Hewlett Packard Enterprise HPE Support Center

HPE Library and Tape Tools - Frequently Asked Questions (FAQs)

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Where to find Library and Tape Tools (L&TT)?

L&TT is available to download for free at the given site (Click here to view the site).

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How to install L&TT?

Install L&TT on any server that can **see** the drive. This is most likely to be the backup server,but it could be another server if using a SAN. For specific installation instructions forWindows Operating Systems, see Installing L&TT at Click here to view the HPE StoreEver Library and Tape Tools - Installing: Using L&TT on Windows .

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What is the impact on the server if L&TT is installed?

L&TT is troubleshooting software. For running few specific tests it will affect the data in tape andbackup. Restore activities needs to be stopped.

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Why to use L&TT?

L&TT will help to detect the problems in tape devices.

top

Why to use latest version of L&TT?

The latest version generally have some new features and defect fixes. It is always recommendedto use latest version supported for any OS platforms.

top

How to know the latest version of L&TT?

When L&TT is executed, there is a pop up message about the new releases.

top

What Operating Systems L&TT supports?

L&TT Operating System (OS) support

Operating System	Operating System Variant	Last Supported Version of L&TT
Windows	Windows 2012 and 2012 R2 x64	L&TT 4.27
	Windows 8 and 8.1 (x86, x86_64)	L&TT 4.27
	Windows 7 SP1 (x86, x86_64)	L&TT 4.27
	Windows 2008 SP2 (x86, x86_64) Windows 2008 R2 SP1 (x86_64) Windows 10 (x64)	L&TT 4.27

Operating System	Operating System Variant	Last Supported Version of L&TT
	Windows 2016	L&TT 4.27
HP-UX	HP-UX 11i v3 (PA-RISC,IPF)	L&TT 4.26
	HP-UX 11i v2 (PA-RISC,IPF)	L&TT 4.26
	HP-UX 11i (PA-RISC)	L&TT 4.26
Linux	RedHat EL 6.0 to 6.6 (x86, x86_64)	L&TT 4.27
	RedHat EL 7.0 (x86_64)	L&TT 4.27
	SuSE SLES 11 SP1, SP2, SP3 (X86, IA64, X86_64)	L&TT 4.27
Solaris	Oracle Solaris 10 Update 9 (x86, SPARC, AMD64)	L&TT 4.26
Mac	Mac 10.7 through 10.11 (x86)?Standalone drives, L&TT CSI only	L&TT 4.26
OpenVMS	OpenVMS 8.4 IPF	L&TT 4.26

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Information to be provided when contacting HPE support?

Collect the following information before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Error messages
- OS type and revision level
- Detailed questions

top

Where to find information about media compatibility with the hardware?

The links in this section provides information about media compatibility with various hardware.

- Click here to view the one stop compatibility chart for tape and optical media .
- Click here to view the device-specific information about media compatibility and cleaning cartridge compatibility .

top

Why to use L&TT for firmware upgrade?

L&TT provides a convenient way to easily upgrade the firmware of connected devices. Whenusing L&TT to update firmware, there are protections in place to ensure that only the correctfirmware is downloaded to the drive.

top

How to verify that the drive's firmware is up to date?

Use the **Get Files** from **Web** feature of L&TT.

top

Where to find information about drive cleaning requirements?

The links in this section provides information about cleaning requirements for various drives.

- Click here to view the cleaning requirements for LTO drive .
- Click here to view the combined tape cleaning matrix for all tape drive types .

top

How to use L&TT to find the drive serial number?

- With the Windows version, select the device and click **Identity** on the toolbar. The deviceinformation screen displays the serial number.
- With the CSI version, from the **Main screen**, enter `select <n>`
  where n is the number ofthe device. The device information screen displays the serial number.

- If for some reason the serial number is not displayed on the device information screen,generate a support ticket for the device and examine the drive details.

top

How to check if the drive is OK?

- **Quick check -** Generate a support ticket for the drive and look at the device analysis section.This section examines the logs within the drive and gives an assessment of health alongwith appropriate recommendations. Run the drive assessment test in case uncertainity.
- **Fifteen minute check -** Run the drive assessment test with a known, good (preferablynew) tape. This test measures the health of the drive and provides recommendations ifissues are found. If the test passes, the drive is OK. If the test fails but the tape is good, thenthe drive needs attention.

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How to know if drive is degrading?

Tape assure functionality in L&TT 5.x for monitoring the drive performance can be used.

top

When the drive should be replaced?

Drive should be replaced only when the drive assessment tests failed or if HPE support teamrecommended to replace the drive.

top

Why HPE support ask for the support ticket?

Support ticket contains lot of information from the drives which will help HPE support personal totroubleshoot the problem and recommend next steps.

top

How to send a support ticket?

- Use the email support ticket option if possible.
- If the above option is not possible, save the ticket to a single directory. Then archive the filesinto a compressed archive and attach the archive file to an email.

NOTE: End user support personnel typically provide an email address to users who areemailing a support ticket as a result of a support call request. In this case, the user shouldenter the email address exactly as provided by the support person. In the European regionthis will usually be provided in the form: **<XXX>@cases.brussels.hpe.com** where XXX is theactual assigned case number. This associates the support case number with the supportticket, making resolution and tracking more manageable.

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Why to run L&TT tests?

L&TT tests are specifically designed to diagnose problems with tape and optical devices. Thetests check the internal drive registers for logged data that come from normal operations, and perform other data-gathering operations. The test help pinpoint the problem and prevent a driveswap that would not resolve the issue.

top

Why should the backup/restore activity be stopped when running L&TT tests?

Some tests will read/write data on the tape to check the actual problem.

top

Is it necessary to stop the backup and restore activities for all tests?

No. For more information see **Running the tests and utilities** section at the link below:

Click here to view the page HPE StoreEver Library and Tape Tools - Installing: Using L&TT on Non-Windows Systems .

top

How to know which test to run?

See **Running the tests and utilities** section at the link below:

Click here to view the page HPE StoreEver Library and Tape Tools - Installing: Using L&TT on Non-Windows Systems .

top

Why is the Assessment test recommended?

The Assessment test incorporates all of the division expertise for each specific drive type basedon in-house and field failure information. The test measures drive health and gives an accurateassessment as to whether or not a drive/tape combination will perform backups and restore well.HPE recommends to use a known, good (preferably new) tape to ensure that the test ismeasuring the health of the drive. If the assessment test fails with a good tape, a faulty drive isindicated. If the test passes, then the drive is fine.

top

How to find that the backup is successful (LTO only)?

To determine whether a backup to LTO tape was successful:

1. Perform the normal backup.
2. Generate a support ticket for the drive to which the backup was performed.
3. Locate the **Loaded Tape**, **Cartridge Health** section of the support ticket and examine themargins. Also, 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.

If any of these parameters are suspected, the backup using a differentdrive/tape combination should be repeated.

top

How fast will the backups take place?

To determine backup performance, measure how fast the system reads from the disksubsystem and writes to tape. Backup performance is no faster than the slowest of these twomeasurements.

- Use the system performance backup pre-test to measure the speed of the disk subsystem.

  See **Using the System Performance test** at the link below:

  Click here to view the page HPE StoreEver Library and Tape Tools - Testing: Performance Tests .
- Use the Drive Performance test to measure the speed of the tape drive.

  See **Using the DrivePerformance test** at the link below:

  Click here to view the page HPE StoreEver Library and Tape Tools - Testing: Performance Tests .

top

How fast will the restores take place?

To determine restore performance, measure how fast the system reads from tape andwrites to the disk subsystem. Restore performance is no faster than the slowest of these twomeasurements.

- Use the device performance test to measure the speed of the tape drive. Note that tape driveswrite and read at the same speed.

  See **Using the DrivePerformance test** at the link below:

  Click here to view the page HPE StoreEver Library and Tape Tools - Testing: Performance Tests .
- Use the system performance restore pre-test to measure the speed of the disk subsystem.

  See **Using the System Performance test** at the link below:

  Click here to view the page HPE StoreEver Library and Tape Tools - Testing: Performance Tests .

top

What to do if backup/restore fails?

Run the drive assessment test and generate a support ticket.

top

How L&TT can help to identify the problems during backup/restore?

Support ticket displays the health of the drive and tape. Running the tests help in identifying theproblem.

top

How to check if the LTO tape is OK?

To determine if an LTO tape is OK:

1. Load the tape into an appropriate drive of known good health.
2. Generate a support ticket for that drive.

3. Locate the **Loaded Tape**, **Cartridge Health** section of the support ticket and examine themargins. Also, 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 wroteit.
    - Write/read life shows the age of the tape from a data volume perspective.
    - Load/unload life shows the age of the tape from a load/unload perspective.

If any of these parameters are suspected, then the tape is most likely faulty. Repeat theprocedure with a known, good tape to compare results.

top

How to verify the capacity of a tape?

To determine tape capacity:

1. Insert the tape in the appropriate drive.
2. Run the device performance test on the drive. Select one test set with any choice ofcompression ratio. This will fill the tape and measure both capacity and performance.

NOTE: This procedure will overwrite any data on the tape and can take up to two hours,depending on the speed of the system.

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

1. Perform a normal clean.
2. After the clean is finished, generate a support ticket for the drive that was just cleaned.
3. Examine the **Loaded Tape**, **Cartridge Health** section of the support ticket to see the numberof cleans performed and the estimated number of cleans remaining.

top

How to send an L&TT event log?

The most useful event logs have I/O history enabled. Make sure that I/O history is enabled, andthen recreate the issue, if possible, so that it can be recorded in the log. Navigate to the eventlog in the logs directory. Archive the file into a compressed archive and attach the archive file toan email.

NOTE: End user support personnel typically provide an email address to users who areemailing a support ticket as a result of a support call request. In this case, the user shouldenter the email address exactly as provided by the support person. In the European regionthis will usually be provided in the form: **<XXX>@cases.brussels.hpe.com** where XXX is theactual assigned case number. This associates the support case number with the supportticket, making resolution and tracking more manageable.

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Why not to uninstall L&TT or install a new version?

Some users may have problems uninstalling L&TT or installing a new version after installing oruninstalling a previous version. This is caused by remnants of program information that remainin the Windows registry.

For L&TT 3.x, the L&TT team has created a utility to manually remove any remains from previousinstallations. To obtain this utility, download and execute **hpe_ltt_install_support.exe** from the HPEsupport website. The utility completely removes any remains of previous installations quicklyand safely. Do not attempt to use this utility with L&TT 4.0 or greater.

After running this utility, rerun the latest L&TT installation package.

top

How to run L&TT from a CD or USB flash drive?

It is possible to create a version of L&TT that can run directly from a CD or USB flash drive withoutthe need for installation or alteration of registry settings. This feature is most useful on WindowsNT and Windows 2000. On other Windows platforms, WINASPI must be installed.

To create a version of L&TT that can run from a CD or USB flash drive:

1. Fully install L&TT. Also install any desired firmware files into the firmwaresubdirectory.
2. Remove the logs directory from the L&TT install directory.
3. Write the contents of the L&TT install directory to the root directory of the CD or USB flashdrive. Close the CD or unmount the USB flash drive.

4. Put this CD or USB flash drive into any Windows system and run **HPE_LTT.exe** from theroot directory.

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How to shut down the application in the taskbar?

Under certain circumstances, L&TT may not completely shut down. To completely terminate theapplication:

1. Press `Ctrl`+`Alt`+`Del`.
2. Click **Task Manager**.
3. Click the **Processes** tab.
4. Select the process named **HPE_LTT.exe** and click **End Process**.

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When installing L&TT for Windows, should the previous version be uninstalled first?

The L&TT installer automatically uninstalls any previous versions before installing the currentversion, so it is not necessary to manually uninstall the previous version.

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How to erase an LTO FUP tape?

Run the LTO Firmware to Data Tape Creator test. See **LTO Firmware to Data TapeCreator** for more information at the link below:

Click here to view the page HPE StoreEver Library and Tape Tools - Testing: Utility Functions .

NOTE: FUP tapes other than LTO do not need to be erased.

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How to configure email to send support tickets?

To successfully send a support ticket via email directly from L&TT, aMAPI-compliant email client set up is required for outgoing email. Even if email software (such as Outlook or Outlook Express) is not installed, a simple email account can be configured using the **InternetConnection Wizard** that comes with Internet Explorer. To access the Internet Connection Wizard:

1. Launch Internet Explorer. If this is the first time to launch Internet Explorer on this machine,the **Internet Connection Wizard** starts automatically. Follow the instructions until thestep that asks whether an Internet email account should be set up. Answer **Yes** and skip toStep 5. If this is not the first time to launch Internet Explorer on this machine, proceed withStep 2.
2. Select **Internet Options** from the **Tools** menu.
3. Select the **Connections** tab.
4. Click **Setup** at the top of the dialog to start the **Internet Connection Wizard**.
5. Enter a `display name` (this is the from name in the email) and click **Next**.
6. Enter the return email address and click **Next**. If there are no email accounts on this system,that will be monitored, use the regular email address for contact by therecipient of the support ticket.
7. Enter bogus as the address for the incoming mail server.
8. In the SMTP mail server field, enter the address of any SMTP mail server within the firewallof the organization that accepts SMTP send requests and click **Next**.
9. If SMTP server requires a login to send email (most sites only require a login for incomingmail), proper account information must be provided. Otherwise, enter bogus in boththe fields. Click **Next**.

The email is now configured for outgoing mail delivery.

top

Does L&TT use any system resources in the background?

L&TT is an application, not a service. No part of the application uses any system resources unlessthe application is launched manually by the user.

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L&TT starts in restricted mode and most functionality is unavailable. What ishappening?

L&TT automatically runs in restricted mode when it recognizes a supported device that has aproblem with firmware and requires a firmware upgrade. There are two basic scenarios:

- L&TT recognizes the device, but the device is in brain dead mode. This usually indicatesthat the device firmware is corrupt and the device is responding via boot code only.

- L&TT recognizes the device by means of the product ID code, but L&TT does not recognizethe personality codes of the device.

If one of these scenarios exist, then L&TT displays a message stating that it is running in restrictedmode when it is started. The functionality of L&TT is restricted as follows:

- All features are disabled except for firmware update and support ticket.
- The support ticket shows basic information only and excludes device details.
- For firmware upgrades, L&TT enforces the **Allow all files to be selected** optionand the **Options** button is unavailable because all options are preset.

To exit restricted mode, exit and restart L&TT. L&TT will continue to start in restricted mode untilthe problem with the offending device is resolved, or the device is disconnected.

top

Why does not L&TT for Windows see devices that are connected to a computerrunning HPE-UX?

L&TT does not support a client-server model such as the HPE-UX support tools manager. L&TT on a Windows workstation cannot be used to view devices that are connected to a computerrunning HPE-UX.

top

Why does not L&TT for Windows see the USB drives?

The ASPI driver does not support USB drives. Make sure that the miniport driver are used.

top

How to set the password?

To set the password in the Windows version of L&TT:

1. Select **Options**, **Enable Factory Overrides**. The **Factory Password** dialog box appears.
2. Enter the password and click **OK**. Assuming the password is valid, the password-protected functions of L&TT can be accessed now.

To set the password in the CSI version of L&TT:

1. From the **Main screen**, enter the `preferences` command. The Preferences screen appears.
2. Enter the number that corresponds to the password option. L&TT prompts for the currentpassword.
3. Enter the `password`. If the password is valid, then L&TT returns to the Preferencesscreen. The password-protected functions of L&TT can be accessed now.

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Why does display not show any text or only a single line of text on HPE-UXsystem?

Display problems can happen for two reasons:

- If TERM, COLS, and ROWS are set incorrectly there can be problems. Execute the followingcommand:`/opt/ltt/hp_ltt -o displaytest`

  Follow the prompts to let L&TT analyze the settings.
- If the patch level of the host machine is too low, curses may not function properly (10.20systems only). Be sure to apply patch B6378DA or higher.

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Why is there a segmentation fault when L&TT is initiated in HPE-UX?

L&TT dumps core (segmentation fault) when the stack size is smaller than 8MB because thekernel tunable parameter *maxssiz* has a value less than 8MB. Use the commands `kmtune` or `kctune` to increase **maxssize**.

top

Why does not L&TT for HP-UX see some of the devices?

Several things can prevent L&TT from seeing a device in HPE-UX:

- If a device shows up in an I/O scan as **NO_HW**, the device was previously visible to the system,but currently is not visible. The device may have been unplugged from the SCSI bus orpowered down.
- L&TT does not support the NIO bus type. If the system has an HSC or PCI bus, connectthe device to that bus. If the system does not have an HSC or PCI bus, unfortunately, L&TT will not work.

- The device is connected to an unsupported HBA. Connect the device to an HBA with asupported driver. L&TT supports HBAs with the following drivers:
  - c720
  - c8xx
  - fcpdev
  - fcpmux
- If a device shows up in the I/O scan as **unclaimed**, there might be a need to install or enable thetape driver kernel module using the SAM tool.

top

Why does not L&TT for HPE-UX see all the devices connected to a SAN environment?

L&TT may not be able to see all of the devices (e.g. libraries) in a SAN environment if the numberof files listed by it has reached the maximum limit (maxfiles). Hence, in a large SAN, with a largenumber of devices and disks, HPE recommends setting maxfiles larger than 2048 , dependingon the SAN size. Use the commands kmtune or kctune to configure maxfiles.

top

Why it is not possible to download firmware/script files using the download option in theCSI (HPE-UX, Linux)?

If the network is protected by a firewall and web proxy, then the proxy servername and port name must be specified using the Preferences screen.

top

Why does not L&TT for Tru64 see some of the devices?

Whenever a device is connected or removed, the CAM and hardware managerlayers must be reconfigured. Furthermore, Tru64 does not support hot swapping of SCSI devices. To reconfigure theCAM and hardware manager layers:

1. Close L&TT.
2. Use the following command to check for stale devices:`/sbin/hwmgr show scsi -full | grep stale`
3. Remove any stale devices. Devices can be rediscovered later. Use the following command to remove a device:`/sbin/hwmgr -delete scsi -did <SCSI ID>`
4. Rescan the SCSI bus.`/sbin/hwmgr scan scsi`
5. Rescan the CAM layer.`/sbin/scu scan edt`
6. Run the following commands to verify the SCSI devices:`/sbin/hwmgr show scsi`
   `/sbin/scu show edt`
7. Restart L&TT.

top

Why does not L&TT for Linux see some of the devices?

To detect a surrogate SCSI device, the modules.conf file must be configured for the newdevice connected. After modifying this file, reboot the computer so that the new deviceis recognized by the scsi/sg layer. Linux does not support hot swapping of SCSI devices. Toreconfigure the modules.conf file:

1. Login as root.
2. Edit the following file:`vi /etc/modules.conf`
3. Add the following line as appropriate:`add options scsi_mod max_scsi_luns=128`
4. Reboot the computer.

top

Why does not L&TT for Windows see devices that are connected to a computerrunning HPE-UX?

L&TT does not support a client-server model such as the HPE-UX support tools manager. L&TT cannot be usedon a Windows workstation to view devices that are connected to a computerrunning HPE-UX.

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How to connect/disconnect a SCSI device in Linux without rebooting?

- To add a new device, connect the device and run the following command:`echo "scsi add-single-device <hostid> <busid> <targetid> <lunid>">/proc/scsi/scsi`

- To remove a device, run the following command and disconnect the device.`echo "scsi remove-single-device <hostid> <busid> <targetid> <lunid>">/proc/scsi/scsi`

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Link to the list of available documents

Click here to view a list of documents available for the HPE Library and Tape Tools .

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