



Release Notes

Product	Scalar® i6000, Version i10
Firmware Version	630Q.GS20601
Operating Systems (Remote LMC Client)	Microsoft™ Windows® Solaris™ Red Hat® Linux
Supported Web Browsers	Firefox Internet Explorer versions 7, and 8.
Required Java Runtime Environment (JRE)	JRE version 6
Date	December 2011

Contents

Purpose of This Release	2
New Features and Enhancements	2
Changes with this Release	3
Compatibility and Support	4
Resolved Issues	7
Known Issues	8
Documentation	12
Contacting Quantum	12

Purpose of This Release

The Scalar i6000 i10 release includes new features and enhancements that extend its capabilities. These release notes describe these new features and enhancements, as well as currently known issues and issues that were resolved for this release of the product. These notes also provide drive and auxiliary firmware compatibility information. Visit <http://www.quantum.com> for additional information about Scalar i6000 and previous releases.

New Features and Enhancements

This section contains new features covered by the i10 release. The *Scalar i6000 User's Guide* contains detailed information on the new features.

Dual robotics, new hardware

This firmware release supports dual robotics and a new library hardware design. The new hardware is referred to as Gen 2 (to differentiate it from the original library hardware, which is referred to as Gen 1 hardware). Users with Gen 1 single robot systems can upgrade to Gen 2 dual robot systems.

Automated Media Pool (AMP)

Allows media pooling within a library managed partition to facilitate selective tape cartridge assignments from the media pool to a standard partition without the need to physically load/import additional tape cartridges. Also allows you to create logical element extensions in standard partitions. Requires a Partition license.

Active Vault

Allows you to vault tapes within the library. Requires an Active Vault license.

EDLM Enhancements

In previous versions, all of the slots in the EDLM library managed partition were required to be licensed slots. Now, the EDLM library managed partition will be composed of unlicensed slots, unless the size of the EDLM partition exceeds the number of unlicensed slots in the library. In that case, the EDLM partition will be composed of both unlicensed and licensed slots, or all licensed slots.

FIPS-Validated Encryption Solution

The Scalar i6000 now offers a FIPS (Federal Information Processing Standard) 140-2 Level 1 validated encryption solution composed of the Scalar Key Manager and HP LTO-5 Fibre Channel tape drives. FIPS mode can be enabled on

the HP LTO-5 tape drives via the library user interface. Once in FIPS mode, all encryption key communication between the tape drive and the library controller is authenticated and encrypted.

Partition Utilization

Partition Utilization is a reporting feature that allows billing based on library usage. This feature requires a Partition Utilization license.

Unlicensed Expansion Module

You can now purchase expansion modules with unlicensed slots. Unlicensed slots can be used with EDLM and Active Vault. These slots can also be used for future expansion as needed.

Changes with this Release

There are a number of changes with this release, including:

GUI redesign

A number of LMC user interface menus have changed/moved. For instance, all of the Storage Networking features can now be found under a single menu path: **Setup > Drives > Access > SNW Wizard**.

SCSI Port not supported

With this firmware, the SCSI port on the MCB is no longer supported.

DLT drives and media not supported

With this firmware, DLT drives and media are not supported.

CONFIG button prompts you to save configuration

Previously, the library issued RAS tickets reminding you to save the library configuration. Now, a **CONFIG** button on the LMC indicates whether the current library configuration matches the configuration saved on the library. You can click the **CONFIG** button to access the Save and Restore Library Configuration screen.

Compatibility and Support

Firmware Compatibility Matrix

See the following table for information on drive and auxiliary firmware compatibility with this release of Scalar i6000. This information is current as of this product release. For the most up to date information on Quantum Global Services, please visit: <http://www.quantum.com>.

i10 Release

Library Firmware: 630Q.GS20601

Library Management Console (LMC) Remote Client: 5.3.3 Build 48¹

Drive Types	Firmware Version ²
IBM LTO-1 (SCSI)	5AU1
IBM LTO-1 (FC)	5AU1
IBM LTO-2 (SCSI)	A4N0
IBM LTO-2 (FC)	A4N0
IBM LTO-3 (FC) 2 Gb	93GM
IBM LTO-3 (FC) 4 Gb	93GM
IBM LTO-4 (FC) 4 Gb	B7C0
IBM LTO-5 (FC) 8 Gb	B6W0
HP LTO-3 (FC) 2 Gb	L67Z
HP LTO-3 (FC) 4 Gb	M69Z
HP LTO-4 (FC) 4 Gb	H63Z
HP LTO-5 (FC) 8 Gb	I57Z

1. For information about installing the LMC remote client, contact Quantum Support.
2. Check with Quantum Support for the latest firmware.
3. Logical serial number addressing (drive spoofing) is not supported.

Backup Software Compatibility

To view a list backup software packages that have been tested for interoperability with the Scalar i6000, refer to the *Quantum Software Compatibility Guide* at <http://www.quantum.com/swcompguide.aspx>.

CAN Controller Compatibility

In November 2011, the CAN controller was updated. Please note the following:

- When replacing the MCB, CMB, or RCU, library firmware may need to be at firmware version 615Q.GS05501 or later to support the new CAN controller. Refer to the FRU list for firmware dependencies.
- If the new CAN controller exists on the system, the system prevents downgrading to a version earlier than 615Q.GS05501.

i2000 vs i6000 Features

The Scalar i6000 has access to a number of features that the Scalar i2000 does not. The following features are supported on Scalar i6000 only. If your system is a Scalar i2000, request an upgrade kit.

Note: Any Scalar i2000 can be field-upgraded to a Scalar i6000.

- LTO-5 and later drives
- Ethernet Expansion blade (EEB)
- Storage Networking (SNW) features: Host Access, Control Path Bridging, Control Path Failover, Data Path Failover
- >8 frames
- High-capacity I/E station (72-slot)
- Blue aisle lights
- Extended Data Lifecycle Management (EDLM) (formerly MeDIA)
- Extended I/E
- Sift Sort Export
- RKM Client
- Advanced Reporting selected options (Media Security Report, Media Usage Report)
- KMIP 1.0 Client
- FIPS-validated encryption solution
- Partition Utilization Report
- Dual robotics
- Automated Media Pool (AMP)
- Active Vault
- Unlicensed Expansion Modules

Encryption Key Management Drive Support

Encryption Option	HP LTO-4	IBM LTO-4	HP LTO-5	IBM LTO-5
Application Managed Encryption	Supported	Supported	Supported (i6000 only)	Supported (i6000 only)
Q-EKM	Not Supported	Requires EKM License	Not Supported	Requires EKM License
SKM	Requires EKM License	Not Supported	Requires EKM License	Not Supported
RKM	Requires EKM License	Not Supported	Requires EKM License	Not Supported
KMIP Key Manager	Requires EKM License	Not Supported	Requires EKM License	Not Supported

KMIP-compliant Key Managers Supported

The following KMIP-compliant key management server has been tested with this version of library firmware. While other KMIP-compliant key managers may work, this is the only one currently supported by Quantum.

- SafeNet KeySecure k460 servers, version 6.0.0 build 28

External Application Software Support

Certain licensed features (EDLM and Active Vault) optionally use an external application to perform partition policies. To configure access to an external application, you must first install an application programming interface (API) client plug-in, and then configure the library to communicate with the external application.

The following table lists the external applications and their supported API client software qualified to work with the EDLM and Active Vault features of the Scalar i6000 library. The table also lists the associated API client plug-in that must be installed on the library so that the library can communicate with the API client.

External Application	Scalar i6000 API Client Plug-in
StorNext® version 3.5 and later with StorNext Storage Manager installed and SNAPI server component version 2.0.1 and later installed. Note: StorNext version 3.5 only supports Scalar i6000 emulated as Scalar i2000. Note: StorNext 4.0.1 and greater includes support for Scalar i6000.	SNAPI Client Plug-in 2.0.1 revision 110i.EE002.

Resolved Issues

This firmware release resolved the following issues:

Change Request Number	Service Request Number	Description	Solution
18382	894472 979230 1050722	If two slots have media with duplicate barcodes, they will be incorrectly indicated as empty.	Duplicates barcodes are not supported. If this occurs, a RAS ticket is generated.
18432		After library software upgrade, an error message states cannot connect to server.	Ignore the error message. Connect again and confirm software was upgraded.
18708	724681 732246 737466	Logical Serial Number (SN Spoofing) were not applied after being enabled. Serial number settings are applied at the time of a reboot. Reboot the library again to resolve the issue.	Fixed
18766		Library rejects valid a Read element status command with an allocation length > than 0x1fffff.	Fixed
18847	737276	When the library UI is started from a Web browser, closing the UI will cause an exit of the browser instead of just closing the tab used to start the browser. This does not occur on currently supported Web browsers.	Fixed
28728		HP LTO-5 FC link problem on QLogic FC switches. The fix is associated with a new QLogic FC firmware release version 7.4.0.21 or higher.	Fixed
33661		The library allows you to install 4096-bit TLS CA (root) certificate for encryption key management but will not work with it.	Fixed
34370		Ticket reports sent directly from library via e-mail contain no data (Tools > Reports > Tickets , then select Export > Email). Viewed and saved reports contain data as expected.	Fixed

Known Issues

This release of Scalar i6000 firmware has the following known issues. This list contains *cumulative* information for all previously released Scalar i2000/i6000 library versions.

Change Request Number	Service Request Number	Description	Workaround
16990		Installing Q-EKM with IBM Java disables functioning Sun Java plug-in and the Remote Management Interface (RMI) does not function after Q-EKM install.	Upgrade Q-EKM software to verion 251Q.GC00400 or later.
18643		When interrupting a move from the cleaning tape back to the cleaning slot, the library does not place media in cleaning slot.	Manually remove the tape from the picker.
18702		Cannot connect to a library with SSL enabled at an HTTPS address.	No workaround. Using SSL causes extreme performance degrading and is not recommended.
21663		When initially enabling Host Port Failover on a FC I/O blade, the user is presented with 2 possible ports to set a the primary port, port 1 and port 2. If the user selects port 1 and sets the new parameter everything works as expected. If the user selects port 2 during initial enable, and sets the new parameter, the value is rejected and the user gets an error message stating that the "Primary port must be online."	For Host Port Failover on an FC I/O blade, port 2 cannot be enabled as the primary port without first enabling port 1 as the primary port. Set port 1 as primary, save the configuration, and then set port 2 as primary.
27400		User can set 7404 FC blade initiator port to 1 Gb/sec when attached to a drive that supports 8 Gb/sec.	1 Gb/sec is not an acceptable setting for higher speed drives; it is an incompatible setting. Choose a higher setting or do not connect 8 Gb/sec drives to an FC I/O blade (recommended).
29947		Host loses connection to IBM LTO-5 drives after drive topology is changed to Point-to-Point.	IBM drives must be configured for Loop when configured behind an FC I/O blade or if directly connected to an FC HBA. If the drive is direct connected to a FC switch then the IBM drive can be configured to Point-to-Point, Loop Preferred, or Loop only.

Change Request Number	Service Request Number	Description	Workaround
30302		A Scalar i6000 library with IBM LTO-5 FC drives cannot be configured when drives are not FC I/O blade connected and are directly connected to a Fibre Channel switch within a CA_Arcserve 12.5 .1 environment.	Set the drives to either Loop Preferred or point-to-point in the Scalar i6000 GUI. Do not set as autonegotiate.
30394		Control path failover function is not supported with Tivoli Storage Manager on an AIX configuration.	It is recommend that you do not use Control Path Failover with Tivoli Storage Manager on AIX since doing so will require manual intervention when it fails over and when you fail it back. Alternatively, once all TSM jobs have been stopped, use SMIT > Devices > Tivoli Storage Manager Devices > Fibre Channel SAN Attached Devices > Discover Devices Supported by TSM to discover the change in control path. Within TSM, update the path to the library device (e.g., /dev/lb1). The drives and their paths need to be deleted and recreated (the working drive) before backups can resume.
30736		The Scalar i6000 will not send SNMP traps to DNS addresses that resolve to only an IPv6 address.	Do not use the DNS name for the SNMP trap registration. Resolve the DNS name to the actual IPv6 address in the network and use that IPv6 address for the SNMP trap registration under Setup > Notification.
32229		When running Long Erase on HPUX NBU 7.0, the long erase fails with the error: system call failed. Other NBU 7.0 configurations successfully complete the Long Erase.	Pending fix from NBU.
32816		FRU id "rollup report" graph labels are unreadable.	Reduce scope of query.
32818		When generating an Advanced Reporting Tape Alert report graph, the serial number and barcode overwrite each other in the graphical display.	Select a smaller query set, or set the label to one item, for example, Media ID.

Change Request Number	Service Request Number	Description	Workaround
32820		Reservations not transferred when FC I/O blade host port fails over.	When the FC ports fail over the host needs to re-login (PLOGI + PRLI) to the FCB. Re-login requires that reservations be re-established.
32821		When setting Host Type to HP_UX and then performing a LUN mapping operation, HP-UX host may require a reboot for it to see and communicate with the devices attached to the I/O blade.	Reboot the HP-UX host.
33297		The library allows you to select tapes located in I/E stations for EDLM testing, but does not actually test them. Then it indicates the test ran, and displays the results as "suspect."	Do not select tapes located in I/E stations for EDLM testing.
33400		EDLM media scans do not complete correctly or do not post correct results if a library inventory is performed at same time as the EDLM scan.	Take the EDLM library managed partition offline when performing a library inventory so that a UI-initiated inventory does not interfere with any EDLM media scans. If a media scan is in process, it will be paused while the EDLM library managed partition is offline, and will continue once the partition is brought online again.
33403		Once you configure the primary and secondary SKM servers on the library remote web client and encryption keys are generated, if you switch the key servers (i.e., you try to make the primary server the secondary server, or vice versa), SKM will not function.	The library remembers which server is primary and which is secondary. Once configured on the library, do not switch the primary SKM server to the secondary, or vice versa.
33507		After restoring a saved library configuration that has the EDLM policy "Perform scans immediately when media is imported into the library" enabled, the library performs a scan on all tapes in the partitions with this policy enabled because the tapes appear as newly imported.	Working as designed. To keep this from happening, deselect the "Perform scans immediately when media is imported into the library" policy before saving the library configuration.

Change Request Number	Service Request Number	Description	Workaround
34027		When adding FC I/O blades or EE blades to a library that previously did not have them installed, Ethernet connections were not made between the MCB and the newly installed I/O blades.	<p>When FC I/O blades or Ethernet Expansion blades are installed in the library, the following rules regarding control management blades (CMBs) apply:</p> <ul style="list-style-type: none"> • Any module (including the control module) that contains FC I/O blades or EE blades must also contain a CMB. • A CMB must be installed in the control module and all modules between the control module and the module containing the FC I/O blade or EE blade. The CMB provides daisy-chained Ethernet communication between the Management Control Blade (MCB) located in the control module and the FC I/O blades and EEBs.
35110		The MCB FC port topology cannot be set to Loop Preferred if the switch or HBA FC port is set to Point to Point.	Do not set HBA/Switch=Point to Point and MCB FC=Loop Preferred.
35364		Confusing error message received during EDLM copy operation: "Failed to copy media xxxx Unable to determine write protection."	Message is misleading. It means the tape is not registered with StorNext. Workaround: Register the tape with StorNext.
35493		Severity 1 ticket for Non-Existant FCB after Firmware Rollback.	This message can be safely ignored.
35605		Reinstall Current with the existing build caused device removed tickets.	These tickets automatically close themselves and can be safely ignored.

Documentation

The following documents are currently available for the Scalar i6000.

Document Number	Document Title
6-66882-02 Rev A	Scalar i6000 Planning Guide
6-66879-02 Rev A	Scalar i6000 User's Guide
6-01847-02 Rev A	Quantum Encryption Key Manager User's Guide
6-01884-02 Rev A	Quantum Encryption Key Manager Release Notes
6-66532-04 Rev A	Scalar Key Manager Quick Start Guide
6-66531-04 Rev A	Scalar Key Manager User's Guide
6-66572-02 Rev A	Scalar Key Manager Safety Information by IBM

Contacting Quantum

More information about this product is available on the Service and Support website at www.quantum.com/support. The Service and Support Website contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, or if training is desired, contact Quantum:

Quantum Technical Assistance Center in the USA:	+1 800-284-5101
For additional contact information:	www.quantum.com/support
To open a Service Request:	www.quantum.com/osr

For the most updated information on Quantum Global Services, please visit: www.quantum.com/support