



5730 Release Notes

for Software Version K100R07

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Release Notes

This document contains late-breaking information about requirements that affect installation and operation of R/Evolution 5730 storage systems. It supplements the R/Evolution 5730 and R/Evolution 5000 Series documentation set.

Features of the R/Evolution 5730 storage system include:

- 9-Tbyte base capacity scalable to 81 Tbyte
- 2 or 4 Gbit/sec Fibre Channel host interface
- Dual SAS expansion connectors per controller
- Up to 108 total dual-ported drives supported (8 expansion enclosures)
- RAID support, including RAID 6
- Low-latency cache mirroring with SimulCache™
- Battery-free cache backup with EcoStor™
- Optional licensed features:
 - AssuredSnap™ – Built-in snapshot capability
 - AssuredCopy™ – Independent data volume copies
- Windows, Linux, and UNIX support (cluster-certified)
- Redundant hot-swap components
- Controller enclosure supporting two RAID controller modules; expansion enclosure supports one or two expansion I/O modules
- RoHS-5-compliant and WEEE-compliant
- Support for MIL-STD 810F

Read these release notes before installing, or using a R/Evolution 5730 storage system.

Firmware Version

These release notes describe the functionality of software package K100R07.

- Management Controller (MC) firmware version X420R04
- MC Loader version 12.013
- Storage Controller (SC) firmware version K100R07
- SC loader 16.012
- Memory Controller FPGA version F300R21
- Complex Programmable Logic Device (CPLD) version B110K12
- Expander Controller (EC) firmware version Z100B36
- Power supply unit (PSU) firmware version T021
- Expansion Enclosure Controller firmware version O200B29

What's Changed in This Release

Setting Read-Ahead Cache Size

The setting for the read-ahead cache size parameter is currently set to disabled. For applications that are performing large block sequential access of 64 KB or greater, the read-ahead cache size can be enabled by setting it to the appropriate size. The recommended size is 8 MB.

For further information on changing a volume's read-ahead cache settings, see "Changing a Volume's Read-Ahead Cache Settings" in the *R/Evolution 5000 Series Administrator's Guide*. For information on changing a volume's read-ahead cache settings using the CLI, see the `set cache-parameters` section in the *R/Evolution 5000 Series CLI Reference Manual*.

Related Documentation

These release notes supplement the documents shown below.

Table 1 R/Evolution Storage System Documentation

Application	Title	Part Number
Site planning information	<i>R/Evolution Storage System Site Planning Guide</i>	83-00004283
Installing and configuring hardware	<i>R/Evolution 5730 Getting Started Guide</i>	83-00004284
Configuring and managing storage	<i>R/Evolution 5000 Series Administrator's Guide</i>	83-00004298
Using the command-line interface (CLI)	<i>R/Evolution 5000 Series CLI Reference Manual</i>	83-00004297
Troubleshooting	<i>R/Evolution 5000 Series Troubleshooting Guide</i>	83-00004296
Recommendations for maximizing reliability, accessibility, and serviceability	<i>R/Evolution 5000 Series Best Practices Guide</i>	83-00004295

Supported Software and Hardware

The R/Evolution storage system has been verified as compatible with the software and hardware identified in the following subsections.

Supported Operating Systems

Operating systems supported in this release are shown below.

Table 2 Supported Operating Systems

Operating System	Versions or Required Patches
Windows 2003 Standard Edition	With Service Pack 1 or R2
Windows 2003 Enterprise Edition	With Service Pack 1 or R2
RedHat 4.0 Enterprise Linux AS	With update 1, 2, 3, or 4
RedHat 4.0 Enterprise Linux ES	With update 1, 2, 3, or 4
SUSE Linux Enterprise Server 9	With Service Pack 1, 2, or 3
Solaris 9	With StorEdge SAN 4.4.12 or later
Solaris 10	Solaris 10 Release 3 and the following patches: 118833-36, 119130-33, 119470-11, 119974-08, 120222-21, 120346-08, 120348-02, 125184-04 and 125166-06

Supported Disk Drive Configurations

Disk drive configurations supported in this release are shown below.

Table 3 Supported Disk Drive Configurations

Model	Number of Drives	Drive Type	Mixed Drive Types
Controller enclosure	12	SAS or SATA	Yes
Controller enclosure and up to eight expansion enclosures	108 active slots	SAS or SATA	Yes

Supported Disk Drives

Disk drives supported in this release are shown below.

Table 4 Supported Disk Drives

Supplier	Model	Type	Capacity	RPM
Fujitsu	MAX3147RC	SAS	146GB	15K
Fujitsu	MAX3073RC	SAS	73GB	15K
Seagate	ST3146854SS	SAS	146GB	15K
Seagate	ST373454SS	SAS	73GB	15K
Seagate	ST3300655SS	SAS	300GB	15K
Seagate	ST3146855SS	SAS	146GB	15K
Seagate	ST373455SS	SAS	73GB	15K
Hitachi	HDS725050KLA360	SATA	500GB	7K
Hitachi	HDT722525DLA380	SATA	250GB	7K
Hitachi	HDT25025VLA380	SATA	250GB	7K
Seagate	ST3500641NS	SATA	500GB	7K
Seagate	ST3750640NS	SATA	750GB	7K
Seagate	ST3500630NS	SATA	500GB	7K
Maxtor	8J300S0	SAS	300GB	10K

Supported Fibre Channel Switches

Fibre Channel switches supported in this release are shown below.

Table 5 Supported Fibre Channel Switches

Switch	Firmware Version
Brocade Switches	
Brocade 3250	5.3.0
Brocade 3850	5.3.0
Brocade 3900	5.3.0
Brocade 4100	5.3.0
Brocade 4900	5.3.0
Brocade 200E	5.3.0
QLogic Switches	
SANbox 2-8	6.7.0.04
SANbox 2-16	6.7.0.04
SANbox 5200	6.7.0.04
SANbox 5600	6.7.0.04
McData Switches	
Sphereon 4400	9.03.01
Sphereon 4700	9.03.01

Supported HBAs and Operating Systems

The following tables list supported Fibre Channel HBAs by operating system.

Microsoft Windows 2003 Operating System HBA Support

Fibre Channel HBAs you can use with Microsoft Windows 2003 are shown below.

Table 6 Microsoft Windows 2003-Supported HBAs

HBA	Driver
Emulex LP1050	1.30a9 Storport or later
Emulex LPe1050	1.30a9 Storport or later
Emulex LP10000	1.30a9 Storport or later
Emulex LP 11002	1.30a9 Storport or later
Emulex LP 101	1.30a9 Storport or later
Emulex LPe11002	1.30a9 Storport or later
Qlogic QLA2340	9.1.4.15 Storport or later
Qlogic QLA2342	9.1.4.15 Storport or later
Qlogic QLA2462	9.1.4.15 Storport or later
Qlogic QLE2462	9.1.4.15 Storport or later

Using the Microsoft Storport Driver

To use the Storport driver, you must first either install Windows Server 2003 Service Pack 2, or download the hotfix. Information on downloading the hotfix is available at:

<http://support.microsoft.com/kb/932755/en-us>

The Windows 2003 hotfix is 932755. The executable name is `WindowsServer2003-KB932755-x86-ENU.exe` for 32-bit. There is also a 64-bit version `x64`, and an Itanium Processor version `ia64`. This Windows 2003 hotfix brings the `storport.sys` driver to 5.2.3790.2880.

Solaris 10 Operating System HBA Support

Fibre Channel HBAs you can use with Solaris 10 are shown below.

Table 7 Solaris 10-Supported HBAs

HBA	Driver
Emulex LP 10000	Solaris 10 Update 3 or later includes the needed driver
Emulex LP 11002	Solaris 10 Update 3 or later includes the needed driver
Emulex LPe11002	Solaris 10 Update 3 or later includes the needed driver
Qlogic QLA2462	Solaris 10 Update 3 or later includes the needed driver
Qlogic QLE2462	Solaris 10 Update 3 or later includes the needed driver

The Solaris 10 operating system includes `fc` and `fcp` drivers, which each have a time-out setting. The default for `fc_p_offline_delay` is 20 seconds. To avoid certain file system warning messages when a cable is removed or a controller is killed or shut down, you can change the time-out setting to 60 seconds by changing this line on Solaris 10 hosts in `/kernel/drv/fcp.conf`:

```
fc_p_offline_delay=60;
```

Note – One reboot of the host is necessary for this parameter to take effect.

In addition, Sun Microsystems has provided a patch for both x86 and SPARC platform editions of the Solaris 10 operating system that fixes the `fc_p_offline_delay` parameter issue. These patches are required with Solaris 10 Update 1 or Solaris 10 Update 2:

- Solaris 10 SPARC Platform Edition: 119130-33
- Solaris 10 x86 Platform Edition: 119131-32

Note – Solaris 10 Update 3 includes the `fc_p_offline_delay` parameter fix and does not require the patch.

Fibre Channel HBAs you can use with Solaris 9 are shown below.

Table 8 Solaris 9-Supported HBAs

HBA	Driver
Emulex LP 10000	Sun StorEdge SAN Foundation Software 4.4.12 Suite or later includes the needed driver
Emulex LP 11002	Sun StorEdge SAN Foundation Software 4.4.12 Suite or later includes the needed driver
Emulex LPe 11002	Sun StorEdge SAN Foundation Software 4.4.12 Suite or later includes the needed driver
Qlogic QLA2462	Sun StorEdge SAN Foundation Software 4.4.12 Suite or later includes the needed driver
Qlogic QLE2462	Sun StorEdge SAN Foundation Software 4.4.12 Suite or later includes the needed driver

The Solaris StorEdge 4.4.12 Suite includes `fc` and `fcp` drivers, which each have a time-out setting. The default for `fcf_offline_delay` is 20 seconds. To avoid certain file system warning messages when a cable is removed or a controller is killed or shut down, you can change the time-out setting to 60 seconds by changing this line on Solaris 9 hosts in `/kernel/drv/fcp.conf`:

```
fcf_offline_delay=60;
```

Note – One reboot of the host is necessary for this parameter to take effect.

Red Hat Enterprise Linux HBA Support

Fibre Channel HBAs you can use with Red Hat Enterprise Linux 4.0 are shown below.

Table 9 RedHat 4.0-Supported HBAs

HBA	Driver
Emulex LP 11002	8.0.16.32 or later
Emulex LPe11002	8.0.16.32 or later
Qlogic QLA2462	8.01.07 or later
Qlogic QLE2462	8.01.07 or later

SUSE Linux HBA Support

Fibre Channel HBAs you can use with SUSE Linux 9.0 are shown below.

Table 10 SUSE 9.0-Supported HBAs

HBA	Driver
Emulex LP 11002	8.0.16.32 or later
Emulex LPe11002	8.0.16.32 or later
Qlogic QLA2462	8.01.07
Qlogic QLE2462	8.01.07

Recommended Settings for QLogic HBAs

Recommended settings for QLogic HBAs are shown below.

- **Topology:** Hard Set to Loop or PtP
- **LinkSpeed:** Hard Set to 2Gb or 4Gb
- **LinkDownTimeout:** 120
- **PortDownRetryCount:** 60

Recommended Settings for Emulex HBAs

Recommended topology and link-speed for Emulex HBAs are:

- **Topology:** Hard Set to Loop or PtP
- **LinkSpeed:** Hard Set to 2Gb or 4Gb

Some other Emulex HBA parameters vary, depending on the host operating system, as shown in Table 11.

Table 11 OS-dependent Emulex HBA Parameters

Parameter	Windows 2003	Solaris 9 and Solaris 10	RedHat Linux	SUSE Linux
LinkTimeOut	60	N/A	N/A	N/A
NodeTimeOut	120	N/A	120	120
lpfc-scsi-req-tmo	N/A	N/A	120	120
Adisc-support	N/A	0 – No Support	N/A	N/A
ssd_io_time (In /etc/system)	N/A	120	N/A	N/A

Supported SFPs

Table 12 lists supported RoHS-compliant SFPs for use with a Fibre Channel (FC) controller enclosure.

Table 12 Supported 4-Gbit/sec SFPs

Vendor	Part Number
Avago Tech	AFBR-57R5APZ
Finisar	FTLF8524P2BNV
Intel	TXN31115D100000 TXN31115D200000
JDS	JSH-42S4AA1

Supported Network Protocols

The SSH (Secure Shell) server supports SSH version 2. SSH version 1 is not supported.

Solaris Patches

Make sure the Solaris recommended patch cluster is installed on a Solaris host before connecting the host to the RAID controller enclosure.

Downloading and Installing the Solaris Patch Cluster

1. Log in to the host that you want to connect to the storage system.
2. Go to <http://www.sun.com/sunsolve>.
3. Read the SunSolve License Agreement and click Accept to continue with the download and installation process.
4. Under Sun Support Customers click Login. Enter your user name and password and click Login. If you do not have a user name, click Register Now and follow the instructions to register for a Sun Online Account.
5. Under Support, click Patches and Updates.
6. Under Downloads, click Recommended Patch Clusters.

7. Find your version of Solaris 9 or Solaris 10 in the Recommended Solaris Patch Clusters list, make sure the Readme checkbox is checked, and then click Go.
8. Print or save the README file from the browser window.
9. Click the browser's Back icon to return to the previous page.
10. Ensure that your version of Solaris 9 or Solaris 10 is still selected in the Recommended Solaris Patch Clusters list and click Download HTTP and then click Go.
11. In the File Download dialog box, click Save.
12. In the Save As dialog box, type a destination directory for the patch cluster, and then click Save.
13. Follow the procedure in the Installation Instructions section in the README file to install the patches.

Software and Firmware Configuration

Virtual Disk Size

The K100R07 release is designed to support up to a 32-Tbyte virtual disk. Actual virtual disk size is determined by the drive size and the maximum number of drives in a virtual disk as shown in Table 13.

For example, based on the current maximum drive size of 750 Gbyte, and a maximum number of 43 data disks with 2 parity disk drives, you can build a RAID-50 virtual disk of 32 Tbyte.

Table 13 Maximum Number of Drives in a Virtual Disk

RAID Level	Maximum Drives
NRAID	1
0, 3, 5, 6	16
1	2
10	32
50	45

Snapshot Configuration

Optional licensing for a maximum of 256 snapshots can be purchased with the R/Evolution 5730. When you purchase this license, you receive a license key along with instructions for installing it. The instructions can be found in a document called *Obtaining and Installing the License Certificate File*, part number 83-00004343. This document is available in the R/Evolution 5000 Series Current Documentation section at <http://crc.dothill.com>.

Table 14 lists maximum snapshot parameters supported by the K100R07 software. Actual supported parameters depend on purchased licenses and the options made available by OEM partners.

Table 14 Snapshot Default and Maximum Values

Snapshot Parameter	Default Value
Snapshots, per system	0 without purchase of optional software license; 256 with purchase of optional software license
Maximum number of master volumes, per controller	16
Maximum number of snap pools, per controller	16
Minimum size for a snap pool	3 Gbyte
Warning threshold (snap pool 75% full)	75%
Error threshold (snap pool 90% full)	90%
Critical threshold (snap pool 99% full)	99%
Warning Policy	Notify Only (not settable)
Error policy	Delete's Oldest Snapshots
Critical policy	Delete Snapshots

Note – If you have purchased and installed the optional software license to maximize the number of available snapshots, the license key you install is based on your enclosure's chassis midplane serial number. If you subsequently replace the enclosure or chassis FRU, your snapshot functionality will revert to the default values. To regain the optional functionality you purchased, you will need to install a new license. When you send in your defective enclosure or chassis FRU with a Returned Merchandise Authorization (RMA), you will receive the information you need to install the new license.

Known Issues

Late-Breaking Information

The information in this section describes functionality introduced after the documentation set for this product was completed.

Network Time Protocol

You can use Network Time Protocol (NTP) to enable the storage system's time and date to be obtained from a network-attached server. The system time and date can be set directly, or when NTP is enabled, and if an NTP server is available, the R/Evolution 5730 system time and date can be obtained from the Network Time Protocol server. This allows multiple storage devices, hosts, log files, etc., to be synchronized with each other.

The NTP server time is provided in Universal Time (UT/GMT), which allows for several options. If you want to synchronize the times and logs between storage devices installed in multiple time zones, set all the storage devices to use UT. If you want to use the local time for the device, set its time zone appropriately. If a time server can provide local time rather than UT, configure the storage devices to use that time server, with no further time adjustment.

Enabling the use of Network Time Protocol and setting the NTP parameters can be done through the web interface (RAIDar) or through the command-line interface (CLI). When you enable NTP, you can specify the IP address of an NTP server. If no IP server address is specified, the system listens for time messages sent by an NTP server in broadcast mode. If no NTP server is present, the time and date are maintained as if NTP had not been enabled. For further information about RAIDar, see the *R/Evolution 5000 Series Administrator's Guide*. For further information about CLI, see the *R/Evolution 5000 Series CLI Reference Manual*.

Setting Date and Time Using RAIDar

You can set the system's date and time, which are displayed at the bottom of the menu area. It is important to set the date and time so that entries in system logs and email messages sent by the Event Notification have correct time stamps.

To set the system date and time:

1. Select Manage > General Config > Set Date/Time.

The Current System Date & Time panel shows the current date and time.

2. To set the system date and time directly:
 - a. In the Set System Date panel, select the current month, day, and year.
 - b. In the Set System Time panel, type time values using a 24-hour clock (where hour 8 represents 8 a.m. and hour 20 represents 8 p.m.) and select the proper time zone.
 - c. Click Change Date/Time.
3. To set the time using NTP:
 - a. Set Network Time Protocol to Enable.
 - b. Type the IP address of an NTP server. If no IP server address is supplied, the system listens for time messages sent by an NTP server in broadcast mode.
 - c. Click Change Date/Time.

If no NTP server is present, the time and date are maintained as if NTP is disabled.

Setting Date and Time Using the CLI

Description

Sets the date and time of the management controller and then updates the date and time for each RAID controller.

Input

```
set controller-date
jan|feb|mar|apr|may|jun|jul|aug|sep|oct|nov|dec
day hh:mm:ss year time-zone [ntp enable|disable ntpaddress
address]
```

Parameter	Description
jan feb mar apr may jun jul aug sep oct nov dec	Specifies the month.
<i>day</i>	Specifies the day number (1–31).
<i>hh:mm:ss</i>	Specifies the hour on a 24-hour clock (0–23), the minute (0–59), and the seconds (0–59).
<i>year</i>	Specifies the year as a four-digit number.
<i>time-zone</i>	Specifies the system’s time zone based on an offset from Universal Time in hours.
ntp enable disable	Optional. Enable use of Network Time Protocol. If an NTP server is available, the controller’s time will be synchronized with the server. Since the NTP server’s time will be in Universal Time, you will typically want to set the time zone accurately. If NTP is being enabled, the month, day, time and year parameters will be ignored.
ntpaddress address	Optional. Specifies the network address of an available NTP server. If specified, the controller will query this server to get the current time and date. If 255.255.255.255 is set instead of a specific NTP server IP address, the controller will listen for time messages from an NTP server set to broadcast mode.

Example

Set the controller date to 1:45 PM on September 22, 2006 in the U.S. Mountain time zone (UT -07:00).

```
# set controller-date sep 22 13:45:0 2006 -7
```

Related Commands

- “show ntp-status” (See “Show NTP Status Using the CLI”).

Show NTP Status Using RAIDar

To view information about the Network Time Protocol settings:

- Select Monitor > Status > Advanced Settings > Misc Configuration.

The Network Time Protocol Status information panel shows the following information:

- NTP Enabled – Shows whether NTP is activated or deactivated
- Client Task Status – Shows whether the NTP client task is present, missing or not applicable (NTP is deactivated)
- Server Address – IP address of the NTP server or blank. If no server address is specified, the client task listens for time messages sent from an NTP server in broadcast mode.
- Last Server Contact – Time (UT) of the last message received from the NTP server.

Show NTP Status Using the CLI

Description

Shows the status of Network Time Protocol (NTP) in the system.

Input

```
show ntp-status
```

Output

Field	Description
NTP status	NTP is activated or deactivated
Client	NTP client task is present, missing or not applicable (NTP is deactivated)
Server address	IP address or blank
Last contact	Time, in Universal Time, or none

Example

Show the NTP status for the system:

```
# show ntp-status
NTP status: activated, client present, server address, last
contact 2007-11-26 21:20:50
Success: Command completed successfully
```

Related Commands

- “set controller date” (See the “Command Descriptions” section in the *R/Evolution 5000 Series CLI Reference Manual*).

Documentation Errata

- In the *R/Evolution 5000 Series CLI Reference Manual*, the set `global-spare` topic should specify that there is a maximum of 8 global spares per system.
- In the *R/Evolution 5000 Series Administrator's Guide* and in the *R/Evolution 5000 Series Best Practices Guide*, the manuals incorrectly state that the minimum size for a snap pool is 1 Gbyte and that each snap pool requires a reserve space of 750 Mbyte. The minimum snap pool size is 3 Gbytes. Each snap pool requires a reserve space of 2.5 Gbytes. The section on determining the snap pool size should be as follows:

Determining the Snap Pool Size

Before you can create a master volume you must create a snap pool. A snap pool is the storage area that will hold the copy of the data or pointers to the data created by snapshot of the master volume. When you create a snap pool, RAIDar prompts you to enter the size for the snap pool. To help you calculate the size, first you must know or supply the following information:

- **Snap pool reserve space.** Each snap pool requires a reserve space of 2.5 Gbytes for internal use.
- **What is the master volume size?** The size of the master volume is specified at the time the master volume is created.
- **How many snapshots is the system going to retain?** This number is dependent upon the configuration limits for your system.
- **What is the average percent of change to the master volume?** If the master volume is going to be updated frequently, the snap pool size will be greater than if the master volume is not updated frequently.
- **What is the number of snapshots that will be written to?**
If the snapshots are being written to, what is the average amount of data that will be written to a snapshot? If a snapshot has been made accessible as read-write, you can write to it.
- **Safety margin.** Add a 25% safety margin to the snap pool size.

Note – If you cannot estimate the above values, you can specify a reasonable initial size and use the Auto Expand policy to expand the snap pool when it reaches a capacity threshold.

Snap Pool Sizing Formula: One Master Volume Per Snap Pool

Based on the information from above, use the following formula to calculate the snap pool size for a configuration of one master volume per snap pool:

$$(reserve-space + (volume-size \times avg-change \times snapshots-retained) + (snapshots-modified \times avg-write-data)) \times (1 + safety-margin) = snap-pool-size$$

Example

The following example information illustrates calculating the snap pool size for a 10-Gbyte volume.

Snap Pool Sizing Parameters	Volume Data
Overhead or reserve space (Mbyte)	2,560
Volume size (Mbyte)	10,000
Average percent of change (%)	0.05
Number of snapshots retained	4
Number of modified snapshots	4
Average write data (Mbyte)	1,000
Snap pool size (Mbyte)	8,560
Safety margin (%)	0.25

If you substitute the values from the above example into the snap pool sizing formula, the snap pool size is as follows:

$$2,560 + (10,000 \times 0.05 \times 4) + (4 \times 1,000) = 8,560 \times 1.25 = 10,700 \text{ Mbyte}$$

Known Bugs

The following issues are not resolved in this release:

- **4318: Upon a controller shutdown due to an Over Temperature condition, the power supply fan speed will remain at high speed even after the temperature returns to normal.**
- **4451: Error: Lock not granted from other controller when attempting to run snapshots from both RAIDar and the CLI.**
Workaround: Avoid using RAIDar and the CLI simultaneously.
- **4863: The CLI command `show vdisks` reports inconsistencies in the amount of free space available on vdisks.**
- **4911: The CLI command `clear disk-metadata` returns a wrong example when incorrect disk drive syntax is specified.**

```
# clear disk-metadata 0
Error: Disk list example: 1,3,5-7
```

The above example is specific to the drive list syntax of a different hardware platform. The disk list example above should be: 0.1,0.3,0.5-7 for the 5730.
Workaround: The correct syntax for the command includes an enclosure ID and slot number (0.x). For example:

```
# clear disk-metadata 0.0
Updating drives list...
Info: Drive 0.0 Metadata Cleared.
```

- **4994: During extended SDR testing, SATA drives can transition to a leftover state due to a ghost drive.** In all cases the iteration count exceeded 500 before the issue occurred.
- **5037: The Teneable Nessus vulnerability scanner program detected the following security hole:**
We could crash the web server by sending an invalid POST HTTP request with a negative Content-Length field. A cracker may exploit this flaw to disable your service or even execute arbitrary code on your system.
- **5038: The Teneable Nessus vulnerability scanner program detected the following security hole:**
It was possible to kill the BrowseGate proxy by sending it an invalid request with too long HTTP headers (Authorization and Referer). A cracker may exploit this vulnerability to make your web server crash continually or even execute arbitrary code on your system.

- **5039: The Teneable Nessus vulnerability scanner program detected the following security hole:**
 Family Denial of Service
 It was possible to crash the remote host by sending a specially crafted IP packet with a null length for IP option #0xE4. An attacker may use this flaw to prevent the remote host from accomplishing its job properly.
- **5045: When trying to access a system via Telnet or FTP or an IP address URL on a web browser, if a leading 0 is specified that section of the IP address will be interpreted as octal, unless it cannot be octal (e.g. contains an 8 or 9).** If you type in 010.1.090.200 it will get translated to 8.1.90.200 since only the 010 can be interpreted as octal. It assumes that 090 really means decimal, since 9 is illegal for octal; 200 is left as is since there is no leading 0. This is not a Dot Hill specific issue and is well known.
- **5103: The CLI command `set host-wwn-name` only accepts names with 15 or less characters although the help for host nickname syntax says that 16 characters are allowed.**
Workaround: Enter a host-wwn-name nickname of no more than 15 characters.
- **5122: Error message not formatted properly.** Retry setting of community name.
- **5131: The SNMP trap type for `vdisk offline` is `DHTRAPS-MIB::dhEventErrorTrap`.** It should be `DHTRAPS-MIB::dhEventCriticalTrap`.
- **5148: In RAIDar, the Unwritable Cache popup does not indicate a volume name.** For example:

```
Warn 1980-01-01 00:02:38 44 A724 Unwritable cache data
exists for volume (volume: , SN:
00c0ffd509dc00489ea7034701000000) comprising 40% of cache
space
```
- **5155: Attempting to add a volume to a vdisk to reduce its free space to 0 resulted in the error message `ERROR: Volume size is invalid`.** In RAIDar, the free space indicated in the Add Volume page is 1 MByte more than the actual remaining free space. The Expand Volume page indicates the correct remaining free space.
Workaround: The actual remaining free space is 1 MB less than what is reported in the Add Volume page.

- **5161: Using the CLI command set vdisk with the name and owner options returns Success: Command completed successfully but ownership is not changed.** For example:

```
# set vdisk vbr10 name var10 owner a
Success: Command completed successfully
# show vdisk
Name Size Free Own RAID Dsk Spr Chk Stat Jobs Serial#
-----
var5 587.1GB 587.1GB A RAID5 5 0 64 FTOL
00c0ffe500670048bf7e034700000000
var10 440.3GB 440.3GB B RAID10 6 0 64 FTOL
00c0ffe500680048d17e034700000000
```

- **5183: The current implementation allows the user to configure each Fibre Channel host port to either loop or Point-to-Point without restriction.** The 5730 does not support mixed topology. All host ports must be configured to the same topology for proper operation.
Workaround: Configure all host ports to use the same topology.
- **5196: The processing Independent Cache Mode message pop-up disappeared and a Command completed successfully message appeared but independent cache mode does not change to disabled even after the controller completes the boot process.** Disabling the Independent Cache Mode is not possible using RAIDar. The message indicates that the operation completed successfully but the mode does not change and the controllers do not restart.
Workaround: Refresh the page to display the correct Independent Cache Mode. Once enabled, the feature can only be disabled using the MUI.
- **5202: When creating an offline RAID-3 vdisk with custom LUN assignment, RAIDar reports a Duplicate name specified. 203 error.** The error does not occur using the CLI.
Workaround: Use the CLI to create the offline vdisk.
- **5206: Creating RAID 10 is displaying the error an invalid device (virtual disk or drive) was specified. 26** Still investigating this error.

- **5215: The CLI command `clear disk-metadata` can incorrectly interpret the command line input.** For example:

```
# clear disk-metadata 0.0,4
Updating drives list...
Info: Drive 0.0 Metadata Cleared.
Info: Drive 4.0 Metadata Cleared.
Success: Metadata Cleared.
```

The “4” in the example above should generate an error since it is incorrect syntax.

Workaround: Use proper command syntax to ensure that the correct disk drive is selected. Please refer to the *CLI Reference Manual* for details.

- **5233: The following CLI commands might not return correct data when a storage controller is shut down:**

```
# show shutdown-status
# show redundancy-mode
# show versions
```

- **5263: In the output of the CLI command `show job-parameters`, `partner` is misspelled as “Parter”:**

```
# show job-parameters
Job Parameters
-----
Background Scrub: Disabled
Parter Firmware Upgrade: Enabled
Utility Priority: High
```

- **5283: The following iSCSI-related commands are active although the 5730 does not support iSCSI:**

```
# set iscsi-host
# create iscsi-host
# delete iscsi-host
# show iscsi-hosts
```

These commands are ignored and attempting to use them has no affect.

- **5290: In RAIDar, the Getting Started page has a misspelling.** On the Monitor > Help > Getting Started page, in the RAIDar Behavior Notes topic, “unpredictable” is misspelled.
- **5315: Cannot download the generated RAIDar customization file using Microsoft Internet Explorer 7.**
- **5333: An error occurs when trying to add multiple drives as global spares.**

```
# set global-spare disks 8.0-3
***** ERROR: buildCapiErrorCodeMsg: Hit default case;
unknown CAPI error code: -2197
Error: Unknown CAPI Error = -2197
Info: Global spare 8.1 added.
Info: Global spare 8.2 added.
Info: Global spare 8.3 added.
Error: Spare(s) not added. Command partially succeeded
```

Workaround: Assign one drive at a time when using the CLI command `set global-spare`. The issue is under investigation.

- **5383: Information concerning a Rescan is not properly decoded in subject line for certain email notifications.**
- **5387: When running XML or console output for the expand volume command, a “B” may show up in the free space.**
- **5421: Attempting to add a spare using RAIDar may fail with the message “None of available drives will protect existing vdisks”.**

