StorageTek ACSLS

Management of distributed tape libraries is both time consuming and costly—involving multiple libraries, multiple backup applications, multiple administrators, and poor resource utilization. It all adds up to a high cost of ownership. StorageTek Automated Cartridge System Library Software (StorageTek ACSLS) manager software from Oracle solves this problem, by centralizing the management of your tape libraries for easier administration, increased utilization, and a lower total cost of ownership.

Centralized Tape Library Management

StorageTek ACSLS manager software enables you to implement a strategic, centralized library management solution. It functions as a central service provider for operating StorageTek libraries in heterogeneous environments. It also enables you to collapse disparate, application-dedicated libraries into one centralized library or into a string of libraries accessed via a single point of control.

StorageTek ACSLS is accessible from the most widely used tape backup applications running on every major operating system to leverage the benefits of efficient, cost-effective StorageTek libraries. It supports more than 30 of today's tape management systems and more than 10 different StorageTek libraries.

StorageTek ACSLS is designed to interoperate with popular backup-and-recovery, archive, and hierarchical storage management (HSM) applications to support a heterogeneous systems environment. With it, you can consolidate your library resources, load balance them, and fully utilize your available storage capacity. This eliminates the need to purchase additional direct-attach libraries while other dedicated libraries in your arsenal remain only partially used. The resulting library architecture can help you reduce capital equipment, maintenance, and personnel costs.

Simplifying the Client/Server Architecture

StorageTek ACSLS manager software has a demonstrated ability to work consistently and reliably over the years in thousands of enterprises. It enables any supported application, or combination of supported applications, to dynamically allocate library resources without hard partitioning of tape slots in the library. Yet, to each application, the libraries appear to be operating under its exclusive control.

With dynamic configuration capabilities built into StorageTek ACSLS, any hardware upgrades need not interrupt the larger library complex. The dynamic configuration feature is designed to help you hot-swap drives, add library expansion modules, and

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- Interoperates with the leading backup-and-recovery, archive, and HSM applications
- Offers enhanced security features to protect data from unauthorized access

change other hardware configurations without impact to the greater storage environment.

StorageTek ACSLS High-Availability Solution

Whether you earn revenues through e-commerce, have global operations, or have to complete backups during a tight window, StorageTek ACSLS helps your tape environment meet your high-availability objectives. For maximum business-continuity protection of your StorageTek libraries, look to the StorageTek Automated Cartridge System Library Software High-Availability Agent (StorageTek ACSLS HA) solution. It helps you eliminate single points of failure in the management of your StorageTek tape libraries.

The StorageTek ACSLS HA solution leverages the Oracle Solaris operating system and Oracle Solaris Cluster high-availability software in a dual-server configuration, housing your library management StorageTek ACSLS application on two separate servers. In the event of a hardware or software error, the StorageTek ACSLS HA solution automatically fails over to the redundant server to enable continuous library control and access to data.

StorageTek ACSLS HA is a solution that is developed and supported by Oracle, offering a single point of contact for support of your mission-critical environments. Investing in the StorageTek ACSLS HA solution can help you minimize both unplanned and planned downtime—especially in lights-out data centers—to improve data access and greatly reduce the costs associated with such outages. For large enterprises, the ROI benefit of the StorageTek ACSLS HA solution means that the solution can pay for itself by preventing even short periods of unexpected outages or by reducing the maintenance window that cuts into productive operations time.

StorageTek ACSLS Manager Software Features

StorageTek ACSLS manager software helps you fully optimize your libraries with advanced features.

Rich Management Capabilities

The solution offers capabilities such as auditing, reporting, event-log recording, querying, issuing of service requests, and automated drive cleaning. These features provide exceptional operational flexibility.

The user interface runs as an application within the Java Web Console. It allows performance of most legacy cmd-proc operations and the operations related to logical library management. When partitioning Oracle's StorageTek SL8500 modular library system, StorageTek SL3000 modular library system, or StorageTek SL150 modular tape library into logical libraries, one can assign volumes and drives to the logical library to enable library consolidation, gain capacity on demand, and allow only the client connected to the logical library to access those volumes and drives.

The web-based GUI and the command-line display enable users to obtain information about the StorageTek ACSLS database, using highly customizable queries. The event

notification feature informs users of volume and library status changes as well as hardware errors.

Robust Cartridge and Volume Support

Cartridges that cannot be found in the library due to ejection or absence are marked absent rather than being deleted. These cartridges are easily reactivated and ready for immediate use upon re-entry into the environment. StorageTek ACSLS manager software recovers volumes that are not found in their expected locations in the library, searching all of a volume's recorded locations instead of automatically deleting them.

Cartridge Exchange Support

StorageTek ACSLS manager software supports enterprise environments by utilizing the pass-through port (PTP) feature of StorageTek tape libraries. This enables StorageTek libraries to exchange cartridges between library storage modules to optimize the use of those resources. If all of a library's tape drives are busy and a cartridge resident in that library receives a mount request, the requested cartridge can be passed to another library with the nearest available transport for continuous operation.

Access Control

The Access Control feature allows administrators to protect each client's resources from unauthorized access by other clients. Easily configured access-control tables may be implemented to limit clients to their respective volumes. Client access to specific library commands also can be controlled by the administrator. The StorageTek ACSLS manager software server itself can be protected behind a firewall. StorageTek ACSLS also supports a locking mechanism so that tape drives can be selectively allocated to multiple users or dedicated to a single user. Tape drives and volumes assigned to a logical library can be accessed only by the client managing the logical library.

Dynamic Resource Management

The Media Pool feature enables you to assign each application or user its own pool of tapes to manage. In addition to supporting high and low watermarks, it provides a common scratch tape pool from which applications draw. Pools can easily span physical libraries, making it easy to scale your library environment to accommodate growth or additional applications.

The Drive Upgrade feature enables you to conduct near-continuous operations by dynamically updating drives and configurations without restarting the application.

Mixed-Media Support

StorageTek ACSLS manager software enables you to choose the right mix of drive and media cartridge types in the same library, so you can tune your resource use for its most cost-effective configuration. StorageTek ACSLS coordinates library maneuvers within heterogeneous media and drives environments, protecting all library resources against incompatible operations.

StorageTek ACSLS Manager Software Options

StorageTek ACSLS manager software is enhanced with many key options:

- Oracle's StorageTek Library Attach (LibAttach) software enables StorageTek ACSLS manager software to manage applications running in Windows environments. It uses a TCP/IP network to provide a seamless connection between Windows backup applications and StorageTek ACSLS manager software.
- StorageTek ACSLS 8.4 XAPI client support allows StorageTek ACSLS to be a server for IBM mainframe clients SMC (IBM z/OS platform) and VM Client (IBM z/VM platform).
- RMLS Client System Component (RMLS/CSC) software enables applications running in an iSeries (AS/400) environment to share a library managed by StorageTek ACSLS manager software.

Benefits of the StorageTek ACSLS Configuration

Without StorageTek ACSLS manager software, organizations grapple with having distributed management, several administrators, multiple libraries, excess environmental consumption, poor workload balancing and resource utilization, and higher total cost of ownership.
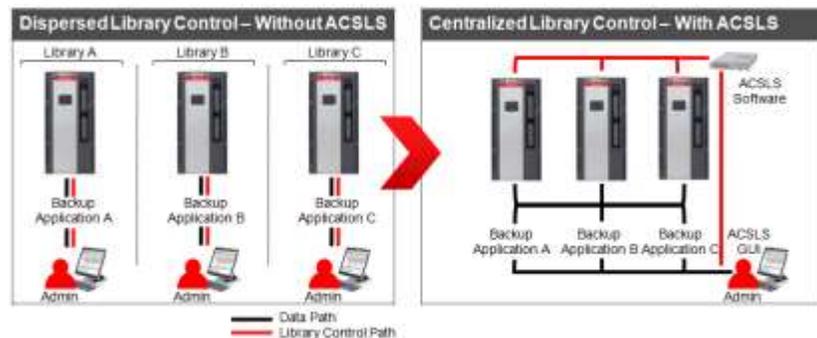

Figure 1. This contrasts the configuration before and after StorageTek ACSLS is utilized to centralize the control path.

With StorageTek ACSLS, organizations gain from having centralized management, a single administrator, one library, lower environmental consumption, standard policy management, balanced workload and resource utilization, maximum storage efficiency, and lower cost of ownership.

New Capabilities in StorageTek ACSLS 8.3 Manager Software

The newest release of StorageTek ACSLS includes features to increase visibility into high availability events, performance enhancements, expanded hardware support, expanded logical library support, and more. It supports:

- Performance enhancements
- Availability enchantments
- Supported hardware enhancements
- Supported OS enhancements:
    - Additional OS support: Oracle Solaris 10 and 11

- Additional OS support: Linux 6.3 and 6.4

New Capabilities in StorageTek ACSLS 8.4 Manager Software

The newest release of StorageTek ACSLS includes features to improve import/export performance, expand OS, and more. It supports:

- StorageTek SL8500 bulk cartridge access port (CAP)
- StorageTek SL3000 bulk ejects
- XAPI for SMC environments
- Supported hardware enhancements
- Supported OS enhancements:
    - Additional OS support: Oracle Solaris 11.2
    - Additional OS support: Linux 6.5

StorageTek ACSLS 8.4 Specifications

Software Requirements

- *Oracle Solaris 11 Update 2: Oracle's SPARC and x86* - *Oracle Linux 6.5* - *Red Hat Enterprise Linux 6.5*	*For StorageTek ACSLS HA only:* - *StorageTek ACSLS 8.3 HA* - *Oracle Solaris 11 update 1* - *Oracle's SPARC and x86* - *Oracle Solaris Cluster software 4.1*

Minimum Hardware Requirements

- *2 GB or greater RAM*
- *40 GB disk space (includes free space for database backup)*

Supported Tape Libraries

- *StorageTek SL8500 modular library system* - *StorageTek SL3000 modular library system* - *StorageTek SL150 modular tape library* - *StorageTek SL500 modular library system** - *StorageTek L1400 tape library**	- *StorageTek L700e tape library** - *StorageTek L180 tape library** - *StorageTek L5500 tape library** - *StorageTek PowderHorn 9310 tape library** - *StorageTek legacy tape libraries**

Supported Tape Drives

- *StorageTek T10000A*, B*, C*, and D* - *StorageTek T9940A* and B** - *StorageTek T9840A*, B*, C*, and D**	- *LTO 2*, 3*, 4*, 5, 6* - *DLT-S4* and SDLT 320* and 600** - *StorageTek legacy tape drives** - *DLT legacy tape drives**

Supported Backup Client Environments (dependent upon backup application)

- *IBM MVS* - *IBM AS/400* - *UNIX*	- *Windows (x86, ia64, x64)* - *Linux*

*Supported but not currently price listed

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For more information about Oracle's StorageTek ACSLS, please visit oracle.com/sun or call +1.800.786.0404 to speak to an Oracle representative.

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