

HP StorageWorks Library and Tape Tools FAQ

Other languages:

[French](#), [German](#), [Spanish](#), [Italian](#), [Korean](#), [Japanese](#), [Chinese](#)

This document: www.hp.com/support/lttfaq

Windows GUI version

This document is a brief, screenshot-based guide to help you follow instructions from HP support. For much more, and detailed information on L&TT, please see the [user guide](#).

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Where is the L&TT user guide?

The user guide is available from the L&TT web page at <http://www.hp.com/support/tapetools>. Follow the **Technical Support & Documentation** link.

Note The user guide is English only.

How do I install L&TT?

- L&TT is available for free download from <http://www.hp.com/support/tapetools> and on the CD that came with your tape drive. The download version is preferred as it is the latest version.
- Install L&TT on any server that can "see" your drive. This is most likely to be the backup server, but it could be another server if you are using a SAN.
- You will need the tape driver installed to run the performance tests.

HP StorageWorks Library and Tape Tools - overview & features - Microsoft Internet Explorer provided by Hewlett-Packard

Address <http://h18006.www1.hp.com/products/storageworks/lt/index.html>

United States - English

» HP Home » Products & Services » Support & Drivers » Solutions » How to Buy

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HP strategy

- » Adaptive Enterprise
- » Information Lifecycle Management
- » Multilevel Protection and Recovery
- » StorageWorks Grid

Storage products

- » Archiving and active archiving
- » Network attached storage (NAS)
- » SAN infrastructure
- » SAN virtualization
- » Storage array systems

Storage > Tape Storage

HP StorageWorks Library and Tape Tools

- Overview & Features



Business Value

Diagnosing HP's tape and magneto-optical storage products. Providing customers a robust diagnostic tool in a single, convenient program.

Product information

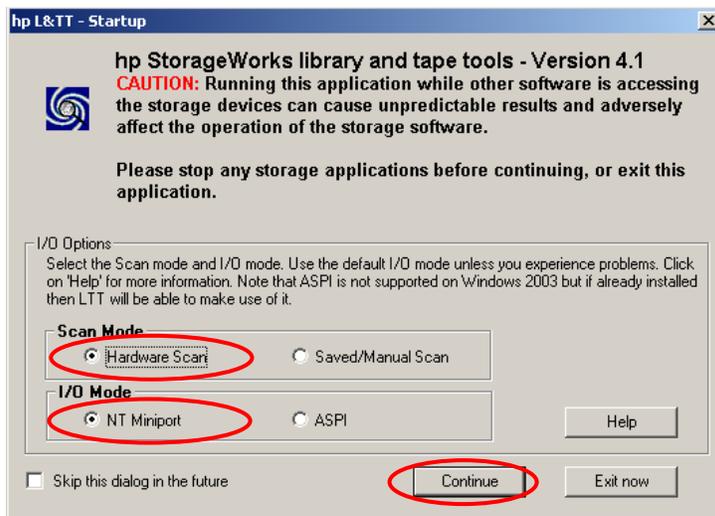
- » Overview & features
- » Specifications & warranty
- » Questions & answers
- » Technical support & documentation
- » **HP L&TT Tool**

Overview

HP StorageWorks Library and Tape Tools (L&TT) is a robust diagnostic tool for tape mechanisms, tape automation and magneto-optical products. L&TT provides functionality for firmware downloads, verification of device operation, maintenance procedures, failure analysis, corrective service actions and some utility functions. Performance tools assist in troubleshooting backup and restore issues in the overall system. It also provides seamless integration with HP's hardware.

How do I run L&TT?

1. [Install L&TT](#)
2. Turn off services that may lock the tape drive such as backup software services and Removable Storage Service (RSM)
3. Double click on the desktop icon
4. Use defaults in pop-ups
5. Wait for L&TT to scan and find your devices
6. Select the device you want to work with



hp StorageWorks library and tape tools

File View Function Options Utilities Help

Identity Firmware Health Test Support Frontpanel Dev Perf Sys Perf Help

Scan By Product By Connection Instructions

Libraries/Autoloaders

- HP C5713A (Address: 3/0.5.1)
 - Drive 1: HP C5713A (Address: ...)

Processors/Enclosures

Drives

- HP DAT160 (Address: 238/0.0.0)
- HP C1100A (Address: 3/0.0.0)
- HP Ultrium 2-SCSI (Address: 5/0)
- HP Ultrium 8-SCSI (Address: 7/0)

Other Devices

Welcome to hp StorageWorks library and tape tools

1. The system is being scanned for devices. When scanning is complete, the device list is displayed in the left section of the screen.
2. Select a device to work with.
 - Only devices with **blue** icons are supported.
 - The address is displayed as follows: *<HBA>.<SCSI Target ID>.<LUN>*
 - Drives in libraries are best diagnosed by selecting the library.
3. After selecting a device, click the appropriate toolbar button to perform the desired diagnostic function.

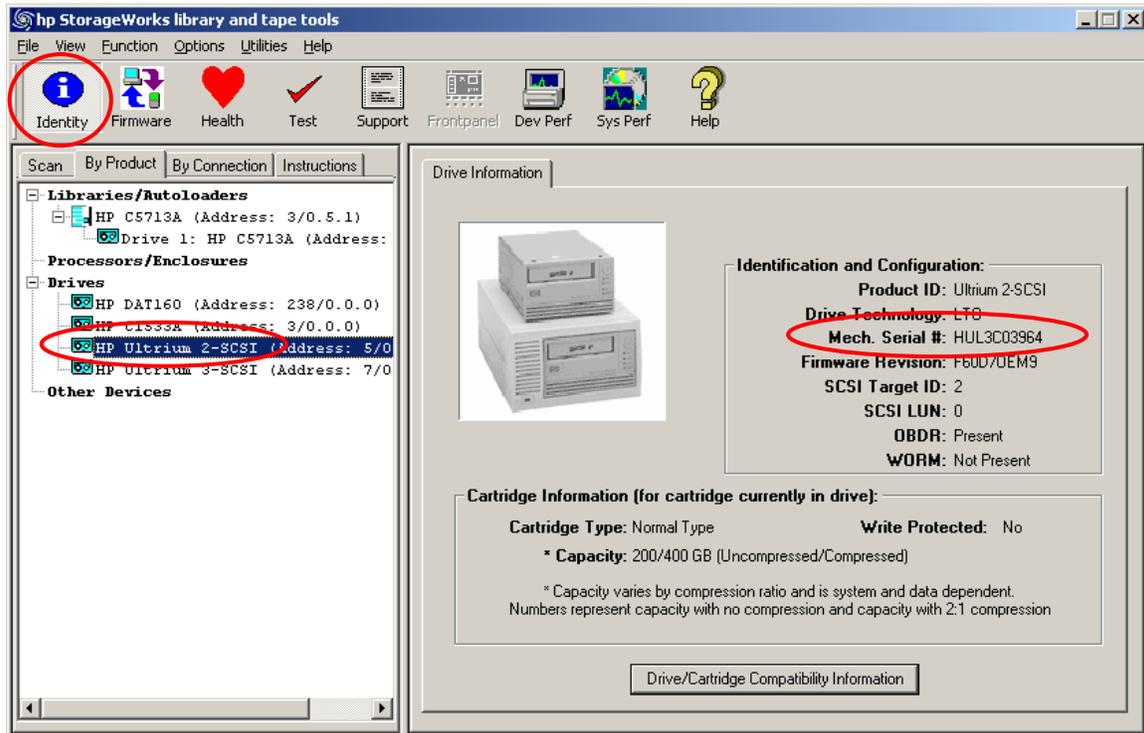
NOTE: If the scan fails or you do not see the expected devices listed, click the **Help** icon on the toolbar for more information. The help is context-sensitive and may be selected at any time to obtain information about the function you are currently using.

How do I check my drive is installed correctly?

1. [Install and run L&TT](#)
2. See if it finds your device during the scan
3. If it can, select that device and [run the device performance test](#) to verify the HBA, cabling and drive are not causing any bottlenecks
4. Any issues should be corrected before attempting to use the drive
5. **Leave L&TT installed** for future use – it will be requested by support

How do I use L&TT to find my drive serial number?

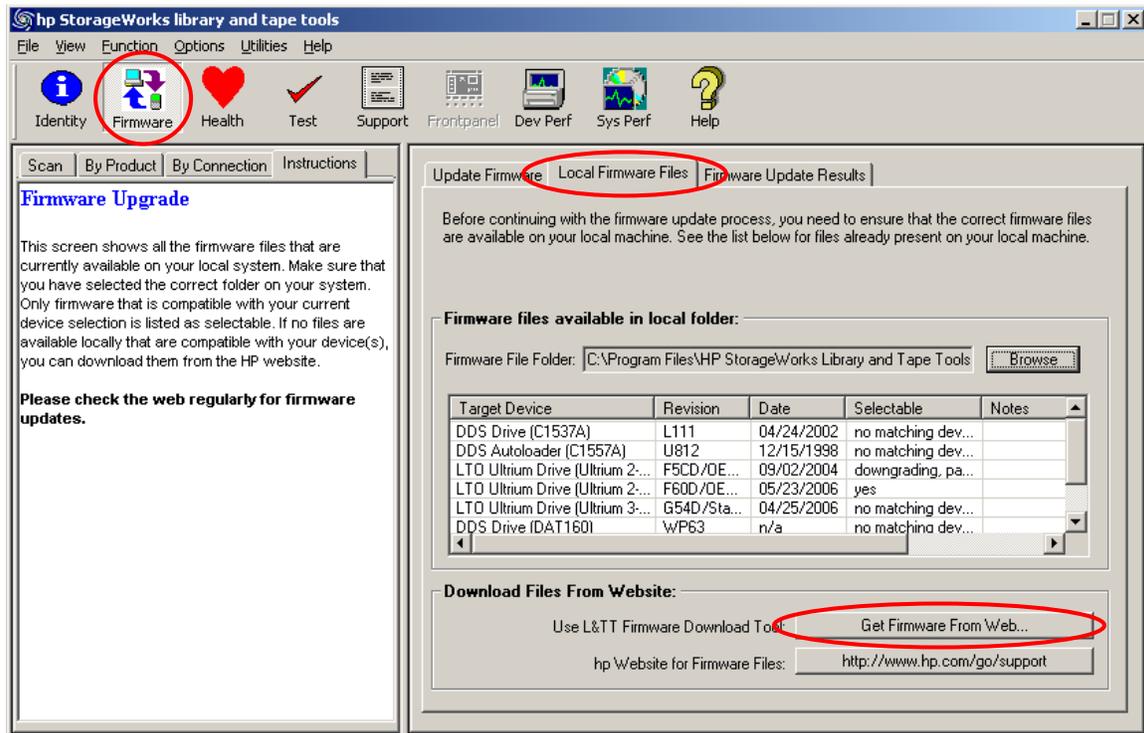
- [Install and run L&TT](#)
- Select the device and click **Identity** on the toolbar.
- The serial number is displayed under the **Device Information** tab.
- It is also available from the [support ticket](#).



How do I verify that my drive's firmware is up to date?

You will need internet access for this. If not please refer to the [user guide](#).

1. [Install and run L&TT](#)
2. Select the device and click **Firmware** on the toolbar.
3. In the **Local Firmware Files** tab, click **Get Firmware from Web**.



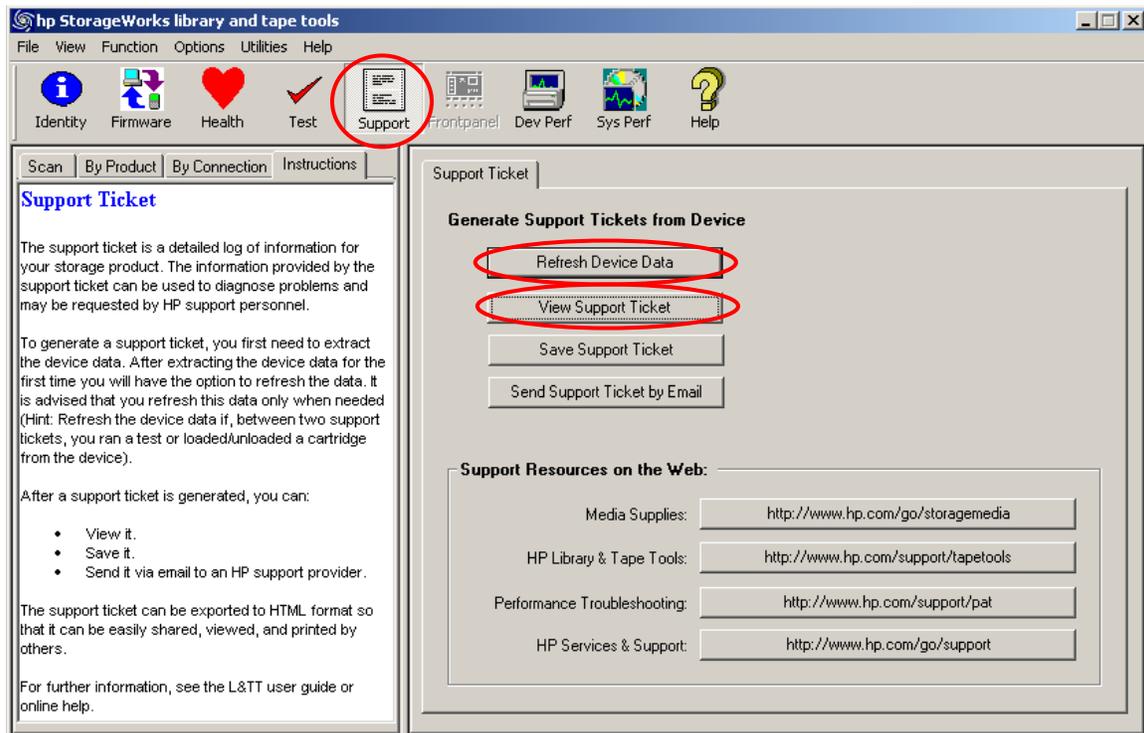
How do I check the health of my drive?

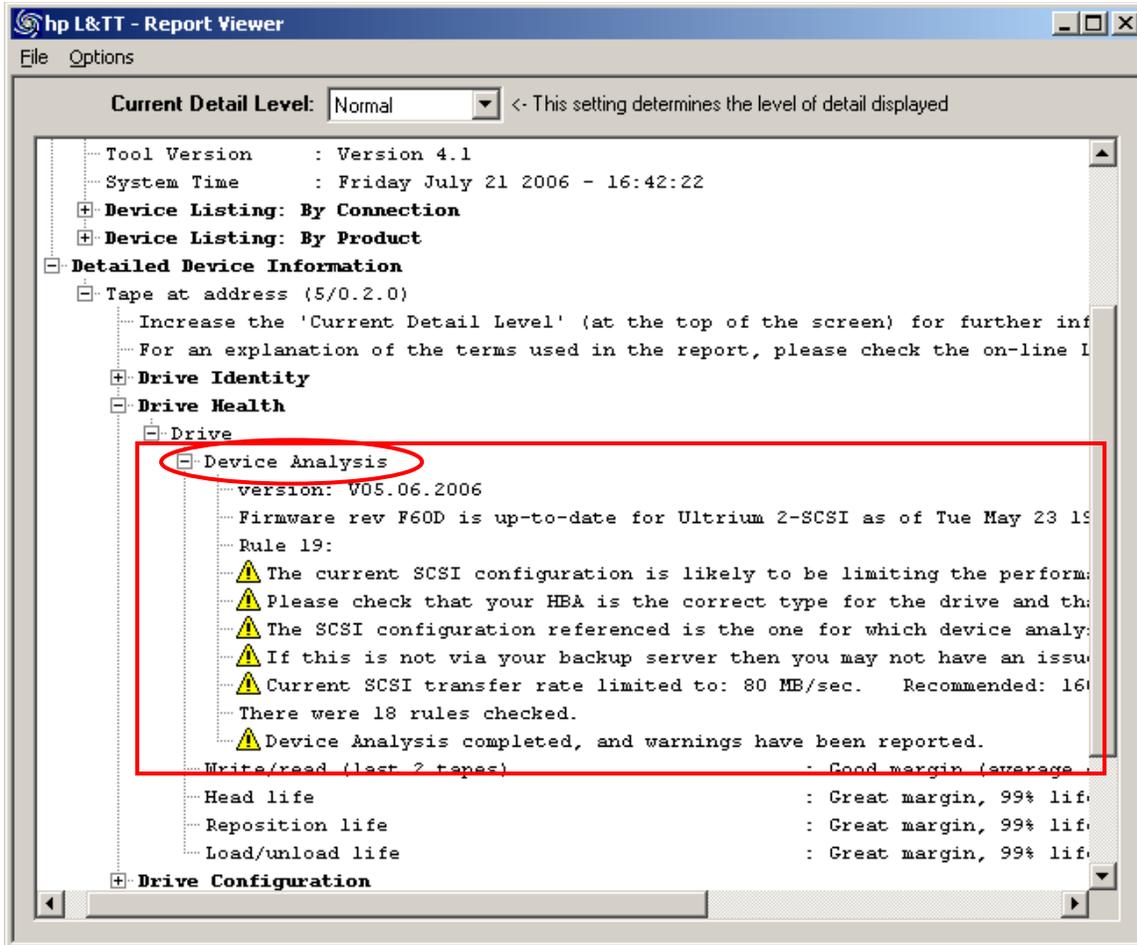
- **Quick check**
 1. [Generate a support ticket](#) for the drive
 2. Look at the **Device Analysis** section. This section gives an assessment of their health along with appropriate recommendations.
 3. If you are still uncertain about the drive's health, [run the Drive Assessment test](#).
- **15 minute assessment**
 1. [Run the Drive Assessment test](#) with a known good (preferably new) tape. This test assesses the health of the drive and provides recommendations if issues are found.
 2. If the test passes, the drive is okay.
 3. If the test fails and you have used a good data tape, then the drive needs attention.

How do I generate a support ticket?

1. [Install and run L&TT](#)
2. Select the device and click **Support** on the toolbar.
3. In the Support ticket tab, click **Extract** or **Refresh Device Data**.
4. Click **View Support Ticket**.
5. The ticket viewer will appear. Use this to examine the ticket.

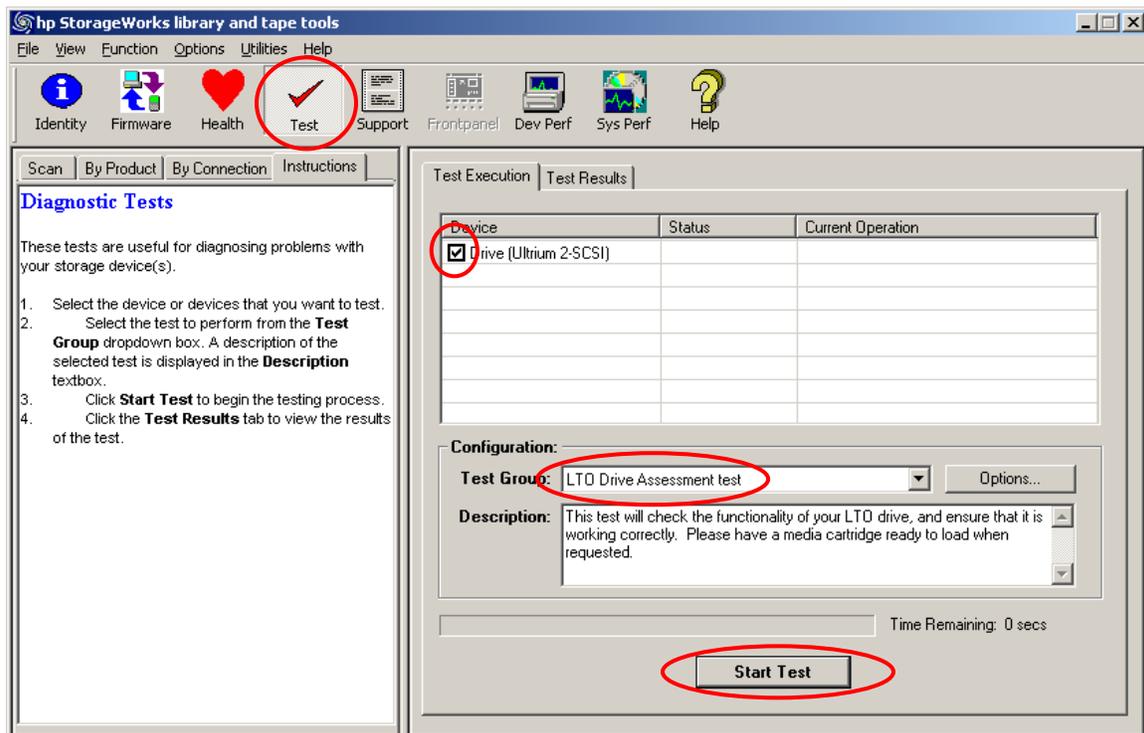
The support ticket contains a section called **Device Analysis**, which examines the logs within the drive and gives an assessment of their health along with appropriate recommendations.

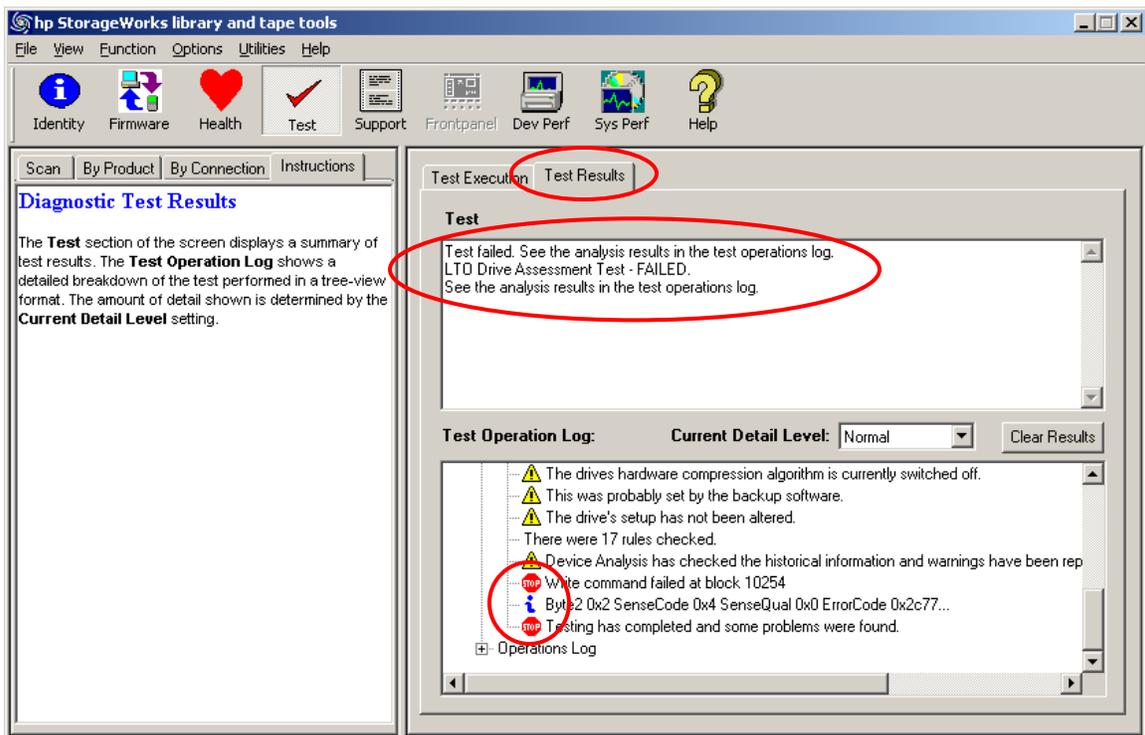
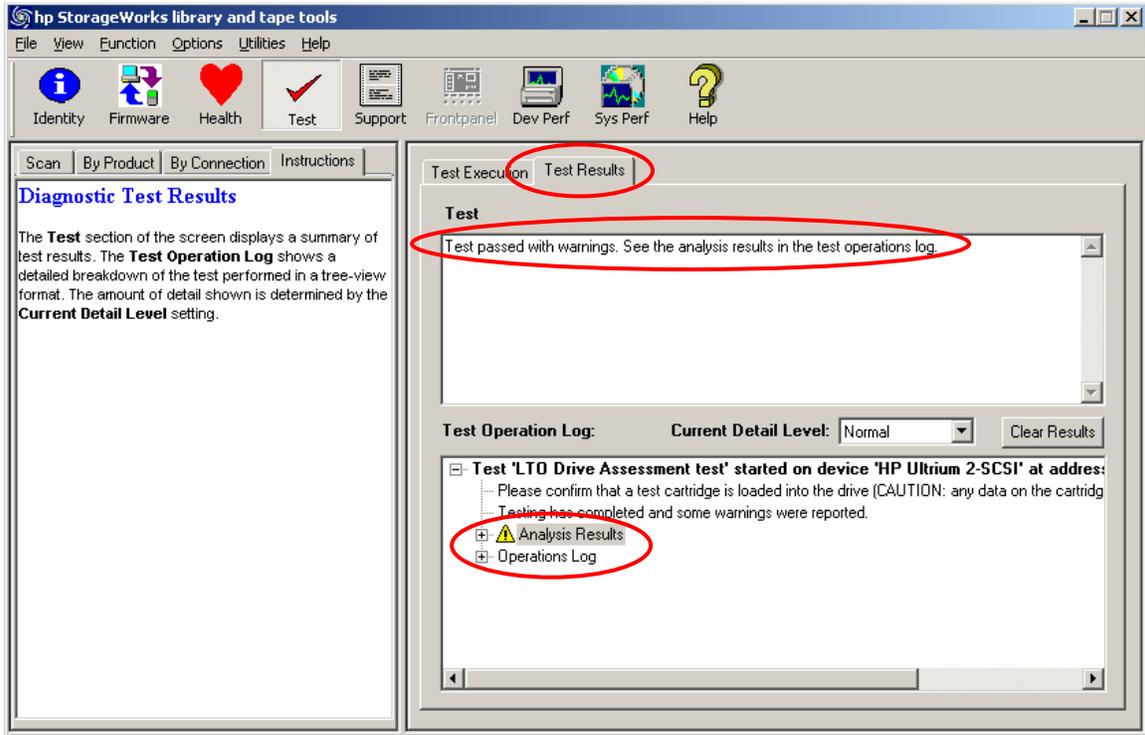




How do I run the Drive Assessment Test?

1. [Install and run L&TT](#)
2. Select the device and click **Test** on the toolbar.
3. In the **Test Execution** tab, select the drive
4. Select the **Drive Assessment test** from **Test Group**.
 - Leave the options as default.
 - Use a known good, preferably new, tape that can be overwritten.
5. Click **Start Test**. The test will take 10-15 minutes.
6. Open the **Test Results** tab to see the results of the test.
7. Red stop signs indicate failures. Warnings should be observed but are not critical.
8. If the test fails with a known, good tape then the drive needs attention. Contact HP support and [send the results in the ResultLog.ltt file](#).





Why is the Drive Assessment test recommended?

The Drive Assessment test automates HP engineering expertise to accurately determine the health of your drive. The test evaluates whether or not a specific drive/tape combination will perform backups and restores as expected.

HP recommends that you use a known good (preferably new) tape to ensure that the test is measuring the health of the drive rather than the quality of the tape.

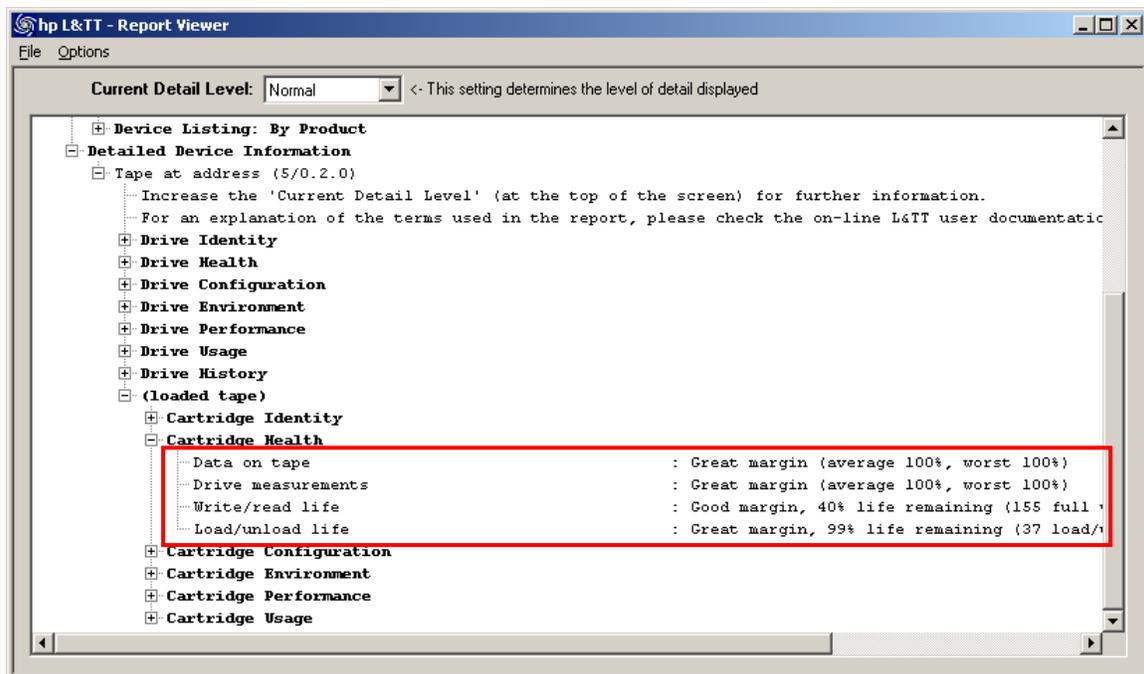
If the test passes, the drive is fine. If the test fails using a good tape, this indicates a faulty drive. Contact support in this case.

If the drive is okay and a problem remains, examine other system components or the overall configuration to determine the location of the problem.

How do I check the health of my data cartridge? (LTO only)

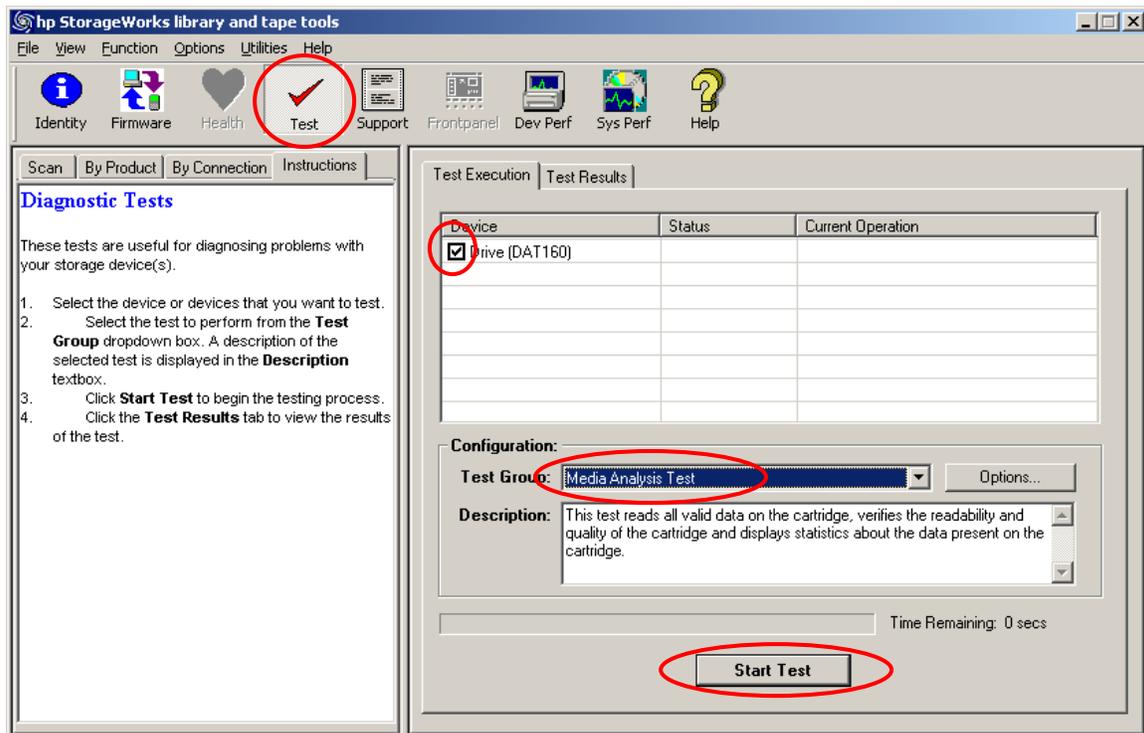
1. Load the data cartridge into an LTO drive of known good health.
2. [Generate a support ticket](#) for that drive.
3. Go to **Detailed Device information > Tape at address > (loaded tape) > Cartridge Health** in the support ticket and examine the margins. Check the following information:
 - a. **Data on tape** measures the quality of the data written on the tape.
 - b. **Drive measurements** measures the quality of the data as viewed by the drives that wrote it.
 - c. **Write/read life** shows the age of the tape from a data volume perspective.
 - d. **Load/unload life** shows the age of the tape from a load/unload perspective.

If any of these categories display questionable information, there may be an issue with the tape. Repeat the procedure with a trusted, good quality tape to compare results.



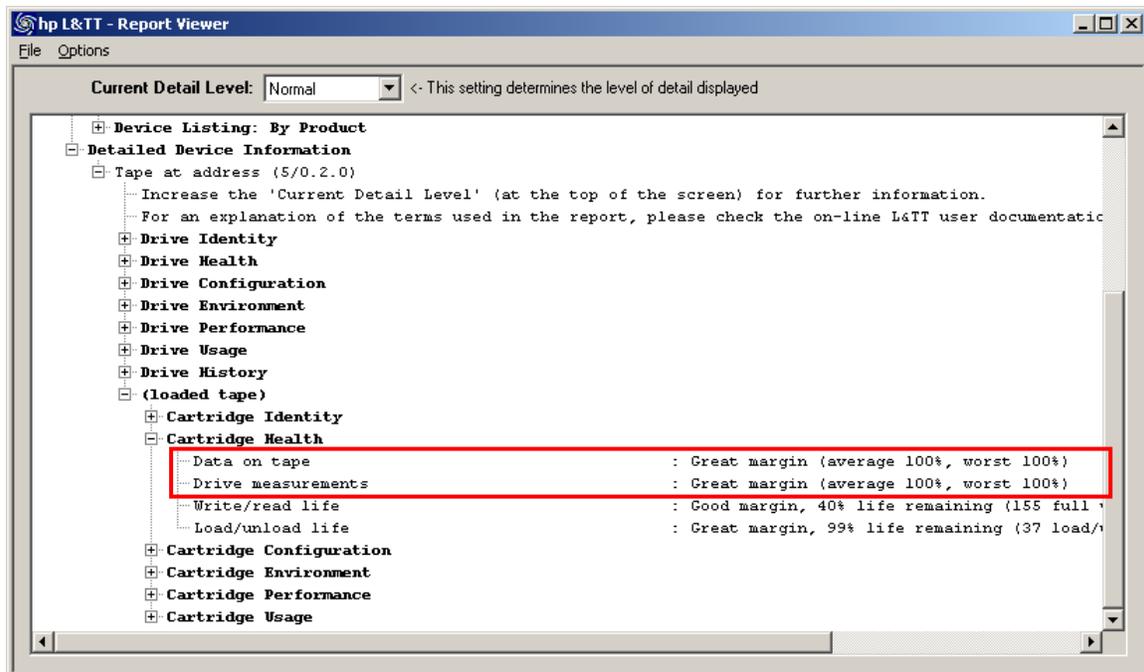
How do I check the health of my data cartridge? (Non-LTO)

1. Load the data cartridge into a drive of known good health.
2. [Install and run L&T](#)
3. Select the device and click **Test** on the toolbar.
4. In the **Test Execution** tab, select the drive
5. Select the **Media Validation test** from **Test Group**.
6. Click **Start Test**. The test will read the whole tape so may take a long time.
7. Open the **Test Results** tab to see the results of the test.



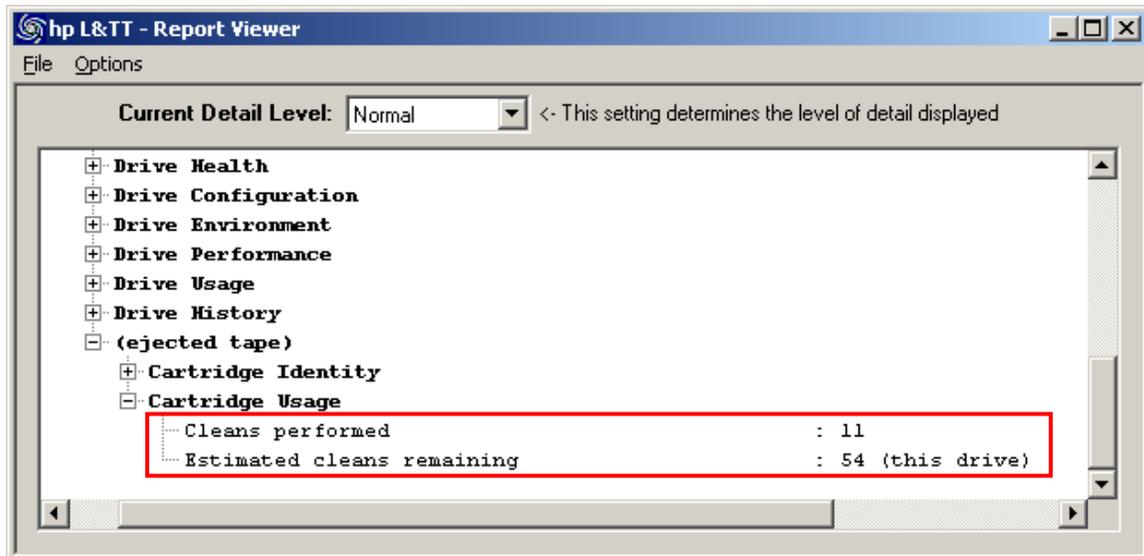
Was my backup successful? (LTO only)

1. After the backup, [generate a support ticket](#) for the drive on which the backup was performed.
2. Go to **Detailed Device information > Tape at address > (loaded tape) > Cartridge Health** in the support ticket and examine the margins. Check the following information:
 - **Data on tape** measures the quality of the data written on the tape.
 - **Drive measurements** measures the quality of the data as viewed by the drives that wrote it.
3. If any of these categories display warnings, the backup may be suspect. Repeat the backup using a different drive and tape combination.



How many more uses are left with this cleaning cartridge? (LTO only)

1. Perform a clean as you normally would.
2. After the clean is finished, [generate a support ticket](#) for the drive that was just cleaned.
3. Go to **Detailed Device information > Tape at address > Ejected Tape > Cartridge Usage** section of the support ticket to see the number of cleans performed and the estimated number of cleans remaining.



How fast will my backups be?

To determine backup performance, you must measure how fast the disks can deliver data and how fast data can be written to the tape. Backup performance will be the slower of these two measurements.

- Use the [Device Performance test](#) to measure the speed of the tape drive.
- Use the [System Performance Backup Pre-test](#) to measure the speed of the disk subsystem.

Note this test is independent of the backup application. Please check with your backup vendor if actual backup performance is significantly slower.

How fast will my restores be?

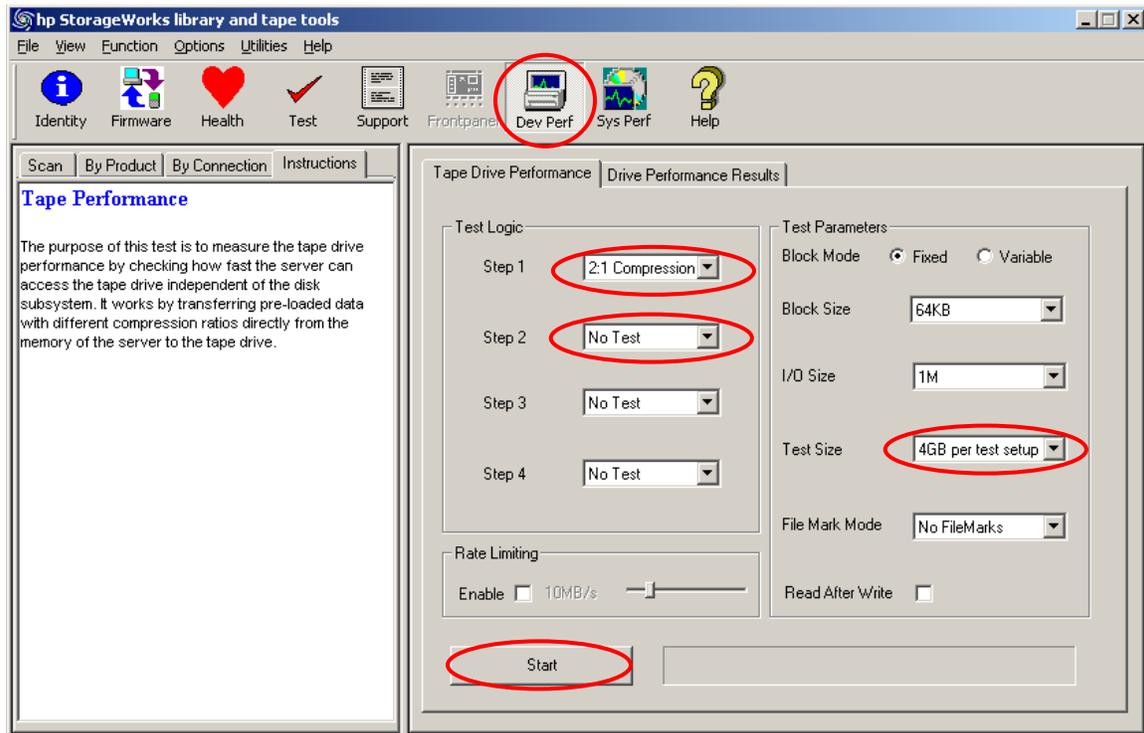
To determine restore performance, you must measure how fast data can be read from tape and how fast data can be written to disk. Restore performance will be the slower of these two measurements.

- Use the [Device Performance test](#) to measure the speed of the tape drive.
- Use the **System Performance Restore Pre-test** to measure the speed of the disk subsystem.

Note this test is independent of the backup application and uses test restore data. Please check with your backup vendor if actual backup performance is significantly slower.

How do I run the Device Performance test?

1. [Install and run L&TT](#)
2. Select the device and click **Dev Perf** on the toolbar.
3. Set parameters as shown – or as preferred – and start
4. See **Drive Performance Results** tab for results



hp StorageWorks library and tape tools

File View Function Options Utilities Help

Identity Firmware Health Test Support Frontpanel Dev Perf Sys Perf Help

Scan By Product By Connection Instructions

Tape Performance

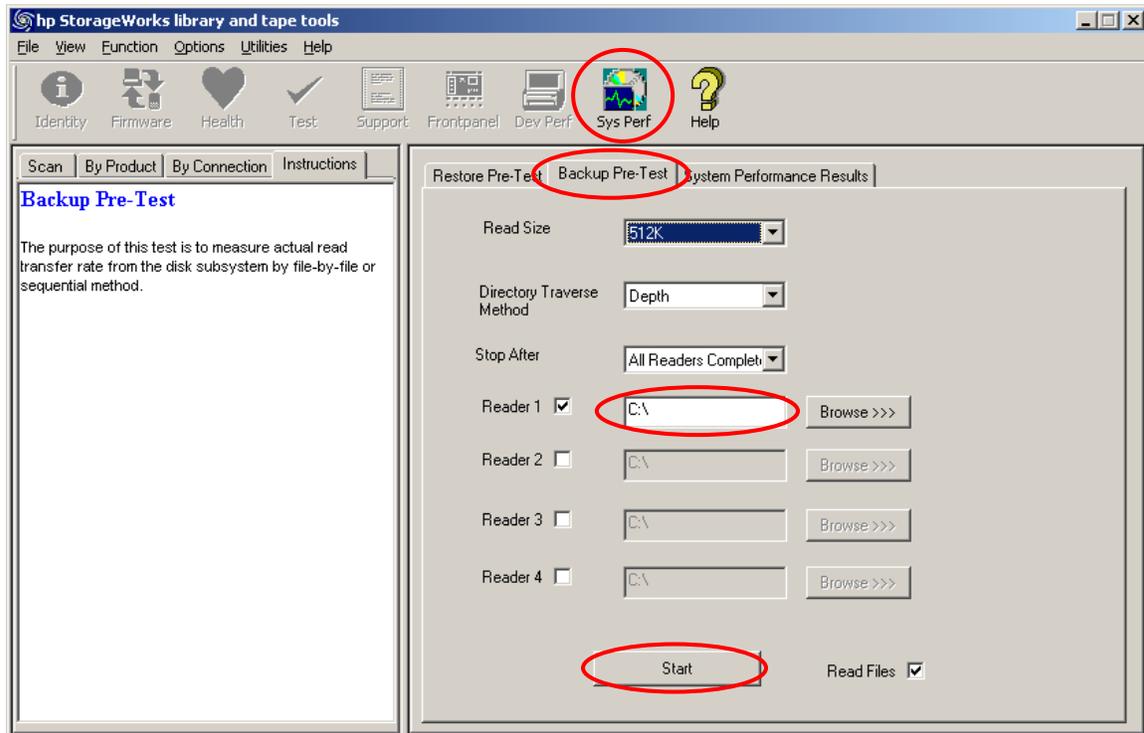
This screen displays the results of the tape drive performance test you have performed.

Tape Drive Performance **Drive Performance Results** Clear Log

- Testing with 2:1 Compression Ratio
- Opening Tape Drive Tape0
- Rewinding Tape
- Writing 1GB of 4GB
- Writing 2GB of 4GB
- Writing 3GB of 4GB
- Writing 4GB of 4GB
- 4 GB written in 70 seconds at 57 MB/s
- Rewinding Tape
- Closing Tape Drive Tape0

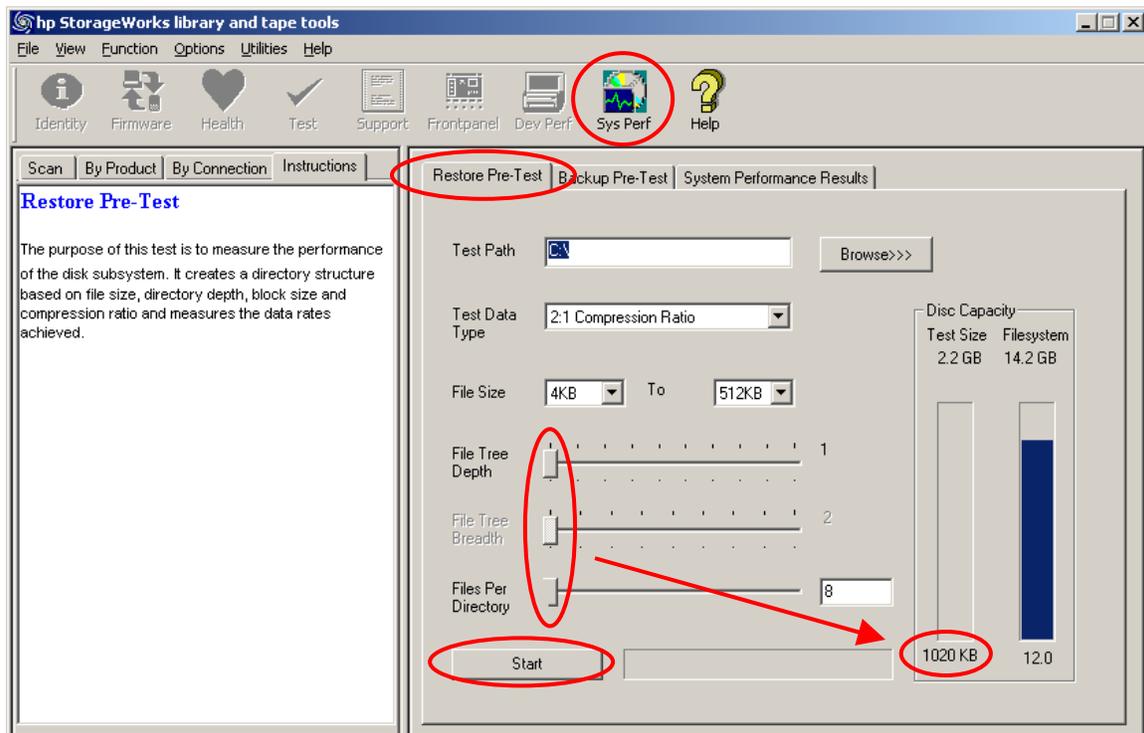
How do I run the System Performance Backup Pre-test?

1. [Install and run L&TT](#)
2. Select the device and click **Sys Perf** on the toolbar.
3. Select the **Backup Pre-test** tab
4. Set parameters as shown – or as preferred – and start
5. See **System Performance Results** tab for results



How do I run the System Performance Restore Pre-test?

- [Install and run L&TT](#)
- Select the device and click **Sys Perf** on the toolbar.
- Select the **Restore Pre-test** tab
- Set parameters as shown – or as preferred – and start
- See **System Performance Results** tab for results



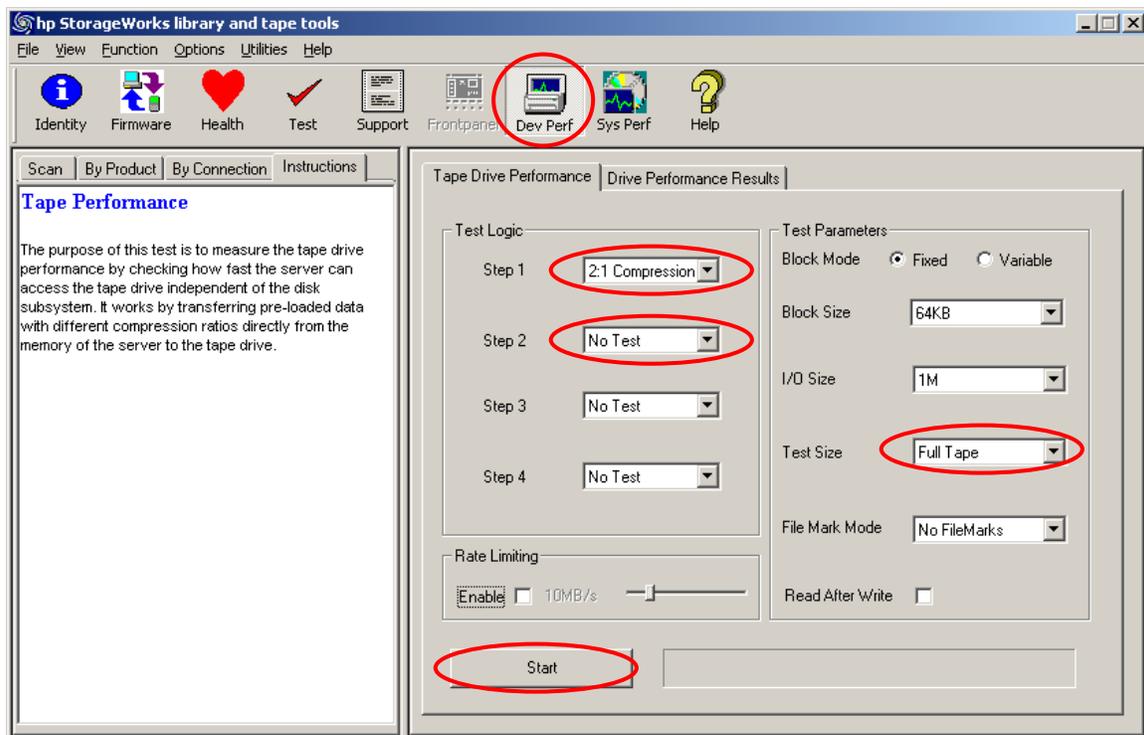
How much data can I write to the tape?

The amount of data written that can be written to a tape is impacted by the compression ratio of the data and the error rate performance of the tape/drive combination. It may not be the same as the capacity marked on the cartridge which assumes 2:1 compression ratio and reasonably good error rate.

Use the Device Performance test to measure a specific tape/drive combination.

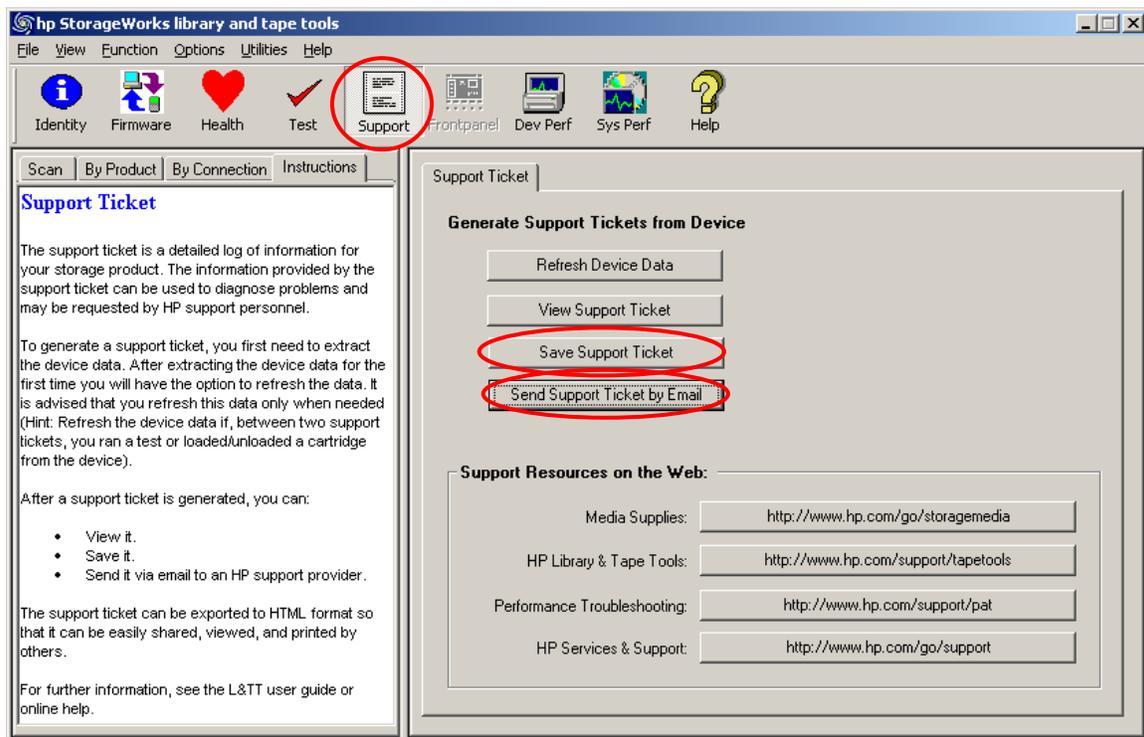
Note - This test will **take a long time** and **overwrite any data** on the tape.

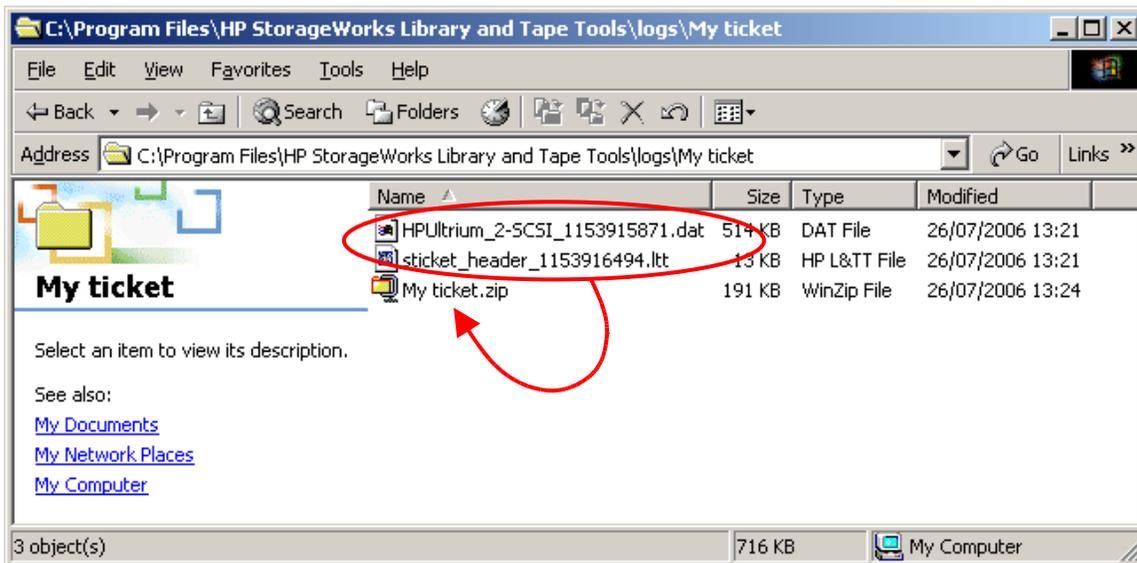
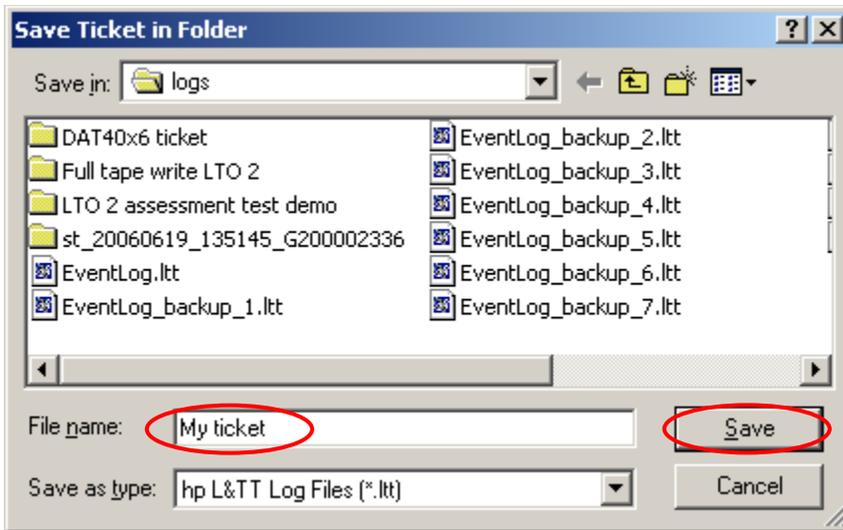
1. [Install and run L&T](#)
2. Insert the tape in the appropriate drive.
3. Select the device and click **Dev Perf** on the toolbar.
4. Set parameters as shown – or choose a different compression ratio – and start. Note the **Test Size** is set to **Full Tape**
5. See **Drive Performance Results tab** for results



How do I send a support ticket by e-mail?

- If you have e-mail set up on your server then
 1. Click on **Send Support Ticket by Email**
 2. Fill out the pop-up form with your details
 3. Click on **Send**
- If not then
 1. Use **Save Support Ticket** to save the ticket files (one header file and one data file for each device) into a directory.
 2. Archive the files (to compress them) and e-mail the archive file via another computer.
- Use the email address given by HP support

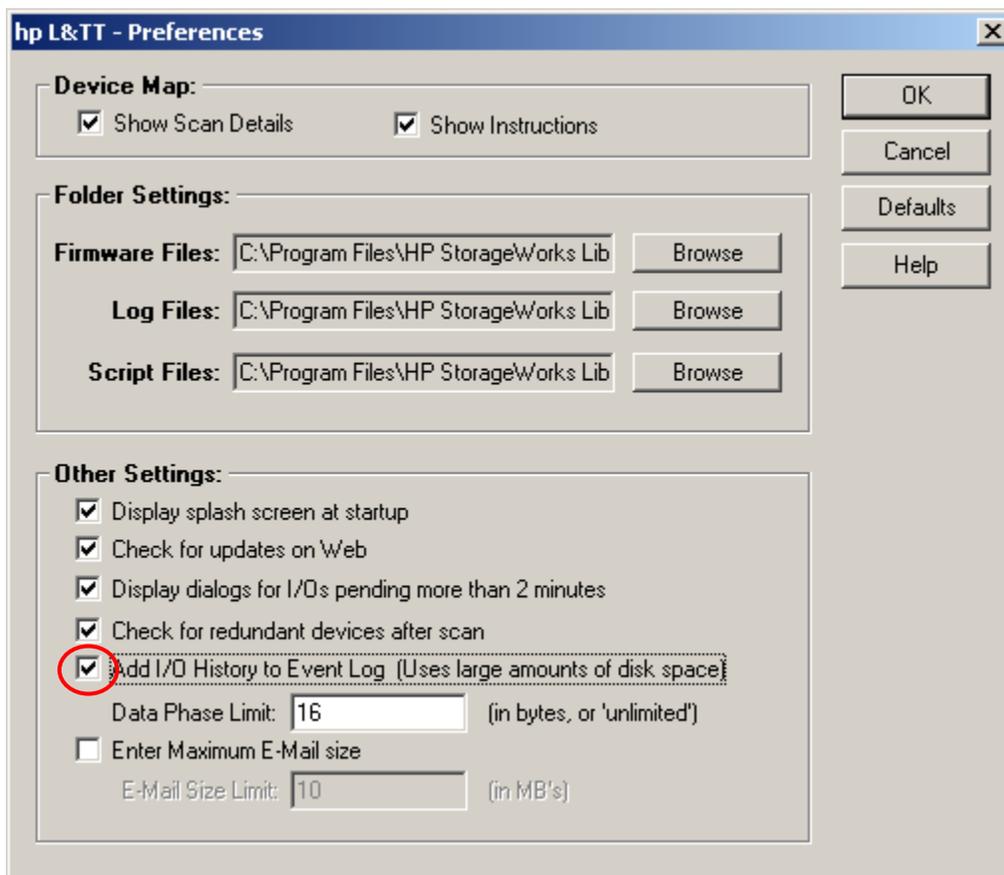




How do I send an L&TT event log?

You may be asked for the L&TT event log by the L&TT support team. This log records L&TT activity and is useful for troubleshooting L&TT issues. The most useful event logs have I/O history enabled.

1. Open the **Preferences** menu.
2. Check **Add I/O History to Event Log**.
3. Recreate the issue so that is recorded.
4. Locate the <L&TT install dir>/logs directory.
5. Archive all the files that begin with **EventLog** and mail them to L&TT Support (LTT_team@hp.com). The most recent file is **EventLog.Itt**; the rest are backups of previous EventLogs.



C:\Program Files\HP StorageWorks Library and Tape Tools\logs

File Edit View Favorites Tools Help

Back Search Folders

Address C:\Program Files\HP StorageWorks Library and Tape Tools\logs Go Links

logs

Select an item to view its description.

See also:
[My Documents](#)
[My Network Places](#)
[My Computer](#)

Name	Size	Type	Modified
EventLog.ltt	10,901 KB	HP L&TT File	26/07/2006 13:21
EventLog_backup_1.ltt	36 KB	HP L&TT File	05/07/2006 13:00
EventLog_backup_2.ltt	25 KB	HP L&TT File	05/07/2006 10:03
EventLog_backup_3.ltt	42 KB	HP L&TT File	30/06/2006 16:19
EventLog_backup_4.ltt	1,008 KB	HP L&TT File	29/06/2006 10:58
EventLog_backup_5.ltt	1,023 KB	HP L&TT File	27/06/2006 15:33
EventLog_backup_6.ltt	2,958 KB	HP L&TT File	27/06/2006 11:28
EventLog_backup_7.ltt	1,423 KB	HP L&TT File	27/06/2006 11:13
EventLog_backup_8.ltt	93 KB	HP L&TT File	26/06/2006 12:43
EventLog_backup_9.ltt	15 KB	HP L&TT File	24/06/2006 10:51
prl.txt	7 KB	Text Document	25/07/2006 12:59
ResultLog.ltt	214 KB	HP L&TT File	21/07/2006 16:53
ResultLog_backup_1.ltt	1,025 KB	HP L&TT File	24/06/2006 10:51
temp	49 KB	File	16/06/2006 13:58
tracefile.txt	1 KB	Text Document	24/06/2006 10:51
EventLogs.zip	2,440 KB	WinZip File	26/07/2006 13:37

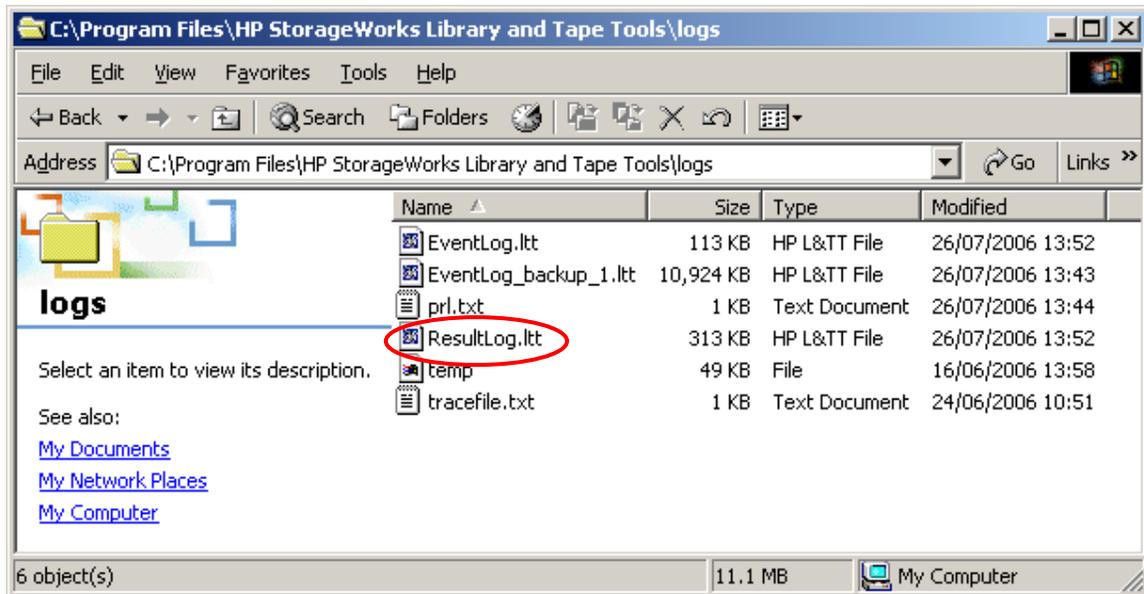
16 object(s) 20.7 MB My Computer

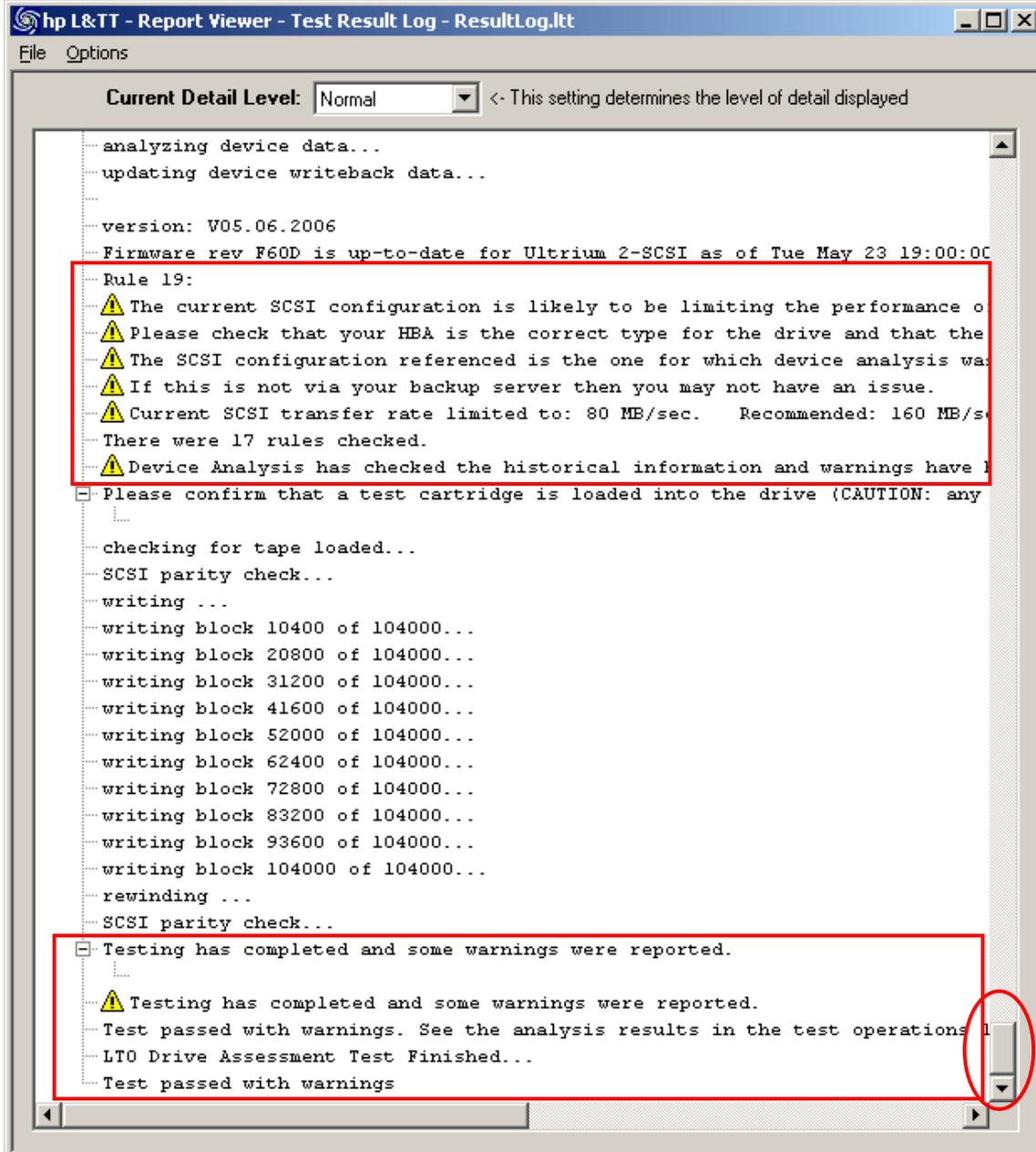
How do I send the results of the assessment test to Support?

The results of all L&TT tests are automatically saved to the **ResultLog.ltt** file in the <L&TT install dir>/logs directory.

Archive and e-mail this file to Support.

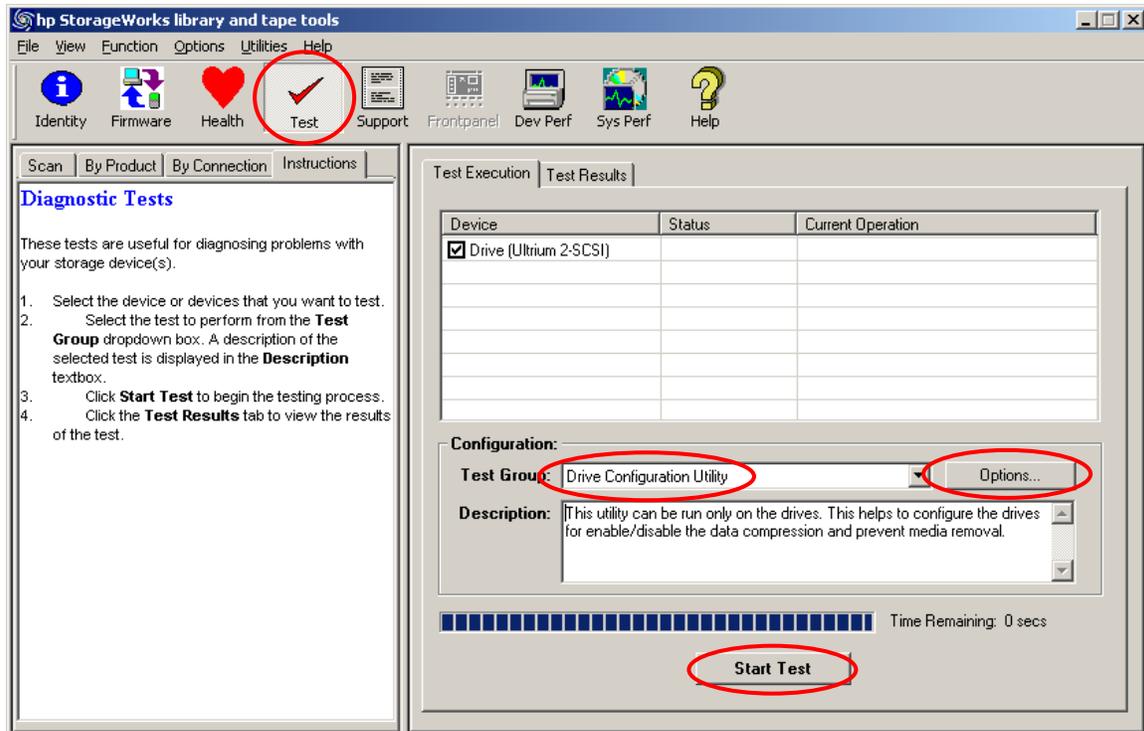
The file can be viewed using L&TT. Just double-click on it. Scroll to the end to see the results summary.





How do I turn on or off Prevent Media Removal or hardware Data Compression?

1. [Install and run L&TT](#)
2. Select the device and click **Test** on the toolbar.
3. Select **Drive Configuration Utility** from **Test Group**.
4. Click **Options...** to configure **Prevent Media Removal** and **Data Compression**.
5. Start the test



Options

Double click on an item to modify the settings for the selected operation.

[-] **Drive Configuration Utility Options**

- Enable/Disable Data Compression : leave unchanged
- Select a new value for 'Prevent/Allow Media Removal'
 - leave unchanged
 - allow**
 - prevent

OK