



Scalar i6000 WebGUI User's Guide

This document contains the following topics:

System Overview	1
Library Overview	25
Status	45

System Overview

E-mail Settings

Configure Library E-mail

1. From the left navigation, select **System**. The **System** window displays and the **Operations** panel becomes active.
2. In the **Operations Area**, click **E-mail**. The **E-mail** window displays.



The screenshot shows the 'E-Mail' configuration window. It features a 'Settings' panel with the following elements:

- ☐ **Activate E-Mail Service**
- SMTP Server:** [Text Input Field]
- Library E-Mail Address:** [Text Input Field]
- ☐ **Account Authentication**
- User Account:** [Text Input Field] (visible when Account Authentication is checked)
- Password:** [Text Input Field] (visible when Account Authentication is checked)

Below the settings panel:

- ☒ **Save Settings**
- ☐ **Test Settings**
- Recipient Address:** [Text Input Field]

At the bottom right are **Apply** and **Close** buttons.

3. In the **Settings** area:
 - a. Select the Activate E-mail Service check box.\
 - b. Enter a server address in the SMTP Server field.
 - c. Enter the library's e-mail address.
 - d. Select the Account Authentication check box if you are requiring a user name and password.
 - e. Enter a user name and password.
4. Select the Save Settings radio button.
5. Click **Apply** to save your settings.
6. Click **Close** to exit the **E-Mail** window.

Test E-mail Settings

1. From the left navigation, select **System**. The **System** window displays and the **Operations** panel becomes active.
2. In the **Operations Area**, click **E-mail**. The **E-mail** window displays.

3. Select the **Test Settings** radio button.

The screenshot shows the 'E-Mail' settings window. It contains a 'Settings' panel with the following options:

- ☒ **Activate E-Mail Service**
- SMTP Server:
- Library E-Mail Address:
- ☐ **Account Authentication**
- User Account:
- Password:

Below the settings panel, there are two radio buttons:

- ☐ **Save Settings**
- ☒ **Test Settings**

Below the radio buttons is a text field labeled 'Recipient Address:'.

At the bottom of the window are two buttons: 'Apply' and 'Close'.

4. Enter an e-mail address in the **Recipient Address** field.
5. Click **Apply**. Check the Inbox of the e-mail address you sent the test message to. If a message is received, then the test was successful.
6. If you have not saved your e-mail settings, select the **Save Settings** radio button and click **Apply**.
7. Click **Close** to exit the **E-Mail** window.

Date and Time

Setup Date and Time

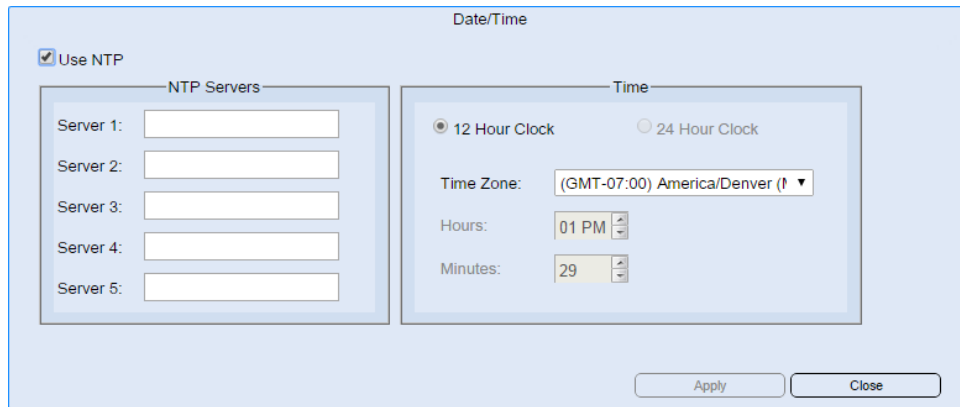
1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Date/Time**. The **Date/Time** window displays.

3. In the **Calendar** area:
 - a. Use the left and right arrows in the calendar to navigate to the correct month.
 - b. Select the date from the calendar.
4. In the **Time** area:
 - a. Select how you want the time to be displayed; either in 12 hr or 24 hr format.
 - b. Select your **Time Zone** from the drop-down menu.
 - c. Use the arrows to set the hours and minutes.
5. Click **Apply** to save your settings.
6. Click **Close** to exit the **Date/Time** window.

Setup NTP (Network Time Protocol)

1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Date/Time**. The **Date/Time** window displays.

3. Select the **Use NTP** checkbox. The **Date/Time** window displays **NTP Server** settings.



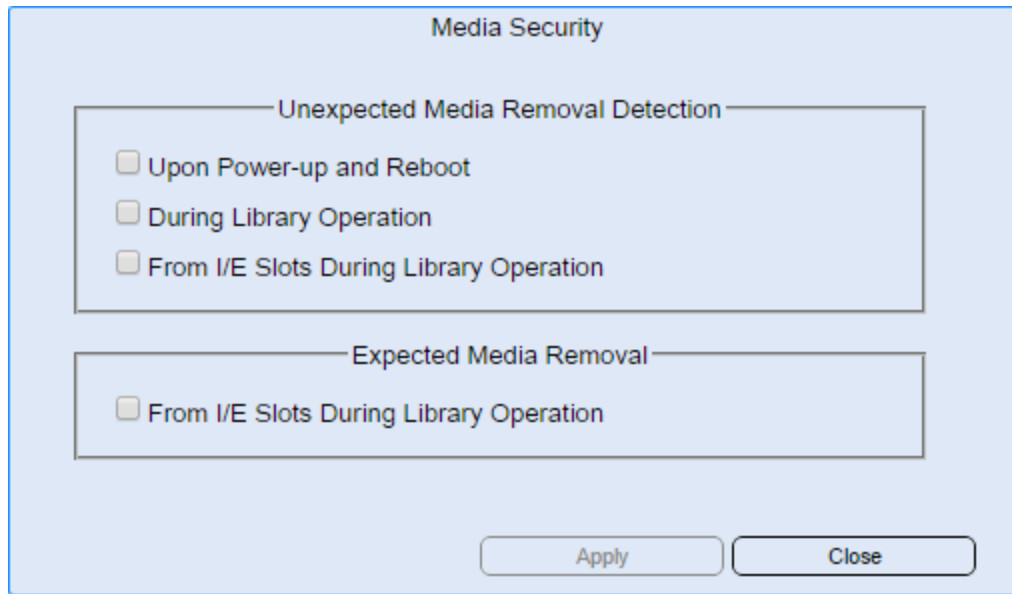
4. In the **NTP Servers** area, enter an IP or URI address in the server fields. Duplicate IP or URI addresses will not be allowed.

Note: Only 1, 3 or 5 server entries will be accepted.

5. In the **Time** area:
 - a. Select how you want the time to be displayed; either in 12 hr or 24 hr format.
 - b. Select your **Time Zone** from the drop-down menu.
6. Click **Apply** to save your settings.
7. Click **Close** to exit the **Date/Time** window.

Media Security

1. From the left navigation, select **System**. The **System** window displays and the **Operations** panel becomes active.
2. From the **Operations** panel, click **Media Security**. The **Media Security** window displays.



3. In the **Unexpected Media Removal Detection** area, select from the following list of options:

- Upon Power-up and Reboot
- During Library Operation
- From I/E Slots During Library Operation

All three of these options will generate a RAS ticket if they are detected.

4. In the Expected Media Removal area, select the From I/E Slots During Library Operation if you want a RAS ticket generated in this situation is detected.

5. Click **Apply** to save your settings.

6. Click **Close** to exit the **Media Security** window.

Library Firmware

Delete this text and replace it with your own content.

Update Library Firmware

1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.

2. In the **Operations Area**, click **Library Firmware**. The **Library Firmware** window displays.

Library Firmware

Current version: 690Q.GS21201
Last install: 2014-12-30 13:55:38 UTC-7

☒ Upload firmware image

☐ Install firmware image

Note: Updating library firmware will affect outstanding host operations.
Make sure host operations are halted before applying a selected operation.

☐ Install uploaded version:
☐ Rollback to version:
☐ Re-install current version:690Q.GS21201

Progress

3. There are two options from the **Library Firmware** window:

- **Upload firmware image** - If a library firmware package is not already uploaded and ready for installation, select this radio button.

i Note: Once you start an firmware upload, it cannot be canceled.

- **Install firmware image** - If a library firmware package is already uploaded and ready for installation, select this radio button.

4. If you need to upload a firmware image:

- a. Click **Browse**. Your browser's **File Upload** window displays.
- b. Navigate to where the library firmware image is located.
- c. Select the firmware image and click **Open**.
- d. Click **Apply**. A window displays showing the status of the upload.
- e. When complete, a confirmation dialog box displays.

5. Once a firmware package is uploaded, you have three options to complete the firmware upgrade:

- **Install uploaded version:** - This option shows the library firmware version that is uploaded and ready for installation.

- **Rollback to version:** - This option shows a previous library firmware version that is ready for installation.
 - **Re-install current version:** - This option is always available and allows you to reinstall the current library firmware.
6. Select an option and click **Apply**. The firmware begins installation.
 7. When complete, a confirmation dialog box displays and the library firmware package is listed next to the appropriate option below the **Install Firmware Image** radio button.
 8. Click **Close** to exit the **Library Firmware** window.

Drive Firmware

Upload Drive Firmware Package

1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Drive Firmware**. The **Drive Firmware** window displays.

Drive Firmware

☒ Upload Firmware

☐ Delete Firmware

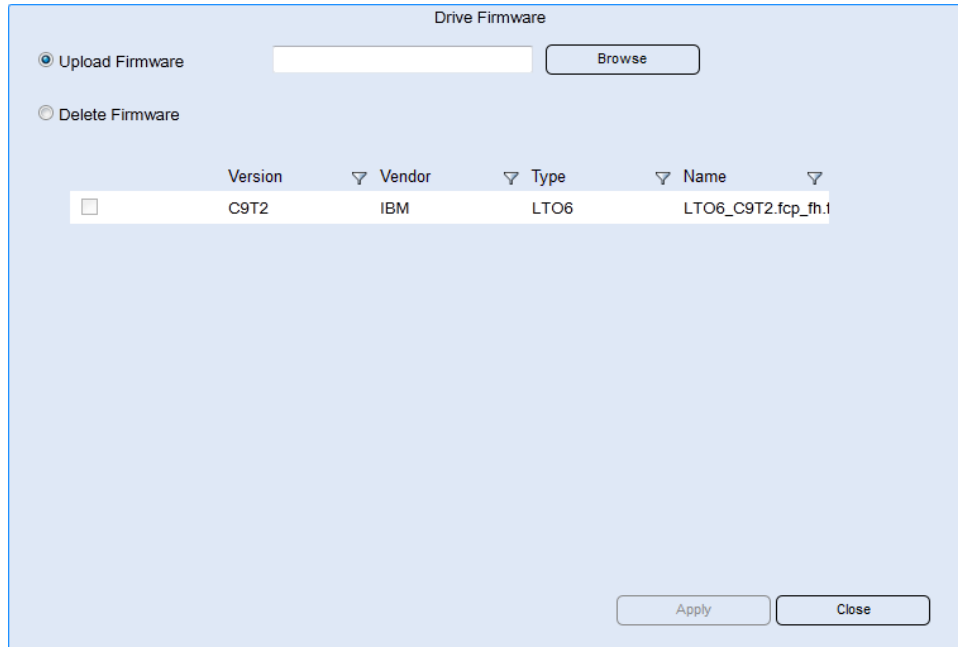
	Version	Vendor	Type	Name
<input type="checkbox"/>	C9T2	IBM	LTO6	LTO6_C9T2.fcp_fh.i

3. Click **Browse**. Your browser's **File Upload** window displays.
4. Navigate to where the drive firmware image is located.
5. Select the firmware image and click **Open**.
6. Click **Apply**. A window displays showing the status of the upload.
7. When complete, a confirmation dialog box displays and the drive firmware package is listed in the table.

8. Click **Close** to exit the **Drive Firmware** window.

Delete a Drive Firmware Package

1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Drive Firmware**. The **Drive Firmware** window displays.



The screenshot shows the 'Drive Firmware' window. At the top, there are two radio buttons: 'Upload Firmware' (selected) and 'Delete Firmware'. To the right of the 'Upload Firmware' button is a text input field and a 'Browse' button. Below the radio buttons is a table with the following columns: 'Version', 'Vendor', 'Type', and 'Name'. There is a checkbox in the first column of the table. The table contains one row with the following data: Version: C9T2, Vendor: IBM, Type: LTO6, Name: LTO6_C9T2.fcp_fh.i. At the bottom right of the window are two buttons: 'Apply' and 'Close'.

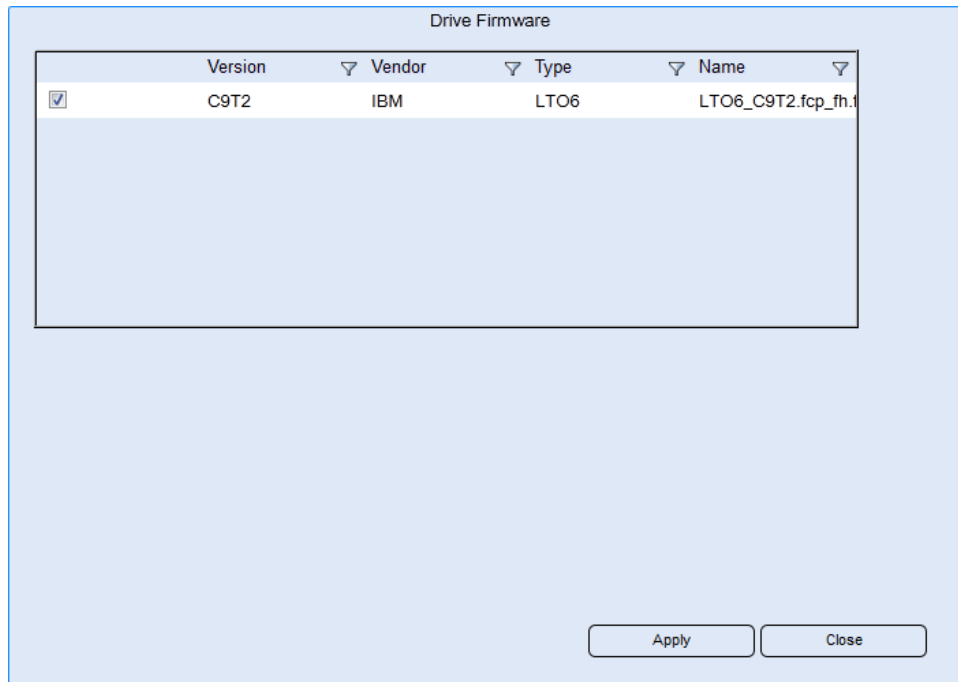
	Version	Vendor	Type	Name
<input type="checkbox"/>	C9T2	IBM	LTO6	LTO6_C9T2.fcp_fh.i

3. Select the **Delete Firmware** radio button.
4. Click the checkbox of the drive firmware package you want to delete.
5. Click **Apply**. The drive firmware package is removed from the table.
6. Click **Close** to exit the **Drive Firmware** window.

Update Firmware

1. From the menu bar, select **Drives**. The **Drives** box becomes active in the **Operations** panel.

2. In the **Operations Area**, click **Firmware Update**. The **Firmware Update** window displays.



3. Select a drive firmware package from the list. You must select a package that relates specifically to the type (e.g. LTO-6) and manufacturer (IBM, HP) of the drive you are updating.
4. Click **Apply**.
5. Click **Close** to exit the **Drive Firmware** window.

Save/Restore the Library Configuration

Delete this text and replace it with your own content.

Save/Restore a Library Configuration

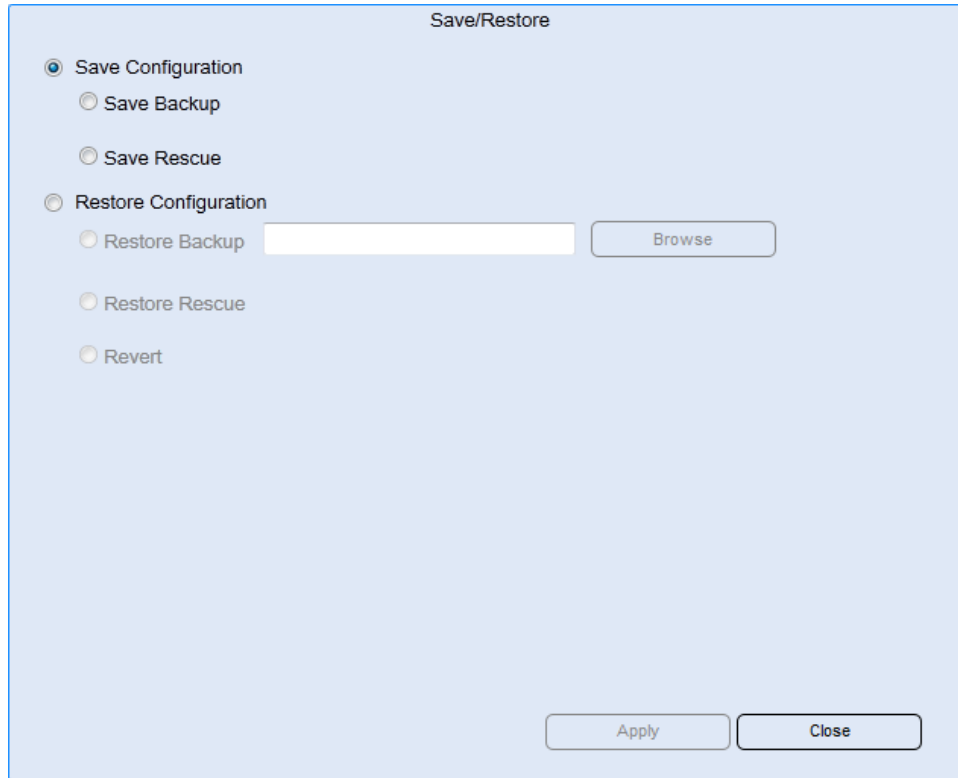
The **Save and Restore** window enables you to:

- Save a library's configuration settings as a remotely or locally stored image
- Restore, revert, or rescue the library by applying a remotely or locally stored image of a library's configuration settings.

Caution: As a result of restore, rescue, or revert operations, the library shuts down. You must have physical access to the library to bring the library back up. If you are performing a restore, rescue, or revert operation using remote access, the library will remain shut down until the library is directly powered back on.

Save a Configuration

1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Save/Restore**. The **Save/Restore** window displays.



3. Select one of the following:
 - **Save Backup** - Saves a copy of the configuration to a location you choose.
 - a. Click **Apply**. A save dialog box display.
 - b. Click **Ok**. The file is saved to your browser's downloads folder.
 - c. Select **Save File**.
 - **Save Rescue** - Saves a copy of the configuration on the MCB.
4. Click **Close** to exit the **Save/Restore** window.

Restore a Library Configuration

1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Save/Restore**. The **Save/Restore** window displays.
3. Select **Restore Configuration**.

4. Select one of the following:

- **Restore Backup** - The restore image is stored on a remote file system. You might restore the library's configuration, for example, if the library's locally saved configuration is lost because the MCB is replaced.
 - a. Click **Browse**.
 - b. Navigate to where the configuration backup file is stored.
 - c. Select the configuration file and click **Open**.
 - d. Click **Apply**. The configuration is restored from the file saved remotely.
- **Restore Rescue** - The rescue image is stored locally on the library's MCB. You might rescue the library's configuration, for example, if the library becomes unstable due to a configuration change and you want to roll back the library's configuration settings to a previous state.
 - a. Click **Apply**. The configuration is restored from the file saved to the MCB.
- **Revert** - The revert image is automatically created and stored locally as the first step of any restore or rescue operation. The purpose of the Revert process is to revert to the last configuration that was used before a restore image was applied. If an incorrect restore image was applied, the Revert feature allows the MCB to revert back to a prior configuration.
 - a. Click **Apply**. The configuration reverts back to it's state immediately prior to the attempted restore.

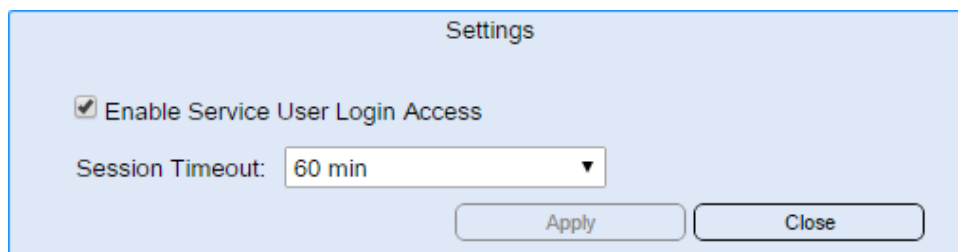
5. Click **Close** to exit the **Save/Restore** window.

User Access Settings

Delete this text and replace it with your own content.

Settings

1. From the menu bar, select **User Access**. The **User Access** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Settings**. The **Settings** window displays.



3. Select the **Enable Service User Login Access** checkbox.

4. Select a value from the Session Timeout drop-down menu. The values range from 5 minutes to 24 hours.
5. Click **Apply** to save your settings.
6. Click **Close** to exit the **Settings** window.

Licenses

In addition to the standard features, the following licensable features are available:

- Active Vault
- Advanced Reporting
- Capacity on Demand (COD)
- Encryption Key Management
- Extended Data Lifecycle Management (EDLM)
- Partition
- Partition Utilization
- Path Failover/Native Storage Networking

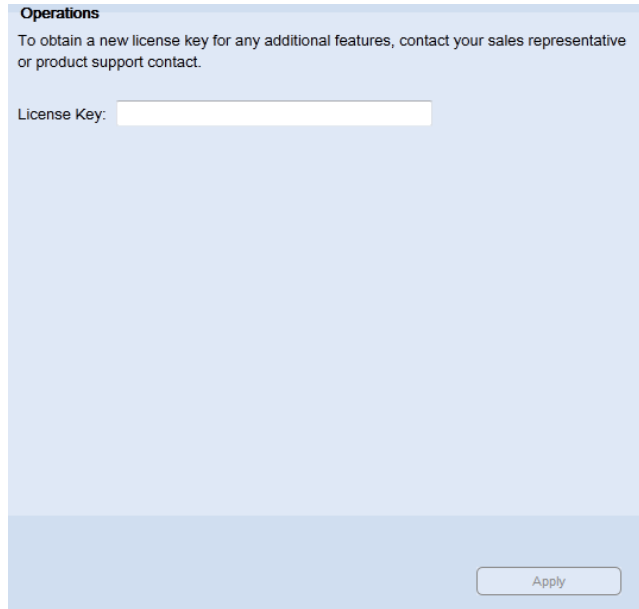
The following situations require you to enable license keys:

- During initial installation and configuration of the library. For more information about enabling licenses for the first time, see the Scalar i6000 Installation Guide
- During a feature upgrade
- When you need to activate additional storage slots in your current COD configuration

If you cannot locate the license keys shipped with the library, you can obtain them by contacting technical support or, if you are an end user, by contacting your inside sales representative.

Apply a License

1. From the menu bar, select **Licenses**. The **Licenses** window becomes active in the **Operations** panel.



The screenshot shows a window titled "Operations". Inside, there is a text instruction: "To obtain a new license key for any additional features, contact your sales representative or product support contact." Below this is a label "License Key:" followed by a text input field. At the bottom right of the window is an "Apply" button.

2. Enter a license in the **License Key** field.
3. Click **Apply**. A confirmation dialog displays and the newly licensed feature is now listed in the North Panel.
4. Click **Close** to exit the **Licenses** window.


Network Overview

If your library has an MCB2 installed, you can configure two (2) network settings for your library. When looking at the Operation area, you'll notice two (2) interface options. Depending on what you have enabled, you'll see IPv4 or IPv6 listed.

The intended use of these settings is twofold:

- Interface 1 is for configuring a gateway to go outside the network.
- Interface 2 is for accessing devices on it's own network, encryption keys and for security. You cannot configure a gateway and cannot access any devices outside the network. You can access the library from a browser, however.

Make sure that your library is attached to a network before you use the Network Configuration command.

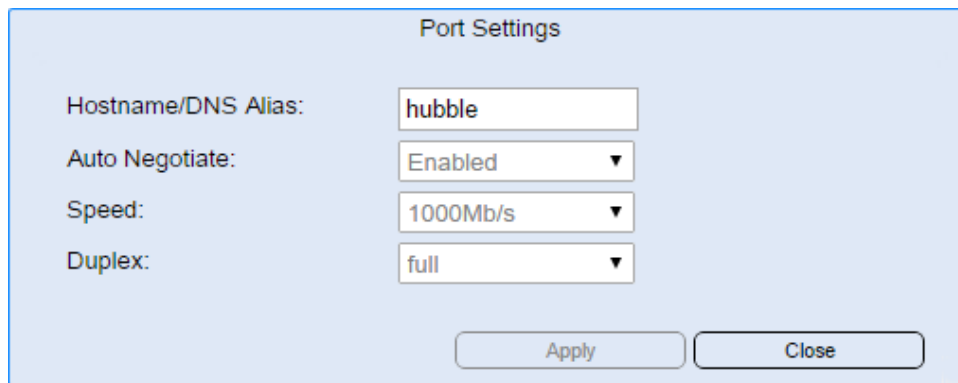
 **Caution:** When configuring both interface settings, the IPs must be on separate subnets. If you configure the second interface with the same IP, you will not be able to save the configuration settings.

Network Port Settings

Delete this text and replace it with your own content.

Port Settings

1. From the menu bar, select **Network**. The **Network** window becomes active in the **Operations** panel.
2. From the **North Panel**, select the checkbox next to the network you want to configure.
3. In the **Operations Area**, click **Port Settings**. The **Port Settings** window displays.



Port Settings

Hostname/DNS Alias:

Auto Negotiate:

Speed:

Duplex:

4. Enter a name/alias for the library.
5. Select either **Enabled** or **Disabled** from the **Auto Negotiate** drop-down menu.
6. From the **Speed** drop-down menu, select either **10 Mb**, **100 Mb**, **1 Gb** or **1000 Mb**.
7. Select either **Full** or **Half** from the **Duplex** drop-down menu.
8. Click **Apply** to save your settings.
9. Click **Close** to exit the **Port Settings** window.

IPv4 Settings

Delete this text and replace it with your own content.

Setup IPv4

1. From the menu bar, select **Network**. The **Network** window becomes active in the **Operations** panel.
2. From the North Panel, select the checkbox next to the network you wan to configure.
3. In the **Operations Area**, click **IPv4**. The **IPv4** window displays.

The image shows a light blue dialog box titled "IPv4". Inside, there are four labeled text input fields: "Type:" with a dropdown menu showing "Static", "Address:" with "10.20.163.105", "Netmask:" with "255.255.248.0", and "Gateway:" with "10.20.160.1". At the bottom right, there are two buttons: "Apply" and "Close".

4. From the **Type** drop-down menu, select:
 - **Static**: this value indicates that other fields will be manual completed.
 - **DHCP** (default): this value indicates that the library will receive a system generated IP. Selecting DHCP will disable entry into the remaining fields.
5. Enter the desired values in the **Address**, **Netmask** and **Gateway** fields. The IP addresses entered cannot be the same in these fields.

i Note: These fields are only active if **Static** is selected from the **Type** drop-down menu.

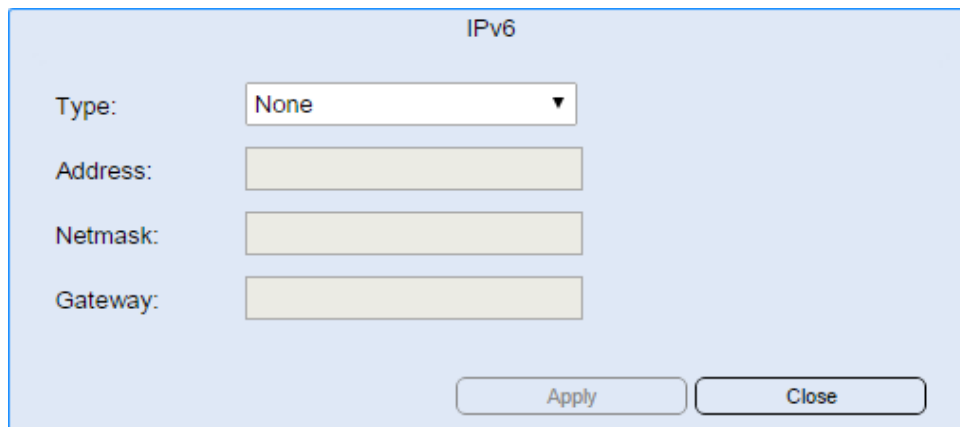
6. Click **Apply** to save your settings.
7. Click **Close** to exit the **IPv4** window.

IPv6 Settings

Delete this text and replace it with your own content.

Setup IPv6

1. From the menu bar, select **Network**. The **Network** window becomes active in the **Operations** panel.
2. From the North Panel, select the checkbox next to the network you want to configure.
3. In the **Operations Area**, click **IPv6**. The **IPv6** window displays.

A screenshot of an IPv6 configuration window. The window has a light blue background and a title bar that says "IPv6". Inside, there are four labels on the left: "Type:", "Address:", "Netmask:", and "Gateway:". To the right of "Type:" is a drop-down menu with "None" selected. To the right of "Address:", "Netmask:", and "Gateway:" are three empty text input fields. At the bottom right of the window are two buttons: "Apply" and "Close".

IPv6

Type:

Address:

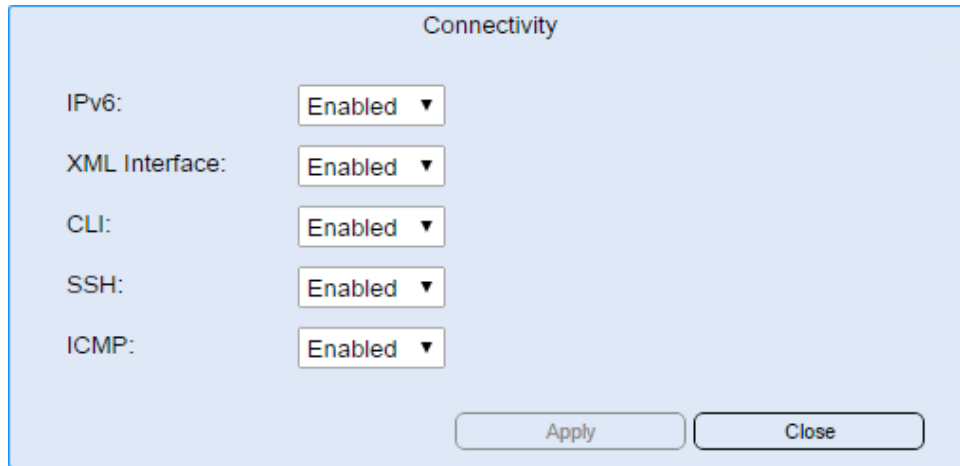
Netmask:

Gateway:

4. From the **Type** drop-down menu, select:
 - **Static**: this value indicates that other fields will be manual completed.
 - **DHCPv6** (default): this value indicates that the library will receive a system generated IP. Selecting **DHCP** will disable entry into the remaining fields.
 - **Static/Stateful**: this value indicates that other fields will be manual completed.
 5. Enter the desired values in the **Address**, **Netmask** and **Gateway** fields. The IP addresses entered cannot be the same in these fields.
-
- i Note:** These fields are only active if **Static** or **Static/Stateful** are selected from the **Type** drop-down menu.
6. Click **Apply** to save your settings.
 7. Click **Close** to exit the **IPv6** window.

Network Connectivity

1. From the menu bar, select **Network**. The **Network** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Connectivity**. The **Connectivity** window displays.



The image shows a 'Connectivity' window with a light blue background. It contains five settings, each with a label and a dropdown menu:

- IPv6: Enabled ▼
- XML Interface: Enabled ▼
- CLI: Enabled ▼
- SSH: Enabled ▼
- ICMP: Enabled ▼

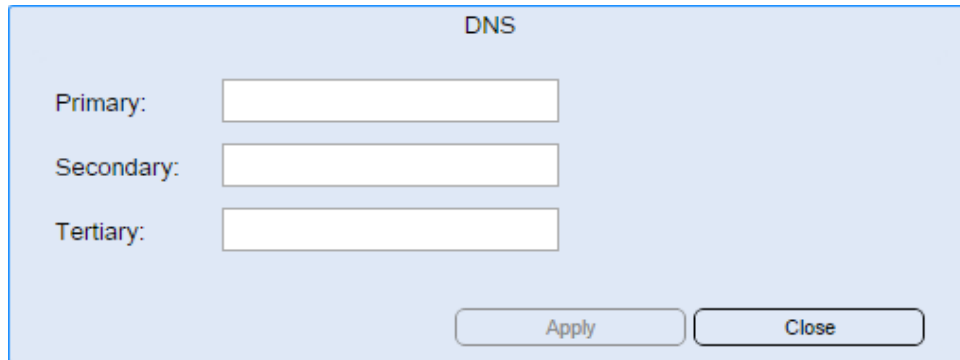
At the bottom right, there are two buttons: 'Apply' and 'Close'.

3. Select **Enabled** or **Disabled** from each of the drop-down menus. The following are the default setting for each drop-down menu:
 - IPv6 - Disabled
 - XML Interface: Disabled
 - CLI - Disabled
 - SSH - Disabled
 - ICMP - Enabled
4. Click **Apply**. Your connectivity settings are saved.
5. Click **Close** to exit the **Connectivity** window.

DNS Settings

Depending on how the library is configured, the IP address entries must conform to IP protocol support such that the entries require a four dot (.) notation for IPv4 and a colon (:) notation for IPv6.

1. From the menu bar, select **Network**. The **Network** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **DNS**. The **DNS** window displays.



3. Enter an IP address in each of the three fields.

Note: You will not be able to save your DNS settings if you have a duplicate IP address entered or if less than 2 fields have IP addresses entered.

4. Click **Apply**. Your DNS settings are saved.
5. Click **Close** to exit the **DNS** window.

Encryption Overview

Encryption key management systems generate, protect, store, and manage encryption keys. These keys are used by their respective tape drives to encrypt information being written to tape, and decrypt information being read from tape media.

Encryption Key Management (EKM) is a licensable feature. You must have an EKM license installed on your library in order to use the Encryption Key Management features.

Note: The library does not support using more than one encryption key management system on a single library.

Encryption on the Scalar i6000 tape library is enabled by partition only. The default setting for encryption-capable drives permits external application-managed encryption support on all encryption-capable tape drives and media within a partition.

You cannot select individual drives for encryption; you must select an entire partition to be encrypted. If you encrypt a partition, all encryption-capable tape drives are enabled for encryption, and all data written to supported media is encrypted. Non encryption-capable tape drives will not be enabled for encryption, and non-supported media will not be encrypted.

KMIP-compliant Encryption Key Management

The Key Management Interoperability Protocol (KMIP) is a specification developed by OASIS. Its function is to standardize communication between enterprise key management systems and encryption systems. With version i8.2.1, the Scalar i6000 provides a KMIP version 1.0 compliant encryption solution.

KMIP is only supported in certain environments. Contact your Quantum representative for details.

Details about the Scalar i6000 KMIP-compliant implementation include:

- As with other encryption systems supported by the library, in order to use KMIP-compliant encryption systems with the Scalar i6000, you must have an Encryption Key Management license installed on the library.
- A minimum of two KMIP-compliant encryption servers are required for failover purposes. A total of 10 KMIP-compliant encryption servers are allowed, for increased failover capability.

FIPS-Certified Encryption Solution

FIPS (Federal Information Processing Standard) 140-2 is a U.S. government standard relating to computer security and encryption.

The Quantum Scalar i6000 now offers a FIPS 140-2 Level 1 certified encryption solution composed of the Scalar Key Manager and HP LTO-5 and LTO-6 Fibre Channel tape drives in a Scalar i6000 library. FIPS mode can be enabled on the HP LTO-5 and LTO-6 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.

Details about configuring FIPS mode include:

- Library firmware must be at version 630Q or later.
- HP LTO-5 and LTO-6 FC tape drive firmware must be at the latest version qualified with the Scalar i6000 library (see the Scalar i6000 Release Notes for qualified firmware levels).
- An Encryption Key Management license must be installed on the library sufficient to cover the tape drive (s) on which you want to enable FIPS mode.
- A Storage Networking license must be installed on the library.

Note: Use of FIPS on a drive does not count against the Storage Networking license drive count. FIPS is not considered a “Storage Networking feature;” however, the SNW license is still required on the library.

- FIPS mode is configured by partition. FIPS partitions must contain only HP LTO-5 or LTO-6 FC tape drives.
- The partition encryption method must be set to Enable Library Managed in order to set FIPS mode.
- FIPS mode is disabled by default.
- The library must be connected to Scalar Key Manager (SKM). SKM software must be at version 2.0 or later in order to be FIPS certified. FIPS currently only works with SKM.
- Ethernet connectivity is required for the tape drives on which you want to enable FIPS mode. This means that every HP LTO-5 or LTO-6 FC drive in the partition must be connected to an Ethernet Expansion blade installed in the library.

Caution: If the Ethernet Expansion blade fails and the attached tape drives have FIPS mode enabled, all encryption operations (encrypting, decrypting, key requests) on the attached tape drives will fail. If this happens, contact Quantum Support for a replacement Ethernet Expansion blade as soon as possible.

Notifications Overview

E-mail Notifications

The library collects status information on its components and, if the appropriate e-mail notifications have been set up in the LMC, the library can send notifications whenever tickets with severity levels 1, 2, or 3 are created. For information about severity levels, see Table 3 on page 37. The library assigns a severity level to each ticket it creates. If the ticket's severity level matches one of an e-mail address' severity codes (as set up in e-mail notifications), the library sends a notification to that particular e-mail address. The library also sends a notification if a ticket's severity level escalates to a more severe level. The library does not send one when an ticket's severity level becomes less severe.

By default, the only e-mail address to which the library sends e-mail notifications is techsup@quantum.com (Quantum technical support). When configured for Quantum technical support notification, the library notifies Quantum technical support only of those severity 1 issues that suggest a component failure requiring a possible CRU/FRU replacement. Severity 1 tickets that do not identify a library component failure, such as customer network connection issues and SAN fabric connection problems, do not automatically notify Quantum technical support, but allow customer issue analysis and customer-initiated support calls. To set up other e-mail addresses to receive any severity 1, and/or severity 2 and severity 3 ticket notification, see Configuring E-mail on page 177 and Setting Up E-mail Notifications on page 180.

Note: Even though you can remove the Quantum technical support e-mail address so that Quantum does not receive severity level 1 notifications, Quantum recommends that you do not remove it. Also, do not include the Quantum technical support e-mail address for severity level 2 or 3 notifications.

The subject line of the e-mail notification indicates "Scalar i6000," the library's serial number, and the severity level of the ticket. The body of the message states that the library sent the message automatically. The message body also includes the following information, which provides details about the ticket and library conditions at the time of the event:

- Ticket summary
- Ticket details, including status information
- Firmware versions, including MCB, RCU, CMB, and drive bricks
- Physical library configuration
- Library states, such as physical library online or offline, partitions online or offline, or robotics varied on or varied off
- Time stamps of recent activity
- Report summary
- Report details for the ticket

The notification also includes a repair page attachment. This page provides a problem description and corrective actions you or a customer service engineer (CSE) can perform.

Note: A notification e-mail contains helpful information about a ticket and how to resolve it. However, the notification represents a condition that existed at a certain time in the past. The notification might not reflect the current situation. The notification indicates a specific ticket ID, so you should find and examine that specific ticket in the LMC. The ticket reflects the real-time status of the issue.

RAS Ticket Notifications

1. From the left navigation, select **Notifications**. The **Notifications** window displays and the **Operations** panel becomes active.
2. In the **North Panel**, select an email address from the list.
3. In the **Operations Area**, click **RAS Tickets**. The **RAS Tickets** window displays.

4. Enter text in the **Subject** field. If the email address is user defined, the Subject field can be modified. If the selected email address is a system defined, such as Quantum Tech Support, the Subject field is pre-populated and cannot be modified.
5. In the **Severity** area, select the level of RAS Ticket you want automatically sent to the select email address.

Note: Any severity level not supported or available for the user defined email address will be greyed out.

6. In the **Attachments** area, enable or disable the type of attachments you want to include with the automatic emails. The attachment types include:
 - Ticket Resolution
 - Library Snapshot
 - Drive Log
7. Click **Apply** to save your settings.
8. Click **Close** to exit the **RAS Tickets** window.

Report Notifications

Add a Report Filter to an Email Notification

1. From the left navigation, select **Notifications**. The **Notifications** window displays and the **Operations** panel becomes active.
2. In the **North Panel**, select a user-defined email address from the list.
3. From the **Operations** panel, click **Reports**. The **Reports** window displays.

Reports

Subject: Report Notification: Quantum Scalar i6000, SN 27310010

☒ Add

	Name	Interval	Day	Time
<input checked="" type="checkbox"/>	Test1	Monthly ▼	Monday ▼	00:00 ▼
<input checked="" type="checkbox"/>	MediaStorageTest	Monthly ▼	Monday ▼	00:00 ▼
<input checked="" type="checkbox"/>	MediaSecurityTes	Monthly ▼	Monday ▼	00:00 ▼

☐ Delete

	Name	Interval	Day	Time
--	------	----------	-----	------

Apply
Close

4. Enter text in the **Subject** field. If the email address is user defined, the **Subject** field can be modified. If the selected email address is a system defined, such as Quantum Tech Support, the **Subject** field is pre-populated and cannot be modified.
5. Select the **Add** radio button. Any report filters created will become active. See [Reports on page 50](#) for information on creating report filters.
6. From the list, select the checkbox next to the report filters you want to automatically email.
7. For each report filter selected, select values for:
 - **Interval** - this is how often the email will be sent. Values include: daily, weekly, monthly and quarterly.
 - **Day** - the day of the week the report will be sent.
 - **Time** - the time of day the report will be sent.
8. Click **Apply** to save your settings.
9. Click **Close** to exit the **Reports** window.

Delete a Report Filter from an Email Notification

1. From the left navigation, select **Notifications**. The **Notifications** window displays and the **Operations** panel becomes active.
2. In the **North Panel**, select a user-defined email address from the list.
3. From the **Operations** panel, click **Reports**. The **Reports** window displays.
4. Enter text in the **Subject** field. If the email address is user defined, the **Subject** field can be modified. If the selected email address is a system defined, such as Quantum Tech Support, the **Subject** field is pre-populated and cannot be modified.
5. Select the **Delete** radio button. Any report filters created will become active. See [Reports on page 50](#) for information on creating report filters.
6. From the list, select the checkbox next to the report filters you want to remove from automatic emailing.

The screenshot shows the 'Reports' window with the following elements:

- Subject:** A text field containing 'Report Notification: Quantum Scalar i6000, SN 27310010'.
- Radio Buttons:** 'Add' is unselected, and 'Delete' is selected.
- Report Filters Table:**

Name	Interval	Day	Time
<input type="checkbox"/> Test1	Monthly	Monday	00:00
<input type="checkbox"/> MediaStorageTes	Monthly	Monday	00:00
<input type="checkbox"/> MediaSecurityTes	Monthly	Monday	00:00
- Buttons:** 'Apply' and 'Close' buttons at the bottom right.

7. Click **Apply** to save your settings.
8. Click **Close** to exit the **Reports** window.

Library Overview

The Library menu displays an overview of your library. In the North Panel, you can view an graphical representation of your library. When you click a module in the North Panel, specific library details display in the Information Panel, located in the lower left area of the screen. Some of the information includes:

- Auto Cleaning settings
- Drive Count
- Firmware Version
- I/E Slot Count
- Library Name
- Serial Number
- more...

You can also view a chart of how the library's partitions in the Partition Allocation area of the screen. Placing your mouse over the chart shows how the library partitions are designated.

In the Operations area you can view the available functions that allow you to configure the library. These include:

- Settings
- Cleaning Slots
- Add, Modify and Delete application plug-ins
- CLN Import and Export

Partitions Overview

A partition is an abstraction of a single underlying physical library that presents the appearance of multiple, separate libraries for purposes of file management, access by multiple users, or dedication to one or more host applications. For example, you can choose to run one software application in one partition, and a different software application in a second partition.

There are two types of partitions in the Scalar i6000 library:

- **Standard partitions** — Standard partitions are visible to hosts and are used for normal backup operations. You can create standard partitions via the setup wizard or manually using simple or expert mode.
- **Library managed partitions** — Library managed partitions (LMPs) are similar to other partitions, except they are not visible to backup applications or hosts. The library manages the LMP, rather than the backup application. The library uses the LMP to facilitate the following value-added features, each of which requires its own [license](#):
 - Active Vault
 - Automated Media Pool

- Extended Data Lifecycle Management

Basic Partition Tasks

Delete this text and replace it with your own content.

Add a Partition

1. From the menu bar, select **Partitions**. The **Partitions** box becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Add**. The **Add** window displays.

Add

Available Resources

Storage: 636 I/E: 12 Drive: 7

Partition Name:

Number of Drives:

0

Type:

Standard

Drive Type:

LTO2

Vendor:

QUANTUM

Number of Storage Slots:

0

Product:

Scalar i6000

AMP Extension:

0

Control Interface:

None

Number of IE Slots:

0

Barcode Reporting:

Prefix

Number of Extended IE Slots:

0

Apply

Close

3. Enter values for the following fields and drop-downs:

Field	Description
Partition Name	name that describes the new partition
Type	type of partition you are adding. Options include: Standard, EDLM, AMP and Active Vault.

Field	Description
Vendor	vendor ID. The Vendor ID information is used in the SCSI Inquiry command. The choices are QUANTUM and ADIC. The default is QUANTUM. Some backup applications may only support or be configured for ADIC libraries, so if you configure a logical library using the vendor ID of QUANTUM, the backup application would not work with the library.
Product	product type. The Product ID setting controls the product ID string that is returned in a standard SCSI INQUIRY response. The library can report that it is a Scalar i500, Scalar i2000, or Scalar i6000. This feature can enable the library to be used with host applications that do not yet include the Scalar i6000 in a list of recognized devices. In addition, the various Microsoft Windows operating systems maintain a list of recognized devices. If the Scalar i6000 is not in an operating system's list of recognized devices, the library will appear as an "unknown" device in device lists. You might prevent the library from being listed as "unknown" by setting Product ID to a library other than Scalar i6000. This setting does not cause any library operational changes other than the SCSI INQUIRY response.
Control Interface	
Barcode Reporting	Options include: Suffix, Pass Through, Prefix, or Disabled. Depending on which setting you choose, you can control the use of the media type identifier in the volume serial number that is returned to the host.
Number of Drives	
Drive Type	type of drive to be used in the partition
Number of Storage Slots	
AMP Extension	you can add logical element extensions to the partition for possible later use. Type the number of magazines by which you would like to extend the standard partition
Number of IE Slots	
Number of Extended IE Slots	

4. Click **Apply**. The new partition appears in the North Panel.
5. Click Close to exit the Add window.

Modify a Partition

1. From the menu bar, select **Partitions**. The **Partitions** box becomes active in the **Operations** panel.
2. In the North Panel, select the partition you want to modify.

3. From the **Operations** area, click **Modify**. The **Modify** window displays.

Modify

Available Resources

Storage: 636 I/E: 12 Drive: 7

Partition Name: Training1

Number of Drives: 2

Type: Standard

Drive Type: Mixed

Vendor: QUANTUM

Number of Storage Slots: 12

Product: Scalar i6000

AMP Extension: 0

Control Interface: None

Number of IE Slots: 6

Barcode Reporting: Prefix

Number of Extended IE Slots: 0

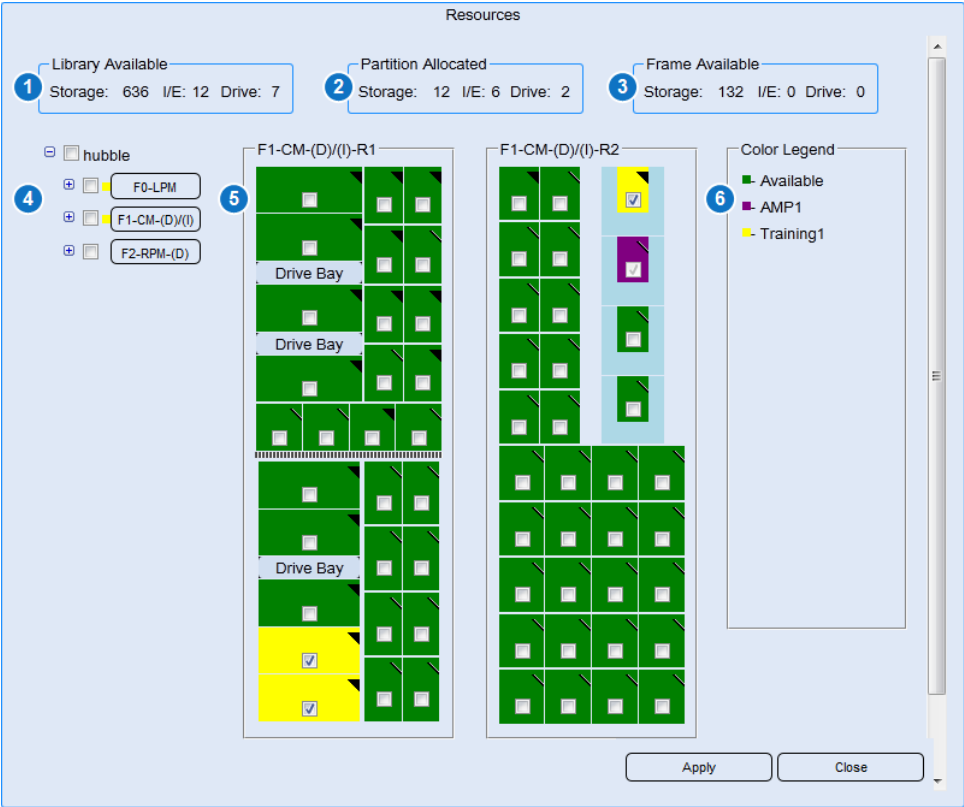
Apply

Close

4. Change values for the following fields and drop-downs:

Field	Description
Partition Name	name that describes the new partition
Vendor	vendor ID. The Vendor ID information is used in the SCSI Inquiry command. The choices are QUANTUM and ADIC. The default is QUANTUM. Some backup applications may only support or be configured for ADIC libraries, so if you configure a logical library using the vendor ID of QUANTUM, the backup application would not work with the library.
Product	product type. The Product ID setting controls the product ID string that is returned in a standard SCSI INQUIRY response. The library can report that it is a Scalar i500, Scalar i2000, or Scalar i6000. This feature can enable the library to be used with host applications that do not yet include the Scalar i6000 in a list of recognized devices. In addition, the various Microsoft Windows operating systems maintain a list of recognized devices. If the Scalar i6000 is not in an operating system's list of recognized devices, the library will appear as an "unknown" device in device lists. You might prevent the library from being listed as "unknown" by setting Product ID to a library other than Scalar i6000. This setting does not cause any library operational changes other than the SCSI INQUIRY response.

- 5. Click **Apply**. The partition is changed.
- 6. Click **Close** to exit the **Modify** window.
- 7. If you want to add drives, storage slots or change other values, from the **Operations** panel, click **Resources**. The **Resources** window displays.



- 8. The **Resources** window displays the following information:

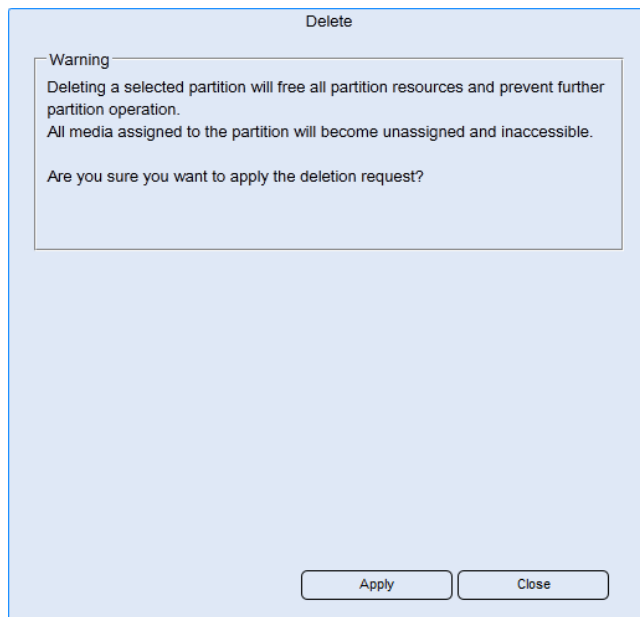
Area	Description
1	Library Available: The number of available drives, storage slots and IE slots.
2	Partition Allocated: The number of drives, storage slots and IE slots currently assigned to the selected partition. This information is
3	Frame Available: The number of drives, storage slots and IE slots available for the selected module.
4	The number of modules in the library. Expanding a module shows the front and back of the module and the available/allocated storage magazines and drives.

Area	Description
5	A visual display of the front and back of the selected module. Selecting a check box assigns the drive or storage magazine dynamically updates the Partition Allocated values as additional drives, storage and IE slots are selected.
6	Describes what the colors indicate in the visual display. <ul style="list-style-type: none"> • Green - Available drives, storage or IE slots • Violet - Drives, storage or IE slots allocated to another partition • Yellow - Drives, storage or IE slots already allocated to the selected partition

9. Make the desired changes to the selected partition and click **Apply**. The changes are displayed in the row for the selected partition in the North Panel.
10. Click **Close** to exit the **Resources** window.

Delete a Partition

1. From the menu bar, select **Partitions**. The **Partitions** box becomes active in the **Operations** panel.
2. In the North Panel, select the partition you want to delete.
3. From the **Operations** area, click **Delete**. The **Delete** window displays.



4. Click **Apply**. The partition is deleted from the list in the North Panel.
5. Click **Close** to exit the **Delete** window.

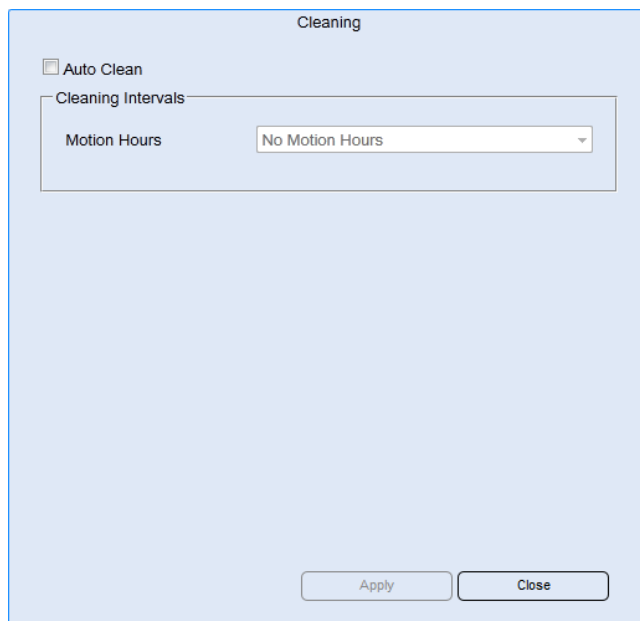
Drive Cleaning

Delete this text and replace it with your own content.

Drive Cleaning Settings

Note: To enable drive cleaning, you must first have cleaning magazines and cleaning media configured for the partition in the Java interface. For specific instructions, refer to the i6000 Java User Guide.

1. From the menu bar, select **Partitions**. The **Partitions** box becomes active in the **Operations** panel.
2. In the North Panel, select the partition you want to setup drive cleaning.
3. From the **Operations** area, click **Cleaning**. The **Cleaning** window displays.



4. Select **Auto Clean**.
5. Select a value from the **Motion Hours** field. This initiates cleaning automatically once the drive has reached the intended number of motion hours. Selecting **No Motion Hours** means that any drive cleaning must be done manually.
6. Click **Apply**.
7. Click **Close** to exit the **Cleaning** window.

Clean a Drive

1. From the left navigation, select **Drives**. The **Drives** window displays and the **Operations** panel becomes active.
2. In the **North Panel**, select the check box next to the drive you want to clean.

3. In the **Operations Area**, click **Clean**. The **Cleaning** window displays.

The screenshot shows a window titled "Cleaning". It contains two main sections: "Cleaning Source" and "Progress".

Cleaning Source

Source Type: I/E Slot ▼

Select	Barcode	Location	Status
<input type="checkbox"/>	001853L6	IE_1,2,1,3,2	Available

Progress

Drive	Serial Number	Location	Status
IBM-LTO6-Fibre	F0013C0019	DT_1,1,5,1,1	

At the bottom right, there are two buttons: "Apply" and "Close".

4. From the Cleaning Source area, select a Source Type. This will be either I/E Slot or Cleaning Slot.
5. Select the check box next to the media you want to use to clean the drive. The barcode should have a suffix of CLN. This will identify the tape as a cleaning tape.
6. Click **Apply**. In the **Progress** area, the **Status** column will inform you as to how the cleaning is advancing.
7. When the cleaning is complete, click **Close** to exit the **Cleaning** window.

Partitions Online Offline

Delete this text and replace it with your own content.

1. From the menu bar, select **Partitions**. The **Partitions** box becomes active in the **Operations** panel.
2. In the North Panel, select the partition you want to take offline.
3. From the **Operations** area, click **Offline**. In the North Panel, the **Mode** column shows the partition offline.
4. Click **Online**. The **Mode** column shows the partition is back online.

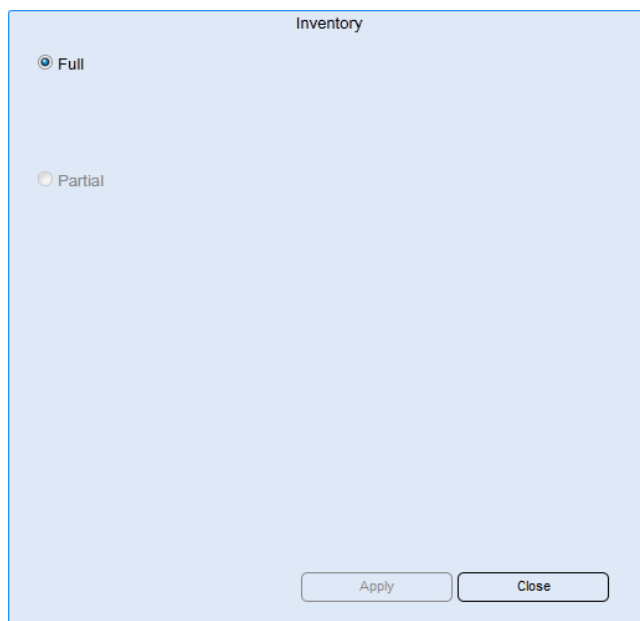
Inventory

Perform an Inventory

There are two types of inventory that can be done: a partition specific inventory and an entire library inventory. If a partition is selected in the North Panel, the inventory is done for that specific partition only. If no partition is selected, the inventory is done for the entire library.

i Note: The time to complete an inventory depends on the type of inventory and the size of your library.

1. From the menu bar, select **Partitions**. The **Partitions** box becomes active in the **Operations** panel.
2. From the **Operations** area, click **Inventory**. The **Inventory** window displays.




3. Full is already selected.
4. Click **Apply**.
5. Click **Close** to exit the **Inventory** window.

Drives Overview

Tape drives are enclosed in a universal drive sled. You can hot swap and hot add all supported drives, regardless of type. The library supports the following types of tape drives:

- IBM LTO-1 or LTO-2 LVD–SCSI
- IBM LTO-1, LTO-2, LTO-3, LTO-4, LTO-5, or LTO-6 FC Multi-mode
- HP LTO-3, LTO-4, LTO-5, and LTO-6 FC Multi-mode

 **Caution:** A single partition can have a mixture of drive types and interface types within the same domain.

The CM has one upper and two lower drive clusters and DREMs have two upper and two lower drive clusters. Each library must have at least one tape drive. Each drive cluster can house up to six tape drives for a total of 18 drives in a CM and 24 drives in a DREM. Additional drives can be added to any expansion modules in the configuration, except HDEMs. This enables you to have a total of 192 drives. In dual-robot systems, the left parking module cannot contain drives.

Drive Maintenance

Delete this text and replace it with your own content.

Take a Drive Online or Offline

1. From the menu bar, select **Drives**. The **Drives** window becomes active in the **Operations** panel.
2. In the North Panel, select the drive you want to take offline.
3. From the **Operations** area, click **Offline**. In the North Panel, the **Mode** column shows the drive offline.
4. Click **Online**. The **Mode** column shows the drive is back online.

Identify a Drive

There are instances when a specific drive needs to be identified at the physical library. In these cases, using the Identify feature causes the LEDs on the back of the drive to blink rapidly so that the drive can be found quickly.

1. From the menu bar, select **Drives**. The **Drives** window becomes active in the **Operations** panel.
2. In the North Panel, select the drive you want to identify at the library.
3. From the **Operations** area, click **Identify On**. At the physical library, the rear LEDs will start blinking rapidly.
4. Once the drive has been found, click **Identify Off** to stop the LEDs from blinking.

Unload Media from a Drive

It is possible to unload/eject media from a drive without being physically at the library. However, the tape remains in the drive until it is physically removed.

1. From the menu bar, select **Drives**. The **Drives** window becomes active in the **Operations** panel.
2. In the North Panel, select the drive you want to eject the tape from. In the row for the drive, the media column contains the barcode of tape currently in the drive.
3. From the **Operations** area, click **Unload**. The tape is ejected from the drive.

Loading Drives

The Load Drives dialog box enables you to load drives with cartridges from the current partition.

Unloading Drives

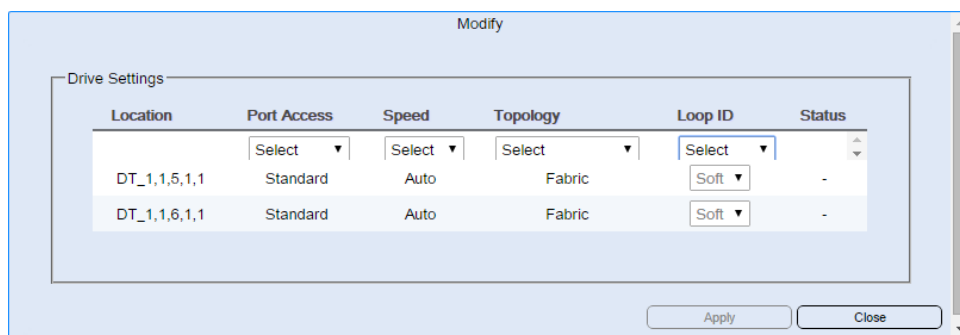
The Unload Drives dialog box enables you to rewind the cartridge in the drive, eject it, and return it to storage.

Drive Configuration

Delete this text and replace it with your own content.

Modify Drive Configuration

1. From the left navigation, select **Drives**. The **Drives** window displays and the **Operations** panel becomes active.
2. In the **North Panel**, select the check box next to the drive(s) you want to modify.
3. In the **Operations Area**, click **Modify**. The **Modify** window displays.



4. For each listed drive, you can change the values in the following columns:
 - **Port Access** - select from Basic, Standard, Advanced or Multipath
 - **Speed** - select from Auto, 1 Gb/s, 2 Gb/s, 4 Gb/s or 8 Gb/s
 - **Topology** - select from Loop Preferred, Fabric, Loop or Fabric Preferred
 - **Loop ID** - select from Soft or Hard ID
5. Click **Apply**.
6. Click **Close** to exit the **Modify** window.

Drive Firmware

Upload Drive Firmware Package

1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Drive Firmware**. The **Drive Firmware** window displays.

	Version	Vendor	Type	Name
<input type="checkbox"/>	C9T2	IBM	LTO6	LTO6_C9T2.fcp_fh.i

3. Click **Browse**. Your browser's **File Upload** window displays.
4. Navigate to where the drive firmware image is located.
5. Select the firmware image and click **Open**.
6. Click **Apply**. A window displays showing the status of the upload.
7. When complete, a confirmation dialog box displays and the drive firmware package is listed in the table.
8. Click **Close** to exit the **Drive Firmware** window.

Delete a Drive Firmware Package

1. From the menu bar, select **System**. The **System** window becomes active in the **Operations** panel.

2. In the **Operations Area**, click **Drive Firmware**. The **Drive Firmware** window displays.

Drive Firmware

☒ Upload Firmware

☐ Delete Firmware

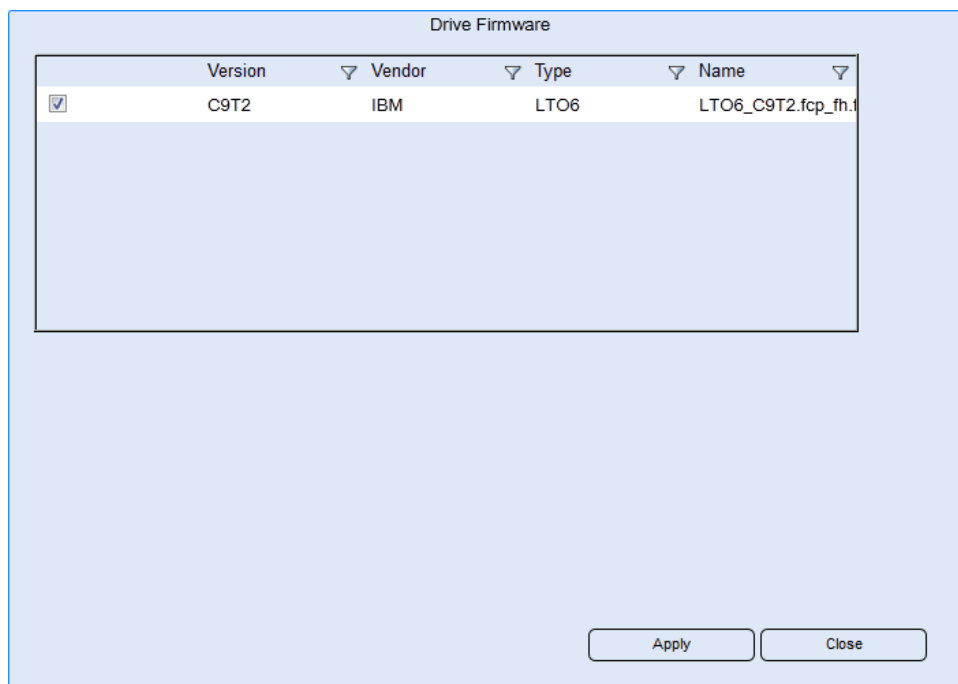
	Version	Vendor	Type	Name
<input type="checkbox"/>	C9T2	IBM	LTO6	LTO6_C9T2.fcp_fh.1

3. Select the **Delete Firmware** radio button.
4. Click the checkbox of the drive firmware package you want to delete.
5. Click **Apply**. The drive firmware package is removed from the table.
6. Click **Close** to exit the **Drive Firmware** window.

Update Firmware

1. From the menu bar, select **Drives**. The **Drives** box becomes active in the **Operations** panel.

2. In the **Operations Area**, click **Firmware Update**. The **Firmware Update** window displays.



3. Select a drive firmware package from the list. You must select a package that relates specifically to the type (e.g. LTO-6) and manufacturer (IBM, HP) of the drive you are updating.
4. Click **Apply**.
5. Click **Close** to exit the **Drive Firmware** window.

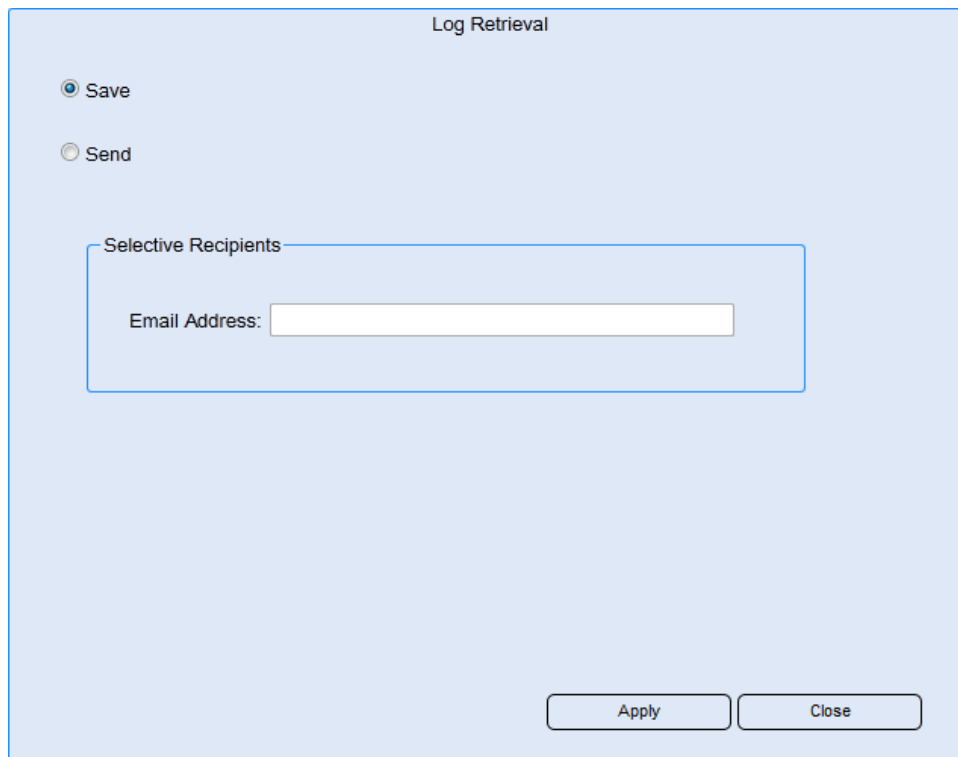
Log Access

Intro text...

Save a Drive Log

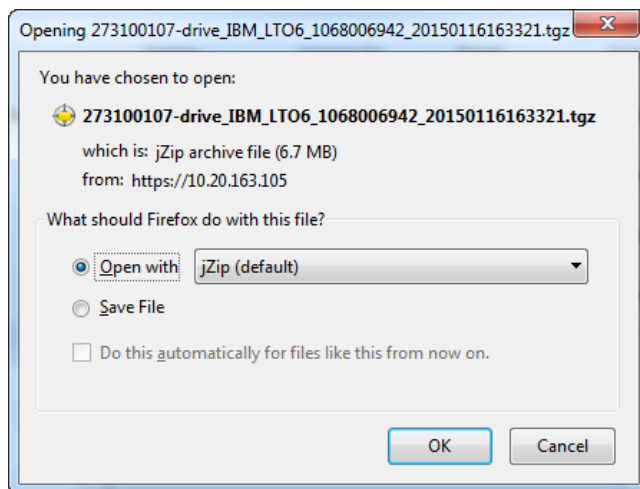
1. From the menu bar, select **Drives**. The **Drives** box becomes active in the **Operations** panel.

- In the **Operations Area**, click **Log Retrieval**. The **Log Retrieval** window displays.



The **Log Retrieval** dialog box is shown. It has a title bar with the text "Log Retrieval". Inside, there are two radio buttons: "Save" (selected) and "Send". Below these is a section titled "Selective Recipients" which contains a text input field labeled "Email Address:". At the bottom right, there are two buttons: "Apply" and "Close".

- Select the **Save** radio button.
- Click **Apply**. A save dialog box displays.

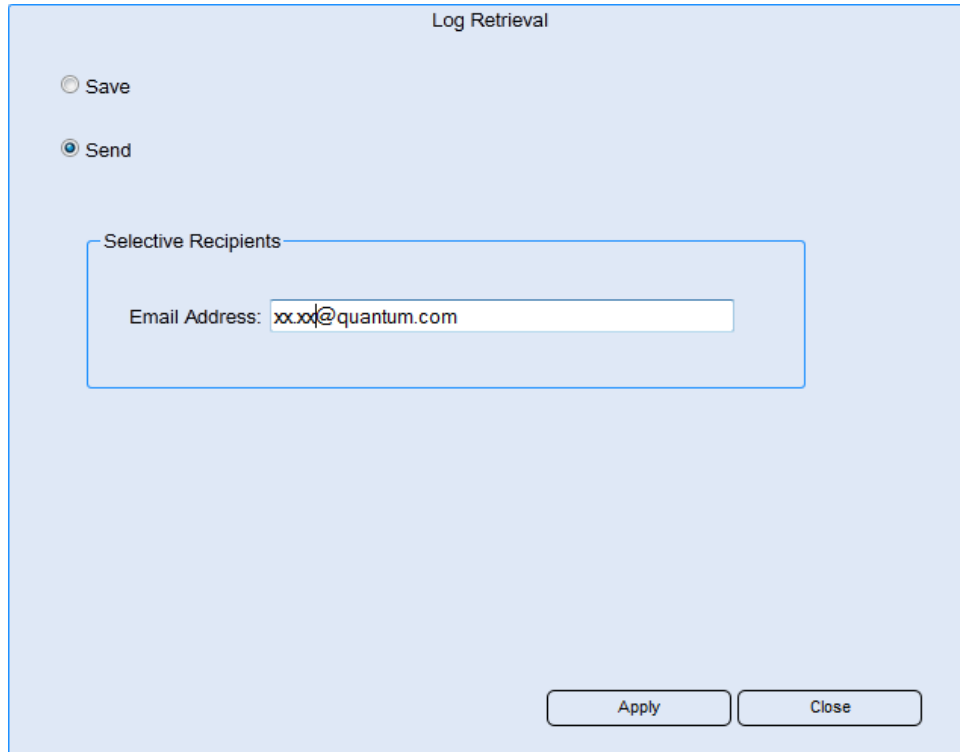


- Select the **Save File** radio button.
- Click **OK**. The log file is saved to your web browser's download folder.

7. Click **Close** to exit the **Log Retrieval** window.

Send a Drive Log

1. From the menu bar, select **Drives**. The **Drives** box becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Log Retrieval**. The **Log Retrieval** window displays.



Log Retrieval

☐ Save

☒ Send

Selective Recipients

Email Address:

Apply Close

3. Select the **Send** radio button.
4. Enter an email address.
5. Click **Apply**.
6. Click **Close** to exit the **Log Retrieval** window.

Media Overview

Unless the situation requires it, use the host application to move, load, unload, import, or export cartridges instead of doing so through the LMC. Using the host to move media makes sure that the host's view of the library remains in sync with the library's actual configuration.

Exception: When moving media into and out of library managed partitions, you must use the LMC since library managed partitions are not visible to hosts.

Import/Export Media

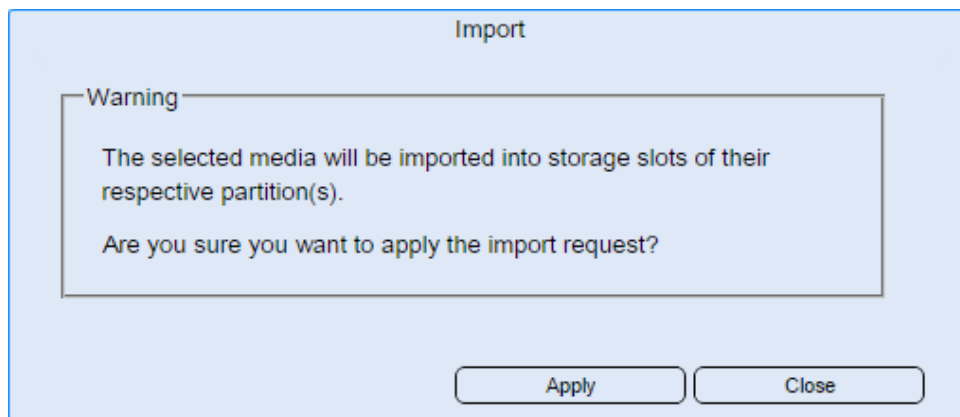
Delete this text and replace it with your own content.

Importing Cartridges Into Partitions

When you first start using your library, open the door and manually insert, directly into storage slots, as many cartridges as you plan to use. The cartridges will not go back all the way if they are inserted incorrectly.

After your library begins operation, use the Import button to add cartridges without interrupting library operations. Place cartridges in the I/E station. The scanner automatically reads the barcodes on new cartridges.

1. From the menu bar, select **Media**. The **Media** box becomes active in the **Operations** panel.
2. In the North Panel, you will see all the partitions listed and also any media that is currently unassigned to any partition. Click the + next to a partition name or the Unassigned media. The + will expand and all media assigned to that partition or unassigned will display.
3. Select the check box next to the media you want to export. You can select multiple tapes to import but the media must be in an I/E slot before it can be imported.
4. In the **Operations Area**, click **Import**. The **Import** window displays.



5. Click **Apply** to import the selected media to the correct partition. The North Panel is updated with the new location information for the media.
6. Click **Close** to exit the **Import** window.

Import and Auto Import Media

i Note: To enable auto import, you must first have an AMP partition created and filters configured for the partition in the Java interface. For specific instructions, refer to the i6000 Java User Guide.

1. From the menu bar, select **Partitions**. The **Partitions** box becomes active in the **Operations** panel.
2. In the North Panel, select the partition you want to import media to.

- From the **Operations** area, click **Import**. The **Import** window displays.

The screenshot shows the 'Import' window with the 'Selective Import' tab selected. It contains a table with the following data:

<input checked="" type="checkbox"/>	Barcode	Location	Status
<input checked="" type="checkbox"/>	001299L6	1,2,1,3,1,3	
<input checked="" type="checkbox"/>	000662L4	1,2,1,3,2,3	
<input checked="" type="checkbox"/>	000563L4	1,2,1,3,3,3	

At the bottom of the window are 'Apply' and 'Close' buttons.

- Select either **Auto Import** or **Selective Import**.
- Select the media you want to import.
- Click **Apply**.
- Click **Close** to exit the **Import** window.

Exporting Cartridges From Partitions

When partitions are created, specific I/E station slots are associated with that partition. When you export cartridges in a library with partitions, cartridges are exported to the partition's I/E station slots. You can only export cartridges if I/E station slots for that partition are empty.

- From the menu bar, select **Media**. The **Media** box becomes active in the **Operations** panel.
- In the North Panel, you will see all the partitions listed and also any media that is currently unassigned to any partition. Click the + next to a partition name. The + will expand the partition and all media assigned to that partition will display.
- Select the check box next to the media you want to export. You can select multiple tapes to export but the number cannot exceed the number of assigned I/E or Extended I/E slots for the partition.

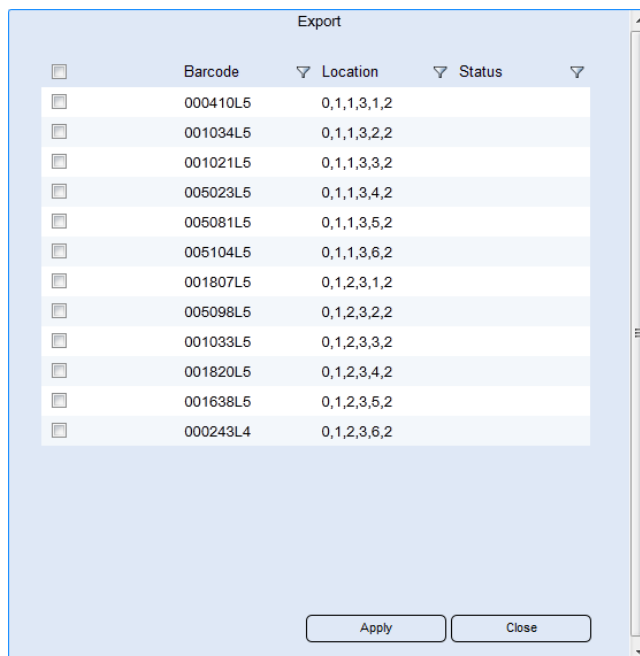
4. In the **Operations Area**, click **Export**. The **Export** window displays.



5. Click **Apply** to export the selected media to the I/E station. The North Panel is updated with the new location information for the media.
6. Click **Close** to exit the **Export** window.

Export Media

1. From the menu bar, select **Partitions**. The **Partitions** box becomes active in the **Operations** panel.
2. In the North Panel, select the partition you want to export media from.
3. From the **Operations** area, click **Export**. The **Export** window displays.



- 4. Select the media you want to import. Selecting the checkbox at the top of the list of media selects all media listed to be exported.
- 5. Click **Apply**.
- 6. Click **Close** to exit the **Export** window.

Move Media

Delete this text and replace it with your own content.

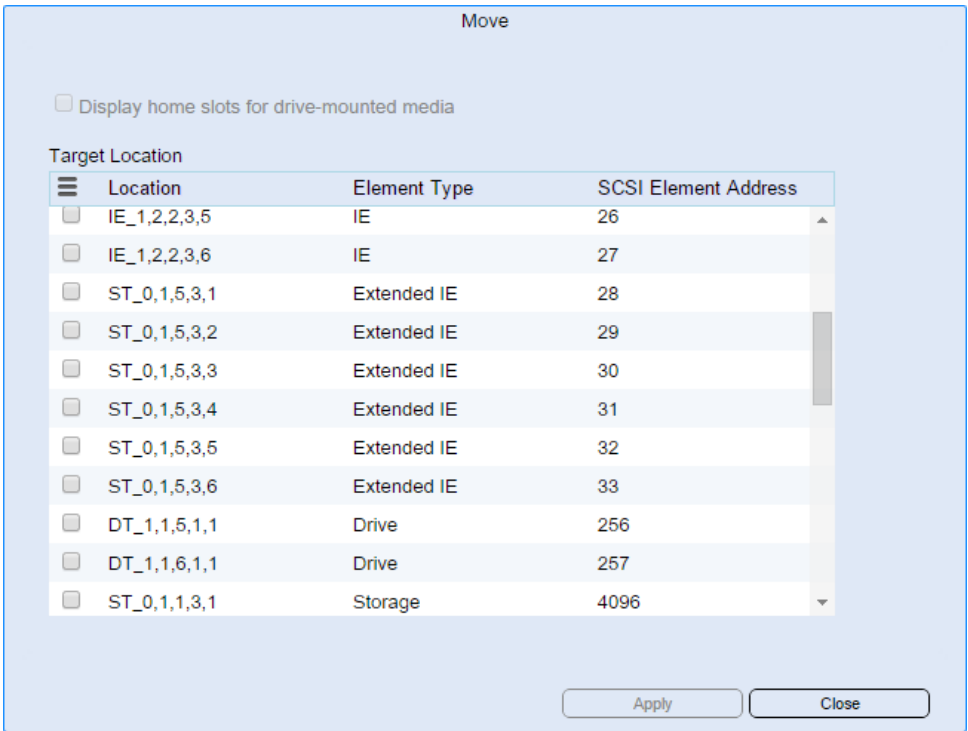
Move Media Within a Partition

The **Move** dialog box enables you to move media from one location to another within a partition.

- 1. From the menu bar, select **Media**. The **Media** box becomes active in the **Operations** panel.
- 2. In the **North Panel**, you will see all the partitions listed and also any media that is currently unassigned. Click the + next to a partition name. The + will expand the partition and all media assigned to that partition will display.
- 3. Select the check box next to the media you want to move.

Note: Only one cartridge can be moved at a time.

- 4. In the **Operations Area**, click **Move**. The **Move** window displays.



The **Move** window shows all the assigned I/E station, extended I/E, storage and drive slots and their coordinates as well as the SCSI Element Address.

- 5. Select the check box next to the location you want to move the selected media to.

6. Click **Apply** to move the selected media to its new slot. The North Panel is updated with the new location information for the media.
7. Click **Close** to exit the **Move** window.

Moving Media Between Active Vault or AMP and Standard Partitions

The library does not allow you to move media directly between one standard partition and another standard partition. However, you are allowed to move media directly from a standard partition to a library managed partition, and vice versa. Library managed partitions include Active Vault, Automated Media Pool (AMP), and Extended Data Lifecycle Management (EDLM) partitions.

i Note: Manual movement between library managed partitions and standard partitions will require inventory reconciliation with the backup application managing the standard partition.

i Note: Moving media between a standard partition and a library managed partition will take the standard partition offline during the operation.

Status

Tickets are your primary troubleshooting tool when you experience problems with the library. A ticket provides details and reports about the issue and library conditions at the time of the event. It also provides guidance on how to resolve the issue. If you are an administrator or a service representative, you can access the tickets through the LMC.

When the library detects an issue, it creates a ticket for it. A ticket includes the following types of information:

- Details about the issue
- Reports that are associated with the ticket
- A repair page that provides corrective actions

In most cases, tickets indicate operational failures that do not always point to a single CRU/FRU as having failed or causing an issue. IN such Status indicator cases, customer repair instructions are provided to isolate the issue and recover from the failure. Only if the library is able to clearly identify a failing CRU/FRU will the repair instruction request service or specific CRU/FRU replacement.

i Note: Tickets can indicate failures or other serious problems, but they also can indicate warning conditions that you should investigate. For example, opening the library's access door or intentionally disconnecting drive fibre channel connections, causes the library to create a ticket, but if such operation is performed intentionally this condition would not indicate serious problems. However, you should still investigate the tickets to make sure no issue has been caused inadvertently by an aisle access operation or SAN configuration.

The library assigns a severity level to each ticket that it creates, and it notifies users of the ticket. The following table describes possible severity levels for tickets.

Severity Level	Description
1 (Failed)	<p>Indicates that a failure or serious condition has occurred within a library subsystem that requires immediate corrective action. In some cases, a hardware component is no longer functioning at an acceptable level or has failed. In other cases an operation may not have completed without a component having actually failed.</p> <p>Examples of failure situations include a FRU that is not functioning, a temperature threshold that may affect operations, or an Ethernet or FC connectivity issue that requires resolutions to network or SAN fabric connectivity issues before operations function normally again.</p>
2 (Degraded)	<p>Indicates that a degraded condition exists within a library subsystem that impacts system performance or redundancy. Typical library operations can continue without immediate corrective action, but an administrator should investigate the condition and correct the problem soon.</p> <p>Examples of degraded situations include a redundant power supply that has failed or a connectivity problem that has caused failover to occur.</p>
3 (Warning)	<p>Indicates that a condition exists within a library subsystem that has some or little effect on system operations. Typical library operations can continue without immediate corrective action, but you should investigate the condition and correct the problem when possible.</p> <p>Examples of warning situations include a FRU that is functioning less reliably, or drives that cannot unload a tape while other drives are still available to service other requests, or a temperature threshold that has been reached that does not affect reliable operations.</p>

RAS Ticket

Tickets are your primary troubleshooting tool when you experience problems with the library. A ticket provides details and reports about the issue and library conditions at the time of the event. It also provides guidance on how to resolve the issue. If you are an administrator or a service representative, you can access the tickets through the WebGUI. This section explains how to display ticket lists, view ticket and report details, view repair pages, and resolve and close tickets.

RAS Ticket Maintenance

Delete this text and replace it with your own content.

View a RAS Ticket Resolution

1. From the menu bar, select **RAS Tickets**. The **RAS Tickets** window becomes active in the **Operations** panel.
2. Select a RAS ticket from the list in the North Panel by clicking the checkbox next to it.
3. In the **Operations Area**, click **Resolution**. A new browser tab is opened displaying the resolution for the RAS ticket.
4. Review the resolution to determine how to address the issue.
5. Close the browser tab when you are finished reviewing the RAS resolution.
- 6.

Close a RAS Ticket

1. From the menu bar, select **RAS Tickets**. The **RAS Tickets** window becomes active in the **Operations** panel.
2. Select a RAS ticket from the list in the North Panel by clicking the checkbox next to it.
3. In the **Operations Area**, click **Close Ticket**. The ticket is removed from the list in the North Panel.
- 4.

Quantum_Support

Delete this text and replace it with your own content.

View Quantum Online Support

1. From the menu bar, select **RAS Tickets**. The **RAS Tickets** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Online Support**. A new browser tab is opened displaying the online support page on Quantum.com
3. Close the browser tab when you are finished.

RAS Ticket Logs

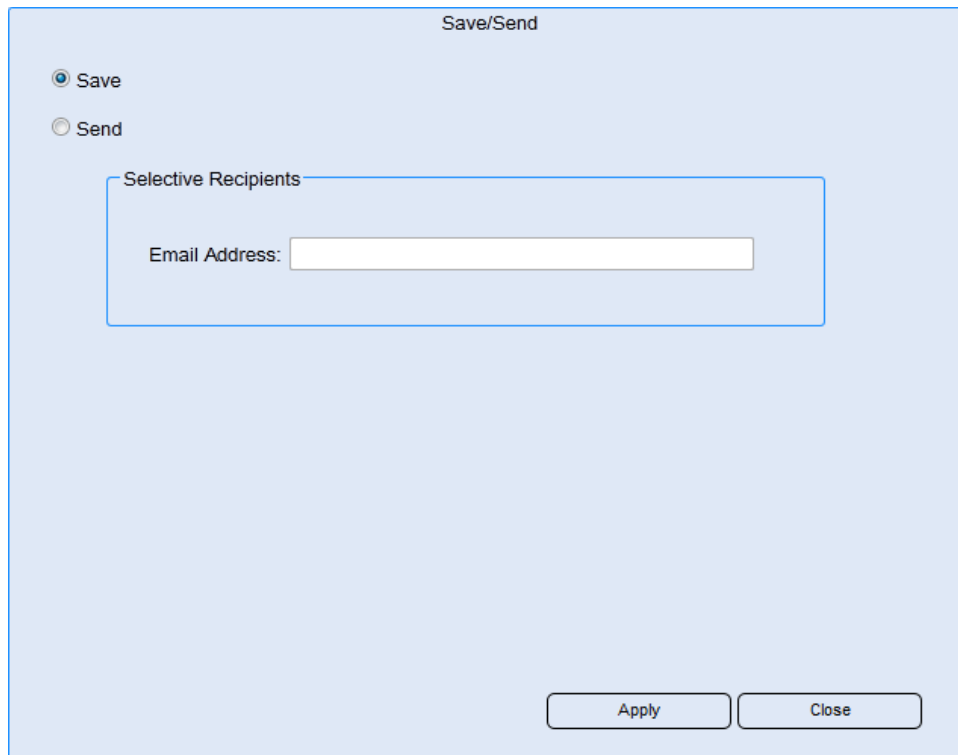
Delete this text and replace it with your own content.

Save a RAS Ticket Log

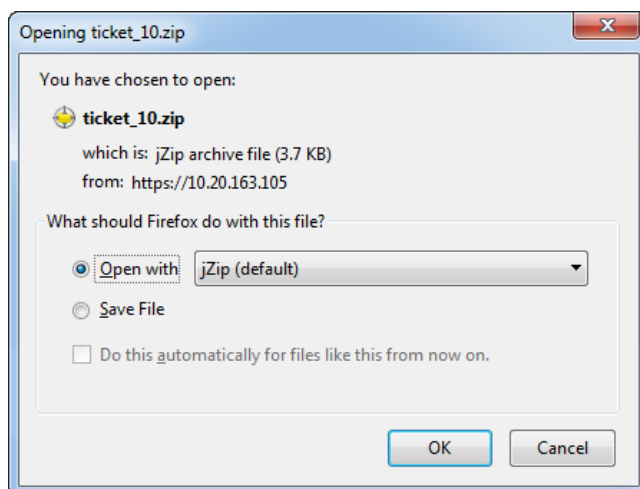
1. From the menu bar, select **RAS Tickets**. The **RAS Tickets** window becomes active in the

Operations panel.

2. In the **Operations Area**, click **Save/end**. The **Save/Send** window displays.



3. Select the **Save** radio button.
4. Click **Apply**. A save dialog box displays.

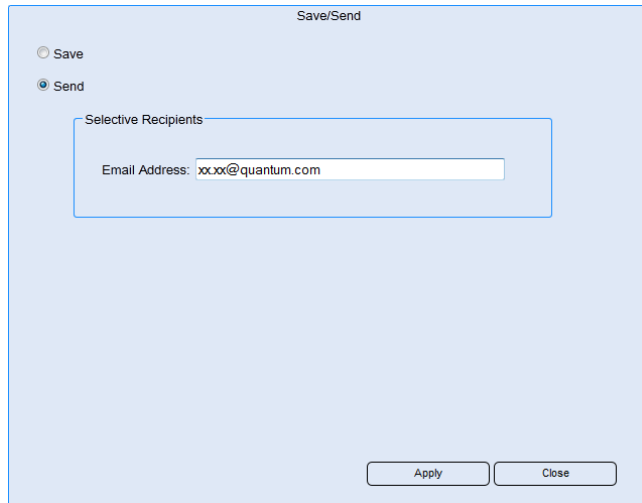


5. Select the **Save File** radio button.

6. Click **OK**. The ticket is saved to your web browser's download folder.
7. Click **Close** to exit the **Save/Send** window.

Send a RAS Ticket Log

1. From the menu bar, select **RAS Tickets**. The **RAS Tickets** window becomes active in the **Operations** panel.
2. In the **Operations Area**, click **Save/Send**. The **Save/Send** window displays.



3. Select the **Send** radio button.
4. Enter an email address.
5. Click **Apply**.
6. Click **Close** to exit the **Save/Send** window.

RAS Ticket Report

Delete this text and replace it with your own content.

View a RAS Ticket Report

1. From the menu bar, select **RAS Tickets**. The **RAS Tickets** window becomes active in the **Operations** panel.

2. In the **Operations Area**, click **Reports**. The **Reports** window displays.

Reports

=====

Head Report	-1
Report Id	27
Description	RCU sled CAN interface at 1,1,1,11,1,1 communication has failed
Event Code	14_05_18_00_80806209
Group	Connectivity
Modifier	0x0
Posted Date	2015-01-20 14:40:28 UTC-7
Repair Link	14_05_hm
Serial Number	HU19487U2K
Status	Drives
Summary	Drive sled polling has determined by drive polling that the SLED CAN interface communication has failed (SLED DRIVE COM PROBLEM)

Apply

Close

3. Click **Close** to exit the **Reports** window.

Reports

The following reports are available:

Report Name	Filters
Drive Utilization	The Drive Utilization Report provides information as to when tape drives were mounted and un-mounted, capturing how much data the drives read and wrote during such mount sessions. The report information provides all details to allow further analysis as to which drives may be under- or over-utilized for tape cartridge load operations while also providing read/write performance data to assess tape cartridge residency needs.

Report Name	Filters
Media Integrity Analysis	The Media Integrity Report provides information as to which drive reported which Tape Alert while being loaded with which tape cartridge. The report information provides details to allow further analysis as to which media or which drive may be a cause for media or drive failures.
Media Usage	The Media Usage Report provides media information capturing tape cartridge identification and media capacity and usage information as well as unrecovered and recovered read/write error count statistics.
Media Security	The Media Security Report provides information as to which tape cartridge was removed either expectedly (properly exported) or removed unexpectedly (removed during open door condition or while library was powered off) to assist administrators with tape cartridge inventory verifications.
Cross Partition Media Moves	
Media Inventory	The Media Inventory Report provides a listing of all media detected within the library, showing tape cartridge location, barcode label identification, partition ownership as well as current media encryption status.
EKM Partition Activity	The EKM (Encryption Key Management) Audit Report provides partition encryption method summaries, providing historic information as to when a library partition was enabled or disabled for library managed encryption.
EKM Media Status	The EKM (Encryption Key Management) Audit Report provides partition encryption method summaries, providing historic information as to when a library partition was enabled or disabled for library managed encryption.
Login Activity	The Library Login Report provides login and command request history. Specifically, the report details as to who logged in when and how, capturing command operations and command attempts to provide a library login audit trail.
Partition Utilization	The Partition Utilization Report provides information for library partition usage determination, capturing high watermark counts for drive, slot and media usage. The report information provides all necessary details to evaluate library and partition usage for proper sizing and/or usage determination.
Library Configuration	The Library Configuration Record summarizes library component and partition configuration data, providing a hardware and firmware component inventory as well as storage slot usage summaries.

Basic Report Tasks

Delete this text and replace it with your own content.

Add a Report Filter

1. From the menu bar, select **Reports**. The **Reports** box becomes active in the **Operations** panel.
2. In the North Panel, select the report you want to modify.
3. Click Add. The Add window displays.

The screenshot shows a light blue dialog box titled "Add". Inside, there is a section labeled "Filter" which contains several input fields. The first field is "Filter Name:" followed by a red dashed rectangular box, indicating it is a required field. Below it is "Day Range:" with a text box containing the number "7". Next is "Partition:" with a dropdown menu currently showing "Physical Library". Below that are "Drive SN:" and "Media Barcode:" each followed by an empty text box. At the bottom right of the dialog box are two buttons: "Apply" and "Close".

4. Enter values in the fields. Depending on which report you select, the fields are as follows:

Report Name	Filters
Drive Utilization	<p>Filter Name (required): name the filter</p> <p>Day Range: the number of days to capture from the current date</p> <p>Partition: select a specific partition or the entire library</p> <p>Drive SN: the serial number of a specific drive. Leaving blank includes all the drives in the selected partition or entire library</p> <p>Media Barcode: the barcode of a specific tape in the library</p>
Media Integrity Analysis	<p>Filter Name (required): name the filter</p> <p>Day Range: the number of days to capture from the current date</p> <p>Drive SN: the serial number of a specific drive. Leaving blank includes all the drives in the selected partition or entire library</p> <p>Media Barcode: the barcode of a specific tape in the library</p>

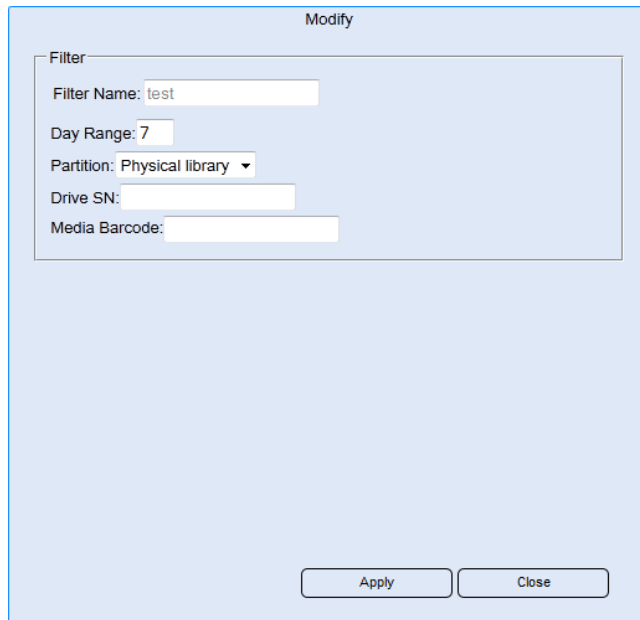
Report Name	Filters
Media Usage	Filter Name (required): name the filter Day Range : the number of days to capture from the current date Media Barcode : the barcode of a specific tape in the library
Media Security	Filter Name (required): name the filter Day Range : the number of days to capture from the current date Media Barcode : the barcode of a specific tape in the library
Cross Partition Media Moves	Filter Name (required): name the filter Day Range : the number of days to capture from the current date
Media Inventory	Filter Name (required): name the filter Partition : select a specific partition or the entire library
EKM Partition Activity	Filter Name (required): name the filter Day Range : the number of days to capture from the current date Partition : select a specific partition or the entire library
EKM Media Status	Filter Name (required): name the filter Day Range : the number of days to capture from the current date Partition : select a specific partition or the entire library
Login Activity	Filter Name (required): name the filter Day Range : the number of days to capture from the current date
Partition Utilization	N/A
Library Configuration	N/A

- Click **Apply**. In the North Panel, a + appears next to the report. This indicates that there is a report filter created for the report.
- Click **Close** to exit the **Add** window.

Modify a Report Filter

- From the menu bar, select **Reports**. The **Reports** box becomes active in the **Operations** panel.
- In the North Panel, select the report filter you want to modify. The filter appears underneath the report and is accessed by clicking the + next to the report.

3. Click **Modify**. The **Modify** window displays.



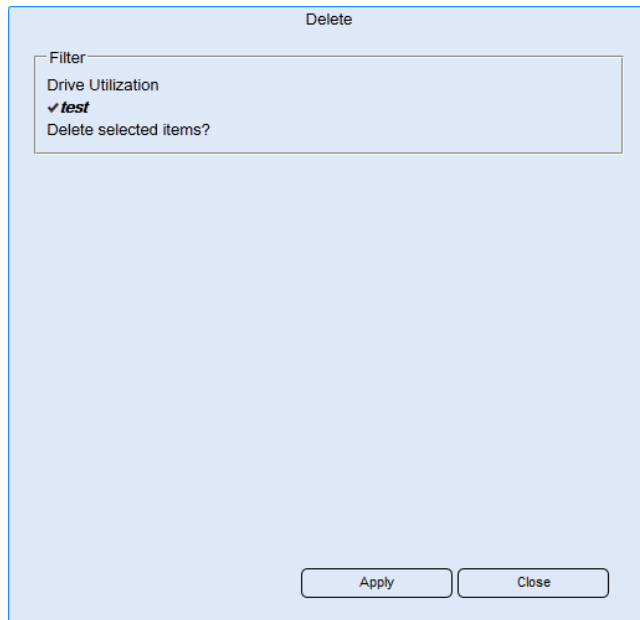
The screenshot shows a window titled "Modify" with a light blue background. Inside the window, there is a section labeled "Filter" with a thin border. Within this section, there are five input fields: "Filter Name:" with the text "test", "Day Range:" with the value "7", "Partition:" with a dropdown menu showing "Physical library", "Drive SN:", and "Media Barcode:". Below the "Filter" section, at the bottom right of the window, are two buttons: "Apply" and "Close".

4. Make the necessary changes to report filter.
5. Click **Apply**.
6. Click **Close** to exit the **Modify** window.

Delete a Report Filter

1. From the menu bar, select **Reports**. The **Reports** box becomes active in the **Operations** panel.
2. In the North Panel, select the report filter you want to modify. The filter appears underneath the report and is accessed by clicking the + next to the report.

3. Click **Delete**. The **Delete** window displays.



4. Click **Apply**. The selected report filter is removed from the list in the North Panel.
5. Click **Close** to exit the **Delete** window.

View a Report

Delete this text and replace it with your own content.

View a Filtered Report

1. From the menu bar, select **Reports**. The **Reports** box becomes active in the **Operations** panel.
2. In the North Panel, select the filtered report you want to view. The filter appears underneath the report and is accessed by clicking the + next to the report.
3. Click **View**. The filtered report is displayed in a new tab on your browser.

Note: You must have pop up enabled on your browser to see the filtered report.

View Report in a Chart

Delete this text and replace it with your own content.

View a Filtered Report in a Chart

1. From the menu bar, select **Reports**. The **Reports** box becomes active in the **Operations** panel.

2. In the North Panel, select the filtered report you want to modify. The filter appears underneath the report and is accessed by clicking the **+** next to the report.
3. Click **Chart**. The **Chart** window displays.

The screenshot shows a window titled "Chart" with a light blue background. It contains two main sections: "Drive Utilization" and "Chart".

Drive Utilization

- Filter: test
- End Date: 2015-01-21 (with a calendar icon)
- Day Range: 7
- Partition: Physical Library (dropdown menu)
- Drive SN: (text input field)
- Media Barcode: (text input field)

Chart

- Data Type: Data Written/Read (dropdown menu)
- Chart Type: Bar (dropdown menu)
- Display Basis: Date Range (dropdown menu)
- Axis Inversion: ☐

At the bottom right, there are two buttons: "Apply" and "Close".

4. In the Chart section, complete the following:

Field Name	Value
Data Type	<ul style="list-style-type: none">• Data Written/Read• Mount Count
Chart Type	<ul style="list-style-type: none">• Bar
Display Basis	<ul style="list-style-type: none">• Data Range• Partitions• Drive
Axis Inversion	<ul style="list-style-type: none">• Yes if box is checked• No if box is unchecked (default)

5. Click **Apply**. A filtered report displays in chart form.
6. When finished viewing the chart, click the **X** at the top left next to the report name.
7. Click **Close** to exit the **Chart** window.

Save/Send a Report

Delete this text and replace it with your own content.

Save a Filtered Report

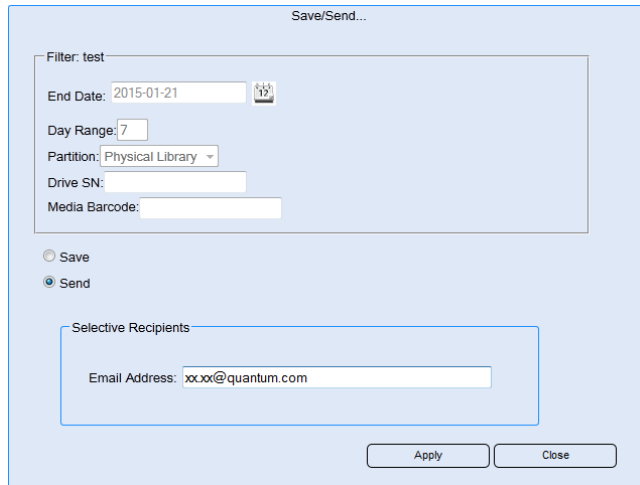
1. From the menu bar, select **Reports**. The **Reports** window becomes active in the **Operations** panel.
2. In the North Panel, select the filtered report you want to save. The filter appears underneath the report and is accessed by clicking the **+** next to the report.
3. In the **Operations Area**, click **Save/Send**. The **Save/Send** window displays.

4. Select the **Save** radio button.
5. Click **Apply**. A save dialog box displays.

6. Select the **Save File** radio button.
7. Click **OK**. The filtered report is saved to your web browser's download folder.
8. Click **Close** to exit the **Save/Send** window.

Send a Filtered Report

1. From the menu bar, select **Drives**. The **Save/Send** window becomes active in the **Operations** panel.
2. In the North Panel, select the filtered report you want to send. The filter appears underneath the report and is accessed by clicking the **+** next to the report.
3. In the **Operations Area**, click **Save/Send**. The **Save/Send** window displays.



The screenshot shows the 'Save/Send...' dialog box. It has a title bar 'Save/Send...'. Inside, there's a section 'Filter: test' with fields for 'End Date: 2015-01-21', 'Day Range: 7', 'Partition: Physical Library', 'Drive SN:', and 'Media Barcode:'. Below this, there are two radio buttons: 'Save' and 'Send', with 'Send' selected. Underneath is a 'Selective Recipients' section with an 'Email Address: xx.xx@quantum.com' field. At the bottom right are 'Apply' and 'Close' buttons.

4. Select the **Send** radio button.
5. Enter an email address.
6. Click **Apply**.
7. Click **Close** to exit the **Save/Send** window.