.
6. Restart the Storage Manager software.
7. Click **Tools** → **Automatic Discovery** to rediscover the DS3000 storage subsystem.
8. Make sure that the DS3000 storage subsystem and the SATA hard disk drives are working correctly.

Hardware service and support

The procedures in this document take approximately 90 minutes to be completed, and then the DS3000 storage subsystem is ready to be configured.

After you have completed the procedures in this document, if you have a problem with the DS3000 storage subsystem, you can receive hardware service through IBM service or through your IBM reseller, if your reseller is authorized by IBM to provide warranty service. See <http://www.ibm.com/planetwide/> for support telephone numbers, or in the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

In the U.S. and Canada, hardware service and support is available 24 hours a day, 7 days a week. In the U.K., these services are available Monday through Friday, from 9 a.m. to 6 p.m.

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