

OVERVIEW

SANworks Tape Storage Management Console (TSMC) is a browser-based management tool that is designed to aid in the installation and maintenance of Compaq tape drives, tape arrays, and tape automation products in both Direct-Attach and SAN Fibre-Attached environments. TSMC includes multiple diagnostics capabilities, advanced tests, and system management functions designed to be used by both Compaq storage customers and trained service personnel. The latest TSMC versions available include: TSMC v2.3.3 for Microsoft® Windows®, TSMC v2.0.1 for Novell® NetWare® and v2.0 for Tru64 UNIX®.

Key Customer benefits include:

- Performs Diagnostic Tests, simplifying and minimizing the procedures and time required to detect, find, and replace failed Field Replaceable Units (FRUs).
- Provides the access and capabilities to download firmware upgrades, ensuring that the customer has the latest and greatest features and enhancements for their storage devices

Other Customer benefits include:

- Minimizes customers "Total Cost of Ownership" and "Cost of Downtime" by efficiently managing Compaq tape devices
- Browser-based GUI (Java) provides for "anytime" and "anywhere" access to application and Tape Devices.
- Supports Compaq Tape Drives, Autoloaders, Compaq Ultrium 230 tape drives, Arrays, Libraries, Fibre-Attached SAN devices, including the FCTC I, and Modular Data Routers
- Supported on all ProLiant and AlphaServer platforms
- Distributed through the StorageWorks Data Protection Suite for Tape Utilities and also available to download from:
<http://www.compaq.com/products/storageworks/softwaredrivers/tsmc/index.html>

KEY FEATURES

- Browser-based GUI with access through either the host server or remote client
- TSMC HMMO agent allows for one primary and multiple secondary users to access TSMC simultaneously. Primary user has access to issue commands to the devices, while secondary users can browse information only
- Provides a single point of access for customers to use both diagnostic and firmware upgrade tools

OTHER FEATURES

- Compliant with Insight Manager, Compaq ELM Server technology, and StorageWorks Command Console (SWCC)
Note: The Agents in Compaq Insight Manager must be turned off prior to running TSMC in a Windows NT® environment. After TSMC has been run, the agents can be turned on again.
- Summary screen lists all Fibre and Direct-Attach devices, as well as the client status
- Provides specific tests for Tape and Automation devices designed to simplify troubleshooting and required service
- Advanced functionality allows users to execute specific commands for tape and automation devices
- Multiple options for retrieving firmware and application updates for Compaq tape and automation devices
- Provides information log for test status and results at both the application and device level
- Enhanced capabilities for testing automation functions and managing library media inventory
- Supports Microsoft Windows NT/2000, Novell NetWare and Tru64 UNIX
- Supports Compaq SAN topology

PRODUCT HIGHLIGHTS

Menu Commands

TSMC uses menu commands that provide the user with the following access or functionality:

- Allows user to access Summary Screen
- Change options that set the behavior and display characteristics for TSMC
- Initialize a Force Rescan that detects and updates all attached devices
- Allows user to sign-off and close the application
- Provides access to TSMC Help Files

Summary Screen

Provides inventory of all Direct-Attach and Fibre-Attached devices, along with the client status.

Device Listing

Displays each device with corresponding SCSI Bus, device ID, and LUN. Utilizes special icons to indicate if device is tape drive, tape library, hard disk drive, optical drive, or fibre-SCSI bridge. Also lists device associations for tape drives installed in tape libraries.

Standard and Custom Tests for Tape Devices

Provides testing tools and qualifiers for tape drives to verify that devices are properly installed or have failed and should be returned to the vendor. Standard tests include:

- Initialization
- Buffer Test
- Read/Write Test
- Filemark Test

The Custom Tests are similar to the Standard Tests, but implement the tests more often and in more locations.

Standard and Extended Tests for Automation

Provides testing tools and qualifiers for tape libraries and autoloaders to verify that each system is properly installed or has failed and requires service. The Standard Test procedure for libraries performs a series of moves from slot to drives and from drives to slots, including the following moves:

- Move from a slot to a drive
- Move from a drive to a slot
- Move from a slot to a load port (where applicable)
- Move from a load port to a slot (where applicable)
- Move from a slot to a slot

The Extended Test procedure for Libraries performs the same tests, but allows for more extensive moves.

Note: Compaq supported tape libraries are unable to perform Standard and Extended Test when the Media Partitioning feature has been selected.

Advanced Functionality

Allows customer to execute device specific commands for both tape drives and libraries including:

- Status Commands – detects test unit readiness and can issue a soft reset for the device (also allows for Eject and Rewind commands for tape drives)
- Info Commands – provides operational and error information for SCSI devices by viewing Log, Mode, or Inquiry pages and page contents
- Setup Commands – allows for the repositioning of robotics and cartridges (also provides an erase function for individual tape drives)

Downloading Firmware and TSMC Updates

TSMC can track all available firmware versions for specific Compaq Tape Devices, as well as updates to the TSMC application. Customers have three options for retrieving updates from the web:

- Firmware Tab – available through each device listing, allowing for the download of specific firmware images for that device or the selection of an existing image available on the user's server
- File Retrieval – located in the parent directory of the TSMC server, provides access to updates outside of the TSMC application
- Update Tab – located on the Summary Screen, provides a complete selection of Compaq tape devices from which the user can select individual or multiple files for download (requires internet connection or access)

PRODUCT HIGHLIGHTS *(continued)*

Test Logs

Test results for each SCSI command are displayed through information logs including the following:

- Message Log – displays every command executed for a device, from the time the TSMC application was initiated (in an ascending order)
- Error Log – displays the SCSI commands that failed or returned an error for each device
- SCSI Log – displays every SCSI command issued to a specific SCSI tape device

Automation Layout

Allows the user to perform media moves, through drag-and-drop techniques, as well as test automation functions and search for barcoded media. This feature also provides for a complete inventory and layout of tape cartridges and drives found within the library.

SYSTEM REQUIREMENTS & SUPPORT

Device Support

Tape Drives	SLR	4/8 GB SLR
	DAT	4/8 GB DAT, 12/24 GB DAT, 20/40 GB DAT (including Hot-Plug)
	AIT	AIT 35 GB (IDE), AIT 35 GB (SCSI), AIT 35 GB LVD (SCSI), AIT 50 GB (including Hot-Plug), AIT 100 GB
	DLT/SDLT	DLT 15/30 GB, DLT 20/40 GB, DLT 35/70 GB, DLT 40/80 GB, SDLT 110/220 GB, SDLT 160/320 GB
	LTO	Ultrium 230 for ProLiant
Rackmount Tape Options	3U Rackmount Kit, 5U Rackmount Kit	
Tape Automation	12/24 GB and 20/40 GB DAT 8-Cassette Autoloader DLT1 Autoloader AIT Autoloader SSL 2020 AIT Library TL 881 DLT Library TL 891 Library, TL 891DLX Library TL 895 DLT Library MSL5026SL Library, MSL5026DLX Library, MSL5026S2 Library MSL5030L1 Library MSL5052SL Library, MSL5052S2 Library MSL5060L1 Library ESL9198SL Library, ESL9198DX Library ESL9322S2 Library ESL9326D Library, ESL9326SL Library, ESL9326DX Library ESL9595SL Library, ESL9595S2 Library <i>Note: Compaq tape libraries are unable to perform Standard and Extended Test when the Media Partitioning feature has been selected.</i>	
SCSI Controllers	Fast-Wide SCSI 2 or LVD Host Bus Adapter, Compaq-branded (requires installed driver 'CPQ32FS2.SYS') 64-Bit/66-Mhz Wide Ultra 3 Host Bus Adapter, Compaq-branded (requires installed driver 'Adu160m.SYS') Dual Channel PCI to Ultra SCSI Adapter PCI to 10/100MBPS Ethernet Combo Adapter	
Fibre Interconnects	FCTC I, FCTC II, and Modular Data Router 64-Bit/33-MHz PCI-to-Fibre Channel Host Bus Adapter 64-bit/66-MHz PCI-to-Fibre Channel Host Bus Adapter NSR M2402 NSR N1200	

SYSTEM REQUIREMENTS & SUPPORT *(continued)*

OS Support	Microsoft Windows NT 4.0 with Service Pack 6 or greater Microsoft Windows Server, and Advanced Server with Service Pack 2 or greater Novell NetWare v5.1 with Support Pack 3 or greater Tru64 UNIX v5.1a
Required Browser	Microsoft Internet Explorer 5.0 or higher with Java Support (or equivalent) Netscape 4.7 or higher
Host System Support	Compaq ProLiant Servers Compaq AlphaServers

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