

		Technical Bulletin	
Author/Date	Subject	Agile Part Number	
Steve Cellum Sep 18, 2008	Firmware Update Procedure from J1xx to J200		
TCC Approval Date	Applicable Products	Revision	Level
	All 2000 Series FC RAID products (2730 & 2730T)	20080918	B
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*This document describes how to update a Dot Hill 2730 or 2730T array that is running a version of firmware that is earlier than J200 to the current version of J200. **If you are upgrading an array running J200 firmware you do not need to follow this procedure.** Special attention is required when the existing version of firmware is a member of the J100 family (viz., J100, J101, J102, and J110) or J111.*

This method differs from the usual firmware update procedure in that each controller is updated individually while the other controller is disconnected from the chassis. This is necessary because of major differences between J200 and its predecessors.

The procedure described here uses ftp to transfer the firmware file to the controller and initiate the download. There is an equivalent update procedure that uses RAIDar, the array's embedded Web browser interface (WBI). The process using the WBI is described in *R/Evolution 2730 Release Notes for Software Version J200R05* under the heading "Updating the Controllers Using RAIDar." If you wish to use the WBI method, follow the procedure below but, whenever instructed to initiate the ftp transfer, use the download instructions described in the release notes.

Technical documents and firmware files for the 2000 series arrays can be downloaded from the Dot Hill Customer Resources Center Web site, <http://crc.dothill.com>. If you require assistance in updating firmware in an array, please contact Dot Hill Systems' Customer Service at +1-877-368-7924 or support@dothill.com.

CAUTION – Updating firmware from any pre-J200 version to J200 is disruptive and must be performed with the array off-line: all host I/O must be stopped. Up to one hour may be required to complete the process.

CAUTION – An array running firmware version J111 can be directly updated to J200. If the controller is running a firmware version earlier than J111 (e.g., J100, J101, J102, or J110) you must first update the array to J111 firmware and then perform the update process again from J111 to J200.

Some of the steps in this procedure require the use of the array's command-line interface (CLI). For help using the CLI, please consult the *R/Evolution 2000 Series CLI Reference Manual*.

1 Determine the Current Version of Firmware on the Array

To display the current version of firmware on the array use the CLI “versions” command. An excerpt of the output of this command is shown below. The first line in each section, identified as “Storage Controller Firmware”, shows the version:

```
# versions
Controller A Versions
-----
Storage Controller Firmware   : J111B09
. . .
Controller B Versions
-----
Storage Controller Firmware   : J111B09
. . .
```

In this example, the existing firmware version is J111B09, which can be updated directly to J200. If it had been an earlier version (e.g., J100, J101, J102, or J110) it would be necessary to update the controllers to J111 first and then repeat the update process from J111 to the ultimately desired J200 version.

Record the network settings displayed by the CLI “show network-parameters” command. Updating from some early versions of firmware may not preserve the controllers’ IP addresses and other network settings.

2 Enable the ftp service on the array

Determine if the ftp service is enabled on the controllers with the following CLI command:

```
# show protocols
Service and Security Protocols
-----
. . .
File Transfer Protocol      (FTP)      : Disabled
```

If it is disabled, enable it with the CLI command:

```
# set protocols ftp enabled
```

3 Update Controller A

Shut down both controllers using the following CLI command:

```
# shutdown both
```

After the command completes, turn off both power supplies.

If there is a SAS cable attached to the B controller, disconnect it.

After loosening the thumbscrew on each latch on controller B, press both latches down to disconnect the controller from the midplane. Pull outward on the latches until the controller projects approximately one inch from the rear of the chassis. For more information on disconnecting and removing the controller module, please see “Removing a Controller Module or Expansion Module” in *R/Evolution 2000 Series Troubleshooting Guide*.

Turn on both power supplies, and, after the system is up, connect to controller A with ftp. Use the IP address that you established at the end of Step 1. For the ftp account the default username is “ftp”, and the password is “flash”.

Initiate the firmware download process with the following command:

```
ftp> put filename flash
```

where *filename* is the name of the controller firmware file (e.g., “neptunesw-J200P19-01.bin”).

Follow the progress of the download process in the ftp session; it can take up to 10 minutes to complete. Do not power off the array during the firmware download process; this can render your controller inoperable. At the end of the process the controller is restarted.

Some early versions of firmware do not successfully close the ftp session after the update process completes. You can determine if the update process is complete by examining the results of the CLI “versions” command. If you are unable to access the CLI though telnet, the controller’s IP address may have changed. Try using terminal emulation software with a RS-232 connection to the CLI port on the controller. See “Setting Management Port Addresses” in the *2730 Getting Started Guide* (Dot Hill P/N 83-00004284-11).

After the firmware update process has completed verify that it was successful. Use the CLI “versions” command to confirm that the storage controller firmware version is the one you just downloaded.

4 Update Controller B

Shutdown controller A using the CLI command “shutdown a” and then turn off both power supplies.

Reinsert controller B by pushing it into the chassis and lifting the latches up until they are flush with the top of the module; then thread the thumbscrew on each latch into the module until the screw is finger tight. If you removed a SAS cable from the module in Step 3, reattach it.

If there is a SAS cable attached to controller A, disconnect it. Disconnect the controller A module and pull it out slightly as was done with Controller B in Step 3.

Turn on both power supplies.

Connect to controller B using its IP address. Use the same ftp command as in Step 3 to initiate the download process. After it completes, shut down controller B and turn off both power supplies.

Reinstall controller A and attach the SAS cable if you disconnected it at the beginning of this step. Turn on both power supplies.

5 Complete the Update and Verify Its Success

After the array has completed initialization, use the CLI “versions” command to verify that both controllers were properly updated. Disable the ftp service if you wish. If necessary, update the expander code on any expansion chassis that may be attached to the array.