

## Scalar i6000 Release Notes 830Q.GS11400

**Product/Software Release Date**      June 2024

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# About This Release

The Scalar i6000 830Q.GS11400 release is a maintenance release for Scalar i6000 libraries.

## What's New in this Release?

This release supports the Scalar i6000 library. Enhancements in this library include:

- New drive firmware for LTO-7 (Q3A0), LTO-8 (Q3A0), and LTO-9 (R3GO) drives.
- The Scalar i6000 library now allows the configuration of more than 240 I/E slots.
- Improved calibration options for partitions.
- Bug fixes (see [Resolved Issues on page 8](#)).

## I/E Slot Configurations

A configuration option was added to the Local User Interface Setup menu to configure a system-wide, modified SCSI element addressing approach, such that drive elements do not start at element 0x0100 (default) but map to starting element address 0x0800. This allows for larger I/E element configurations in standard partitions beyond the 240-element limitation.

To allow for I/E element configurations of size larger than 240 elements, disable the **Default SCSI Element Addressing** setting (Setup > System Settings > Physical Library), then configure the respective partition(s) for the required I/E element size.

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- i Note:** Scalar i6000 tape libraries that disable the default SCSI element address setting and configured library partitions for Stornext control, require a Stornext CLI operation to prepare Stornext for the modified SCSI element address change. From the StorNext CLI, issue the following command: `/usr/adic/MSM/util/archive_cmp -a <archive name> -u`

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## General Information

- The Scalar library Web UI application requires that the browser cache be cleared and the application re-loaded to ensure that all new functionality is implemented.
- The Web client places a cookie on the user's computer to provide the last user's credentials upon login. The cookie only collects the user's credentials to facilitate login, and does not collect any other user data.

- To help maintain system integrity and for marketing purposes, Quantum regularly collects system information through automatic emails and cloud based telemetric auto support. These emails and auto support telemetric data contain configuration and status information only, and do not contain any customer data stored on the system.

## Email Support

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 **Note:** This is only relevant if you have an email server (SMTP).

To disable this function:

1. Log on to your library.
2. Select **Notifications** from the **Navigation** menu.
3. Select the check box next to *scalartelemetrics@quantum.com* in the **North Panel**.
4. From the **Operation** panel, select **Reports**.
5. Click the trash can icon next to **Scalar Telemetrics report**.
6. Click **Apply**, then **Close**.

## Auto Support (Cloud Based Analytics)

To disable this function:

1. Log on to your library.
2. Select **Notifications** from the **Navigation** menu.
3. Select the check box next to *Auto Support* in the **North Panel**.
4. To disable RAS tickets, select **RAS Tickets** from the **Operation** panel.
5. De-select the **Enable Auto Support Communication** check box.
6. Click **Apply**, then **Close**.
7. From the **Operation** panel, select **Reports**.
8. Click the trash can icon next to **Scalar Telemetrics report**.
9. Click **Apply**, then **Close**.

# Library Default Settings

Scalar i6000 software is installed with certain default settings. This section outlines those default settings. Review this section to determine if any of the default settings need to be changed to make your library run more effectively.

WebGUI Path	Option	Default Setting
Library > Settings	Automatic Inventory	Disabled
	Library-Assisted Drive Unload	Enabled
	Logical Drive Serial Number Addressing	Enabled
	Robot Health Check Interval	Once Daily
	Tower Health Check Interval	Once Daily
	Rail Health Check Interval	Once Daily
Network > Connectivity	SSH	Disabled
	XML Interface	Disabled
	ICMP	Enabled
System > Notifications	Email Reports / Auto Support <sup>1</sup>	Enabled
System > Settings	Aisle Lights	Enabled (duration set to 1 hour)
System > SNMP	SNMP v1, v2, and v3	Enabled
User Access > Settings	Remote Service Login	Disabled
	Reverse Tunnel	Disabled

1. The tech support (techsup@quantum.com) and telemetrics (scalartelemetrics@quantum.com) email notifications are enabled by default and active once an email (SMTP) server is configured.

## Security Scanners

Quantum tests with the following Security scanners against the library:

- Tenable Nessus Professional Version 10 - Version 10.5.1 (#8) WINDOWS

No high/critical vulnerabilities found against this release using Nessus Professional Security Scanner.

# Compatibility and Support

## Encryption Key Management Drive Support

While the Scalar i6000 library supports multiple partitions configured for encryption, only a single encryption option can be used.

### IBM Drives

Encryption Options	IBM LTO-4	IBM LTO-5	IBM LTO-6	IBM LTO-7	IBM LTO-8	IBM LTO-9
Application Managed Encryption	Yes	Yes	Yes	Yes	Yes	Yes
Q-EKM	Requires EKM License	Requires EKM License	Requires EKM License	No	No	No
TKLM/SKLM <sup>2</sup>	Requires EKM License					
SKM	No	Requires EKM License				
KMIP Key Manager <sup>1</sup>	No	Requires EKM License				

1. Only SafeNet/Thales encryption key servers are supported/tested KMIP configurations.

2. Applies to TKLM/SKLM and SGKLM (GKLM) for IPP communication protocol only.

## HP Drives

Encryption Options	HP LTO-4	HP LTO-5	HP LTO-6
Application Managed Encryption	Yes	Yes	Yes
SKM	Requires EKM License	Requires EKM License	Requires EKM License
KMIP Key Manager <sup>1</sup>	Requires EKM License	Requires EKM License	Requires EKM License

1. Only SafeNet/Thales encryption key servers are supported/tested KMIP configurations.

2. Applies to TKLM/SKLM and SGKLM (GKLM) for IPP communication protocol only.

## Web Browser Support

The Scalar i6000 WebGUI supports the following web browsers. Quantum recommends upgrading to the latest version of the browser.

Web Browser	Versions Supported
Internet Explorer	Not supported.
Google Chrome	Version 114 and above.
Mozilla Firefox	Version 55 and above.
Apple Safari	Recommend latest version.
Microsoft Edge	Recommend using Edge version 79 or greater, using the Chromium engine. This resolves issues of slowness found in the older versions of Edge.

## Drive Firmware

IBM Drive Types	Latest Firmware Version
IBM LTO-3 (FC) 2 Gb	93GM
IBM LTO-3 (FC) 4 Gb	93GM
IBM LTO-4 (FC) 4 Gb	C7QH
IBM LTO-5 (FC) 8 Gb	H970 <sup>1</sup>

IBM Drive Types	Latest Firmware Version
IBM LTO-6 (FC) 8 Gb	KAJ8 (Standard) <sup>1</sup>
	KAJ8 (FIPS)
IBM LTO-7 (FC) 8 Gb	Q3A0 (Standard) <sup>1</sup>
	Q3A0 (FIPS)
IBM LTO-8 (FC) 8 Gb	Q3A0 (Standard) <sup>1</sup>
	Q3A0 (FIPS)
IBM LTO-9 (FC) 8 Gb	R3G0 (Standard) <sup>1</sup>
	R3G0 (FIPS)
IBM LTO-9 (SAS) 12 Gb	R3G0 (Standard) <sup>1</sup>
	R3G0 (FIPS)

<sup>1</sup> Bundled with library firmware.

HP Drive Types	Latest Firmware Version
HP LTO-3 (FC) 2 Gb	L67Z
HP LTO-3 (FC) 4 Gb	M69Z
HP LTO-4 (FC) 4 Gb	H64Z
HP LTO-5 (FC) 8 Gb	I6RZ <sup>1</sup>
HP LTO-6 (FC) 8 Gb	J5WZ <sup>1</sup>

<sup>1</sup> Bundled with library firmware.

# Resolved Issues

This release of Scalar i6000 830Q.GS11400 firmware resolved the following issues (bug fixes).

Change Request Number	Service Request Number	Description	Resolution
I6K-2337		Configurable SCSI element addressing for more than 240 I/E stations. This is configurable in the Local User Interface console only.	Enhancement.
I6K-2550		CBA snapshot collection allowed after service license expiration.	Enhancement.
I6K-2773	718335	Valid SSH certificate does not upload.	Fixed.
I6K-2774	729768 735770	Library incorrectly generates RAS ticket (SPA Circuit Card Failure) after ever library reboot.	Fixed.
I6K-2846		Web services media calibration command issues.	Fixed.
I6K-2864		In the LTO-9 calibration feature, you cannot select a standard partition to calibrate all LTO-9 media with an unknown calibration status.	Fixed.
I6K-3042		LTO-9 drive firmware update (R3G0).	Enhancement.
I6K-3043		LTO-7 and LTO-8 drive firmware update (Q3A0).	Enhancement.
I6K-3051	802191	No RAS tickets reported when library robotic issues occur.	Fixed.
WUI-1856		Partition Add dialog box updated to a single selection for partition emulation mode. This replaces the Vendor Identification and Product Identification options.	Enhancement.

# Known Issues

This release of Scalar i6000 830Q.GS11400 firmware has the following known issues:

Change Request Number	Service Request Number	Description	Workaround
I6K-91		Under rare situations, robot does not initialize after system reboot.	Vary off and vary on the robot.
I6K-295		Both robots used when selecting left or right robot for a robot scanning diagnostic test.	Vary off the robot not selected scanning before running diagnostic test.
I6K-300		Network IPv6 stateless to stateful change results in error.	This error occurs on the first attempt. The change will occur on the second attempt.
I6K-492		HDC default ISR on multiple towers after swapping scanners in towers.	Power cycle the tower. If this does not fix the issue, reset the library.
I6K-848		Under rare situations, LUI locks up when attempting a login.	Use the WebGUI to reset (not restart/reboot) the library.
I6K-967		RAS ticket automatically closes when new drive is varied off. It should only automatically close when resolved.	Make sure all drive related RAS ticket information is known before a drive is varied off.
I6K-1021	568471	Correct coordinates but wrong locations in non-Java GUI only.	Perform proper logical configuration changes before making physical configuration changes.
I6K-1267		HP LTO-6 drives must remain at drive firmware version J5KZ.	See issue I6K-1369 below.
I6K-1369		EDLM scan fails on WORM media in HP LTO-6 drive. The tape is left in the drive and the drive must be varied off and on in order to unload the drive.	Use J5KZ drive firmware if you attempt an EDLM scan on WORM media in an HP LTO-6 drive. Do not use J5WZ drive firmware.
I6K-1611		Reset (not restart/reboot) of library interferes with drives	Make sure that on library reset, drives are not sled-leveled, tape drive firmware-leveled or reconfigured on bring-up. This will ensure that the drives will not interfere with host connections and I/O operations.

Change Request Number	Service Request Number	Description	Workaround
I6K-1649		NTP will not change to 24 hours format.	Disable NTP. Switch to 24 hour format and apply the change. Once the change has been applied, enable NTP.
I6K-1792		Drive Ethernet communication does not recover after a long frame to frame Ethernet outage.	Vary drive off and on.
I6K-1916	646039 686261 0720033	Error occurs when LDAP logins are uppercase characters.	Use lowercase login characters.
I6K-1924		LTO-9 media initialization time.	When LTO-9 media is loaded into a drive for the first time, it may take up to two hours for the media to be initialized and calibrated. You should expect delays in media access and unload timing
I6K-1933		Cannot access GUI after the library reboots with an open door.	Do not reboot library with when a library door is open.
I6K-1986		RAS ticket report notification is in csv file format, but uses "!" separators instead of "," separators. This causes readability issues when opening the file in Excel.	Change the separator format in Windows: <ol style="list-style-type: none"> <li>1. In Microsoft Windows, click the <b>Start</b> button, and then click <b>Control Panel</b>.</li> <li>2. Open the dialog box for changing Regional and Language settings.</li> <li>3. Click <b>Additional Settings</b>.</li> <li>4. Enter ! in the List separator field.</li> <li>5. Click <b>OK</b> twice.</li> </ol>
I6K-1987		A duplicate barcode error occurs if a drive with a stuck tape is removed while varied on and not re-installed into the library.	The removed drive must be re-installed in the library.
I6K-2067		On occasion, when library reboots with an open door and the robotics are not ready, LUI shows "Running Library Initialization"	Ignore "Running Library Initialization" message. Enable robotics once you have completed service operations and have closed the door.
I6K-2328	667067 672767	Removing active Control Path drive from the library prevents selection of different Control Path drive.	Remove Control Path configuration from drive before removal.

Change Request Number	Service Request Number	Description	Workaround
I6K-2371		After an upgrade to 800 library firmware, the WebGUI Drives North Panel displays a phantom drive in location 1,1,5,1,1 with "-???-Unknown" in the type field.	To remove the phantom drive, select the drive and <b>Vary Off</b> . Then remove the drive from the assigned partition.
I6K-2409	674201	If a fan is removed from the library for longer than 15 minutes and then reinstalled, the CMB does not reestablish fan speed control and the fans remain at high speed.	Limit fan removal from chassis to under 15 minutes.
I6K-2488	682793	SCSI verify (0x13) command hangs for 38 minutes. This then causes EDLM jobs to hang.	This only affects FCB attached drives. <ul style="list-style-type: none"> <li>• Attach all EDLM drives to EEB board instead of FCB.</li> <li>• Use IBM EDLM drives attached to the FCB.</li> </ul>
I6K-2506	684843	Changer visibility lost after toggling LME.	Vary off and vary on the drive.
I6K-2510	0685532	WebGUI incorrectly shows media not in slot.	Restart the LMC using Web Services or the LUI.
I6K-2517	685530	Library does not establish Serial Number after MCB replacement.	Contact Quantum Service.
I6K-2531		Remove Nexus does not clear a prevent medium removal.	Clear from the host. Vary the drive off and then back on.
I6K-2559	688460 688465	Control Path configured drives lose host connectivity.	Vary drives off and back on.
I6K-2563	691593	A conflicting media location occurs between different Web Services API calls.	In the (unlikely) event a mismatch of media location is detected, do the following: <ol style="list-style-type: none"> <li>Stop library control and issue a POST <code>aml/system/software/restartLMC</code>, or</li> <li>Select <b>Operations &gt; Restart LMC</b> from the local Operator panel.</li> </ol>
I6K-2613		Configuration isn't marked dirty when I/E magazine is deleted and added to different partition.	Save configuration after making configuration changes.

Change Request Number	Service Request Number	Description	Workaround
I6K-2637	714464	WebGUI import/export does not lock I/E(s) once for all moves.	Lock the I/E via WebGUI or Web Services. Perform moves to and from I/E. Unlock the I/E.
I6K-2641		Expand Web Services media accessibility definitions.	Ignore the accessibility response column.
I6K-2712	721940	Drives appear to reboot after library reset.	Drives will reconnect with a ready status after 20 to 30 minutes.
I6K-2726		Library reset causes intermittent drive sled controller communication failures.	In the event a library reset operation results in RAS ticket event 02_05_18 (Tape Drive Communication Problem), perform a drive vary off and vary on operation once the drive is no longer performing any I/O to the tape drive.
I6K-2835		Library UI shows 2 ports for a single ported drive sleds.	Ignore the second port information if the sled supports a single port configuration only. Data path failover configurations will not apply.
I6K-2867	734289	Unable to allocate resources removed from a partition.	Contact Quantum service for assistance with correcting and updating COD counts.
I6K-2872		Drive becomes stuck when unloading media.	Vary the drive off and on. Once the drive is varied back on, attempt to unload the media again.  If the drive remains stuck when unloading, contact Quantum Service.
I6K-2874		LTO-9 media is eligible for calibration if located in a drive (DT) or I/E slot.	Before starting LTO-9 calibration operations, make sure all eligible LTO-9 media are located in storage (ST) slots in the partition.
I6K-2892		Library core dump occurs during library reset operation.	Use caution when performing a library reset. If a core dump does occur during a library reset, it can cause an unexpected reboot and interrupt drive I/O as the library tries to auto level drive code. This issue will be addressed in the next release.

Change Request Number	Service Request Number	Description	Workaround
I6K-2901		After a library reset, slow Ethernet or no Ethernet connections occur with drives in the library	<p>When a library is reset, some drives may remain in a degraded status. This indicates that host I/O, loading/unloading, and all normal tape operations are available. The drives should return to a ready status within 30 minutes.</p> <p>Some management functions such as Drive Firmware leveling will no be available immediately. This condition will self recover with 24 hours, usually faster.</p>
I6K-2908		LTO drive containing a tape does not auto level when performing vary off/vary on operation.	Remove tape from drive and then vary off/vary on drive.
I6K-2916		Loading media to an available drive causes an error dialog to occur.	If you encounter this an Error 500 with Reason 600, please wait 10 minutes and retry.
I6K-2934		EDLM session does not continue if the tape is manually unloaded from the drive.	Do not manually eject a tape during an EDLM session. If you do, you will have to restart the session.
I6K-2947		LTO-8 drives do not come online.	<p>Do the following:</p> <ol style="list-style-type: none"> <li>1. Vary the drive off.</li> <li>2. Pull and re-seat the drive.</li> <li>3. Vary the drive back on.</li> </ol>
I6K-2970	750513	Unable to apply a service license to a library, even after a library reboot.	This issue occurs when the SNMP community string is changed from the default. To successfully apply the service license, change the SNMP community string back to default.
I6K-2990	747249 748243 752810 758560	Library incorrectly reporting EDLM drive operation failures with EDLM Drive Operation Failure RAS tickets.	Retry EDLM operation.

Change Request Number	Service Request Number	Description	Workaround
I6K-2994	0754807	After a new library installation, the power supply status is missing in the WebGUI.	<p>Power Supply status may be missing if the PS is not properly seated or an EMB is connected with a defective cable in the frame where the PS(s) reside.</p> <p>If the frame contains an EMB with a blinking amber LED, contact service for an EMB cabling connection analysis.</p> <p>For all other cases, schedule a library shutdown and reseal the PS(s) to assure secure PS insertion, then restart the library.</p>
I6K-2997		After a new library installation, EMB LEDs are amber.	The EMB may have a bad power connection. Contact Service for proper EMB cabling and connection.
I6K-3012		Library fails to become ready after a firmware upgrade.	<p>Do one or more of the following:</p> <ol style="list-style-type: none"> <li>1. Open/close door and enable robotics.</li> <li>2. Perform a library restart.</li> <li>3. Pull and re-seat drives that do not become ready.</li> <li>4. Pull and re-seat drives that become ready.</li> </ol>
WUI-1071		Control Path Configuration - Unable to add additional SAS drives after initial Multi-Path configuration.	Remove current Multi-Path configuration. Create new Multi-Path configuration and add SAS drives.
WUI-1273		Drive/Media Issue Timeline does not show all data for selected time frame.	Select larger time frame.
WUI-1389		When selecting both robots for a Library Get/Put Test, only a single scratch tape location is requested by the library and the right robot does not move.	Do not select both robots for a Library Get/Put Test.
WUI-1493		Syslog and Encryption KMIP modal windows in WebGUI does not show 11th row after adding 10 rows.	Only up to 10 entry rows are currently supported. Ignore any additional entry rows.

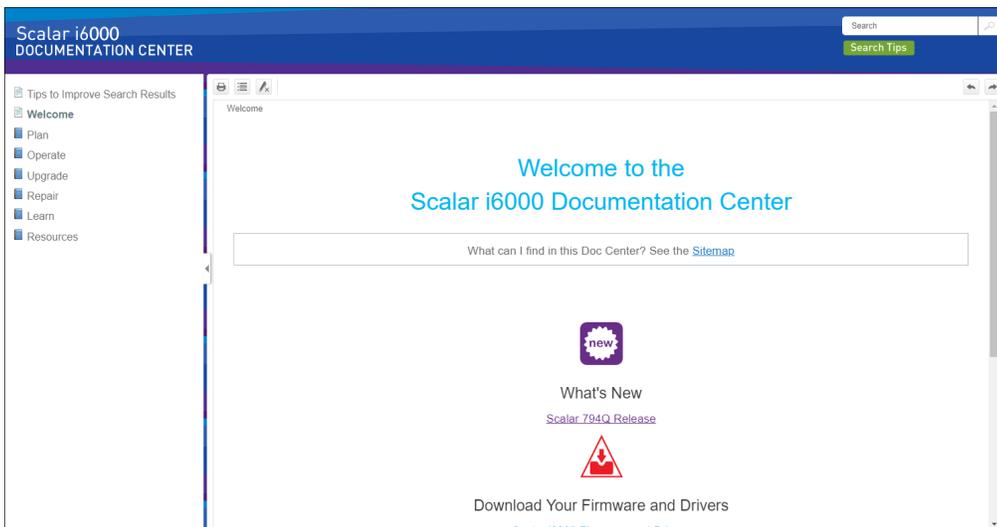
Change Request Number	Service Request Number	Description	Workaround
WUI-1725		Cannot create a new partition using the old name of modified partition.	Do not reuse a partition name that existed and was modified or changed to a different partition name.
WUI-1729		<b>Apply</b> button is incorrectly available with XIE slot in <b>Partition &gt; Resources</b> dialog box.	Ignore that <b>Apply</b> button is enabled if selections are made and undone.
WUI-1730		Large media count unable to display in the WebGUI	Selecting large number numbers of media (< 1000 - 12,000) in the WebGUI may take the library up to 20 minutes to update media data.
WUI-1732		Library does not enable the <b>Calibration</b> button when an LTO-9 tape without media identifier is selected.	Make sure all media has LTO-9 media identifiers as part of barcode label.
WUI-1739		Unable to display large media count on WebGUI.	Selecting large number numbers of media (< 1000 - 12,000) in the WebGUI may take up to
WUI-1785	747134	815Q Service Login requests password change.	Enter a new password, but use the original password as the new password.

# Documentation

All Scalar i6000 documentation is available at the Scalar i6000 Documentation Center:  
[www.quantum.com/Scalari6kDocs](http://www.quantum.com/Scalari6kDocs)

Scalar i6000 documentation includes:

- Site Planning Guide
- Operation Guides
- Repair and Upgrade Guides
- Reference Guides (Web Services, SCSI, SNMP)



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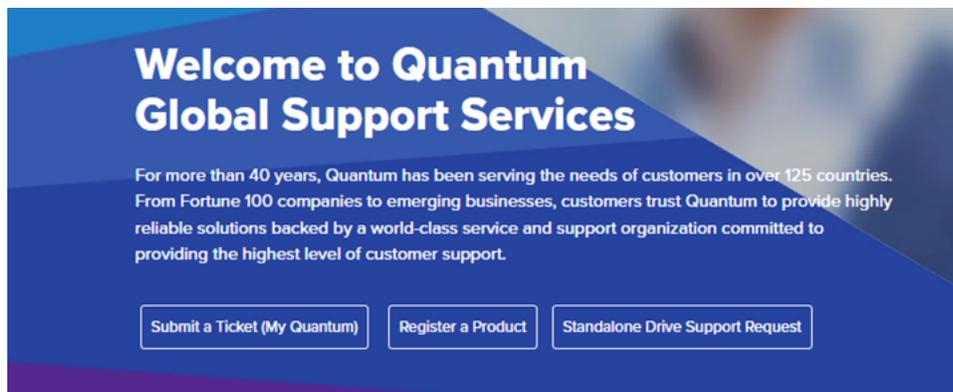
# Contacting Quantum Support

Below is information related to contacting Quantum Support as well as steps to improve your Quantum customer journey.

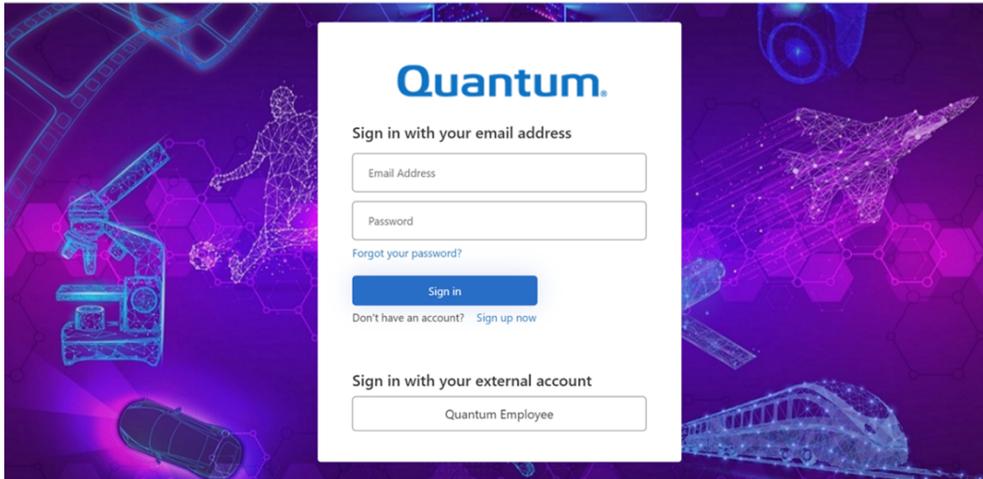
- [Submit a Ticket \(Service Request\) below](#)
- [Use MyQuantum Service Delivery Platform on the next page](#)
- [Use Cloud Based Analytics \(CBA\) on page 19](#)
- [Escalate a Case on page 19](#)
- [Contact Quantum Sales on page 19](#)

## Submit a Ticket (Service Request)

If you need to submit a ticket or speak to Quantum technical support, go to the Support page at <https://www.quantum.com/en/service-support/>



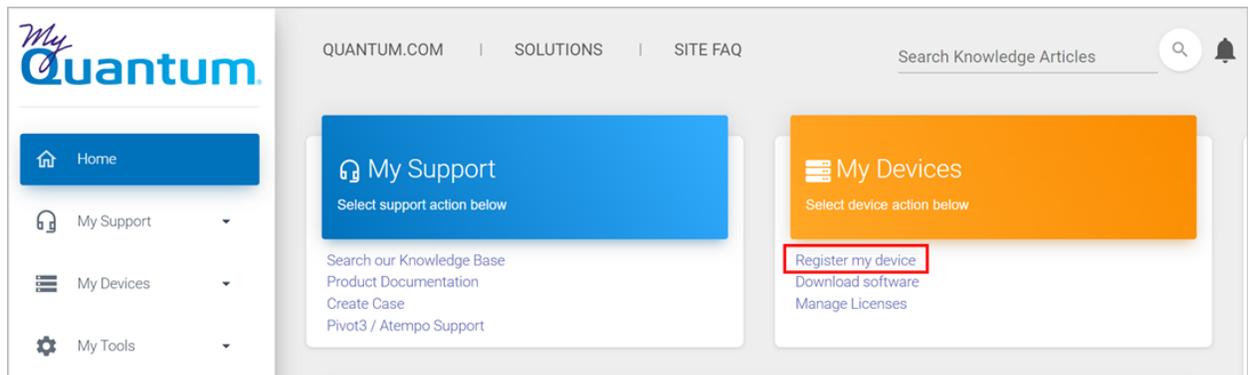
To start the process with Quantum Technical Support, click **Submit a Ticket**. From here, sign in to the MyQuantum Service Delivery Platform or create an account. For more information, refer to the [Use MyQuantum Service Delivery Platform on the next page](#) section below.



## Use MyQuantum Service Delivery Platform

MyQuantum is a single portal for everything Quantum. You can view assets, open support cases, receive real-time updates, and search the Knowledge Base and documentation, all through a secure, online portal.

1. Create an account and log in to the [MyQuantum Service Delivery Platform](#).
2. Register a product on [MyQuantum](#).



3. Request site access to the Cloud-Based Analytics (CBA) monitoring portal and follow the instructions to set up product(s) to connect to CBA. You can use CBA to monitor Quantum products remotely, from a single dashboard, and Quantum Support can use it to help troubleshoot products more efficiently.

Refer to product documentation for product-specific information related to CBA.

## Use Cloud Based Analytics (CBA)

Quantum products are equipped with a Cloud Based Analytics (CBA) agent that can provide log files and snapshots to Quantum CBA servers that are running in the cloud.

CBA enables Quantum systems to collect data regarding system and environment performance. The collected data is bundled and uploaded to the remote CBA server for analysis. You can access Quantum system performance and health results on the CBA dashboard (at <https://insight.quantum.com>) or through the MyQuantum Service Delivery Platform.

The CBA dashboard displays the analytic results of the uploaded CBA data using flexible charting tools, along with an overall health score of each Quantum system configured for the CBA account.

## Escalate a Case

To escalate a case, follow the process documented here: <https://www.quantum.com/en/service-support/resources/escalation/>

## Contact Quantum Sales

<https://www.quantum.com/en/company/contact-us/>