

RAID Array 3000 Firmware Upgrade Procedure

Overview

The RAID Array 3000 firmware can be upgraded using the StorageWorks Command Console (SWCC) application, or a standard terminal emulation tool. If the system disk is on the RA3000, the firmware cannot be upgraded with SWCC. This is accomplished using the **Terminal Emulation method**, otherwise use the **StorageWorks Command Console method**.

Note: If adding a second HSZ22 controller option to an existing single controller configuration, refer to the RA3000 second controller option Installation Guide for upgrading the controllers' firmware.

Terminal emulation method with system disk on the RA3000

If the host Operating System is installed on the RA3000, you must update the firmware using a serial connection to a computer other than that attached to the RA3000 emulating a VT100 type terminal, following these steps:

1. Properly shutdown your host system.
2. Using a computer other than that attached to the RA3000, connect a serial cable between the COM port on that machine and the corresponding serial port (CTR TOP or CTR BOT) for the controller on the RA3000.
3. Start a terminal emulator session. On Windows NT, Compaq suggests the HyperTerminal emulator. Settings to use are 9600 baud, 8 bits, No Parity, 1 stop bit, XON/XOFF.
4. To activate the controller, press the **Escape** key, then press the **Shift+7** keys. The controller will respond with a banner stating "DEC HSZ22 DEC Monitor Utility," followed by the firmware revision number. If the firmware revision is lower than the firmware on the CD, then proceed with the upgrade. If the firmware revision is the same revision level as the firmware on the CD, you do not need to upgrade your firmware.

NOTE: You will not actually be using this utility to upgrade the firmware, but knowing that it is operational ensures communication with the controller.

5. Reset the controller by power cycling the RA3000 subsystem. You will see a "FLASH Boot Utility . . ." banner, followed by instructions to type CTRL/C to abort.
6. Press the **CTRL/C** keys to abort the load sequence. The system displays a FLASH Boot Utility Options menu.
7. Choose a menu item (2) and change the serial baud rate to 38400.
8. When the system displays the "Please change your baud rate and press RETURN" message, use the HyperTerminal File | Properties | Configure option to do this.
9. After you change the baud rate, you may have to disconnect and reconnect the HyperTerminal session. Press the **Return** key after HyperTerminal restarts. The system will display the "FLASH Boot Utility Option" menu again.
10. Select the menu item (1), Download new Firmware Image.
11. Use the HyperTerminal menu option Transfer | Send Text File. Use the full path of the firmware file to send the firmware. The system displays a message containing the text: "Receiving code for System Version <ver>" and a series of \ | / - characters cycling at the end of the line.

12. At 9600 baud, the download will take between 45 to 60 minutes. At 38400, it should take around 10 to 12 minutes. At completion, you will see the "FLASH Programming complete" message followed by the FLASH Boot Utility Options menu again.
13. Select item (9), Restart Controller. The system displays a request message to reset the baud rate back to 9600. Use the HyperTerminal File | Properties | Configure menu to reset the baud rate to 9600. You may have to disconnect and connect the HyperTerminal session. Press the **Return** key after HyperTerminal restarts.
14. The system will display the FLASH Boot Utility Options menu again. Your firmware will now be upgraded.

StorageWorks Command Console Method

For more details on how to use SWCC refer to Command Console for RA3000. This file is also located on the CD in \Docs directory and is named SWCC_UG.pdf.

1. Stop all I/O to RAIDset
2. Go into SWCC HSZ22 storage window
3. Click on Storage
4. Click on Controller
5. Click on Update Firmware
6. Click on Browse in the Update Firmware window
7. Go to directory where the firmware is located
8. Get file with the FDI extension (example: D11x.fdi)
9. Click on Start Update
10. Will get window stating "Firmware update in progress, Please wait."
11. Upon completion, verify the firmware version, by clicking on the Controller Icon displayed in the GUI and look under General tab