Update to *Using a Network Server PCI RAID Disk Array Card*

This update contains information about the Network Server PCI RAID Disk Array Card that is new or modified since the manual *Using a Network Server PCI RAID Disk Array Card* (referred to here as "the manual") went to press.

A ReadMe file (containing the same information that's in this update) is on the *Network Server PCI RAID Disk Array Configuration and Diagnostics Utilities* floppy disk included in your Network Server PCI RAID accessory kit.

Software Installation

Always Install AIX Software for the PCI RAID Card After Installing AIX Itself

Chapters 2 and 3 of the manual describe the process of installing and configuring the Network Server PCI RAID Disk Array Card and installing the AIX operating system.

After installing the AIX operating system itself, please be sure to install all AIX software for the PCI RAID Disk Array Card by following the process described in "Installing the Disk Array Manager" in Chapter 5 of the manual. This will ensure that the latest versions of all AIX software for the card, including the device driver as well as utilities such as the Disk Array Manager, are installed on the system.

Latest AIX Software for the PCI RAID Card May Be Included on AIX CD-ROM

Future releases of the AIX operating system CD-ROM for the Network Server may include the latest versions of all AIX software for the Network Server PCI RAID Disk Array Card, including the Disk Array Manager. Therefore, when you are following the process described in “Installing the Disk Array Manager” in Chapter 5 of the manual, you may see a messages saying that no installable software products were found. If you see this message, all necessary software has already been installed.

Booting AIX

Battery Backup Card Must be Present

A battery backup daughter card is a standard component of the Network Server PCI RAID Disk Array Card. Do not remove the battery backup card. That card must be present for the PCI RAID Disk Array Card to be recognized when booting AIX on the Network Server.

Configuration

Define Standby Item Added to Two Menus

A Define Standby menu item has been added to the New Configuration and View/Update Configuration menus in the PCI RAID Disk Array Configuration Utility. After defining packs and system drives, you can use the Define Standby menu item to explicitly define standby drives. This is not strictly necessary, since any unconfigured drive will become a standby by default.

The Define Standby menu item can also be used to make a “dead” hot standby drive be active again. This may be necessary in certain rare circumstances, such as if the Network Server was booted with an external disk powered off and the controller’s configuration was saved with that drive seen as dead.

Backing Up the Configuration to a Locked Floppy Disk

In the Network Server PCI RAID Disk Array Configuration Utility, you can use the Backup/Restore Conf. menu item in the Tools menu to back up the RAID configuration to a floppy disk, as described in “Backing Up the Configuration” in Chapter 4 of the manual.

When backing up the configuration, please ensure that the floppy disk is not locked (write protected) before inserting it into the floppy disk drive. If the floppy disk is locked, the Disk Array Configuration Utility will report that the backup succeeded with no errors, but the configuration will not have been saved to the floppy disk. This is due to a problem in the Open Firmware ROM in the Network Server itself, and may be corrected in future versions of the Network Server.

Reboot After Adding or Hot-Swapping Non-Disk Devices

Reboot the Network Server after adding or hot-swapping a non-disk device (for example, a tape or CD-ROM drive) to ensure that the PCI RAID Disk Array Card properly sees the new device.

Remove AIX Physical Volume Prior to Reconfiguring RAID System Drive

Assume that you want to reconfigure a RAID system drive (for example, to change the RAID level or add a disk drive to it).

IMPORTANT In all cases, first back up all data on your entire system.

If you will be reconfiguring the RAID system drive containing your AIX root volume group, you will need to reinstall your operating system after reconfiguring and reinitializing the RAID system drive. Be sure you make a mksysb bootable backup tape of your root volume group before reconfiguring the RAID system drive.

If you will be reconfiguring a RAID system drive which does not contain your AIX root volume group, you must first remove the corresponding AIX physical volume definition to prevent problems after reconfiguring your system. You should do this prior to rebooting the Network Server.

Follow these steps to remove the AIX volume group and physical volume that are on that RAID system drive:

1 **Remove the AIX volume group which contains that physical volume by doing the following:**

   a. Back up the volume group, using the `savevg` command, or a utility such as tar. If the volume group is your root volume group, use the `mksysb` command to make a bootable system backup.

   b. Unmount all file systems on that volume group.

   c. Deactivate the volume group using the command:

   ```
   varyoff <volume group>
   ```

   d. Export the volume group using the command:

   ```
   exportvg <volume group>".
   ```

2 **Remove the physical volume by doing the following:**

   a. Determine the physical volume name by double-clicking on the RAID system drive icon in the controller's window in the Disk Array Manager to bring up the System Drive Information window.

   b. Remove the physical volume definition using the command:

   ```
   rmdev -l'<hdisk>' -d
   ```

Monitoring the PCI RAID Disk Array Card

Disk Array Manager Must Be Running As Root

All software monitoring of the condition of the PCI RAID Disk Array Card is done by the Disk Array Manager, an AIXwindows application. Therefore, to get any notification of RAID system events such as physical hard disk drive failures, the Disk Array Manager application must be running as root in an X windows environment.

Log and Controller Windows Must Be Open

To get any notification via e-mail or syslog of RAID system events such as drive failure on a PCI RAID Disk Array Card, the Log Information Viewer window must be open. To help ensure this, the Log Information Viewer window is opened automatically when the Disk Array Manager is launched, and the window has no Close button. The screen shot in "The Log Information Viewer" in Chapter 5 of the manual is incorrect.

Also, the condition of an individual PCI RAID Disk Array Card is polled by the Disk Array Manager only if the main Controller window for that card is open. Up to four PCI RAID Disk Array Cards can be used in the Network Server. To ensure that the condition of each card is being properly monitored, and that notification will be made of any problems with that card, the main Controller window for each card should be open.

The Log Information Viewer and main Controller windows can be iconified. They will continue to monitor the card condition and send notification of any problems when they are iconified.

Don't Use alt-F4 to Close Disk Array Manager Windows

In the Common Desktop Environment, you can press the alt-F4 key combination to close a window. If you do this, however, the Disk Array Manager will not notice that the window has been closed, and will leave that window's entry in the Disk Array Manager's Window menu. If you open that window again, another entry for that window will be appended to the Window menu. Either of the entries in the Window menu can then be used to bring the window to the foreground. To avoid this confusing situation, don't use alt-F4 to close Disk Array Manager windows. Always use the Close button in the windows themselves instead.

Notification

Mail to Multiple Users

To configure the Disk Array Manager to send mail about significant RAID system events to multiple users, specify all of the electronic-mail addresses in a single quoted string with spaces separating the individual addresses, as in the following example:

```
dacmgr -m "root fred laila john@domain.com"
```

See "Getting Mail" in Chapter 5 of the manual for more information about how to send mail about significant RAID system events.

Using Devices With Multiple LUNs

No Support for Multiple LUN Devices

Although primarily intended for controlling hard disks, the PCI RAID Disk Array Card also supports other SCSI II wide or narrow devices such as tape or CD-ROM drives. However, the product can only address SCSI Logical Unit Number (LUN) zero; it cannot address LUNs 1 through 7 defined by the SCSI II specification. This limitation may prevent full support of devices such as tape or CD-ROM jukeboxes, which may use non-zero LUNs to address device changer mechanisms. It may still be possible to use such devices in a limited fashion (for example, as a single-tape drive).

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