



StorageTek™ ACSL

AUTOMATED CARTRIDGE SYSTEM LIBRARY SOFTWARE

PRODUCT INFORMATION

316120302
Version: 7.3

Automated Cartridge System Library Software

Product Information

Version 7.3

316120302

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Summary of Changes

EC released document table.

EC	Date	Edition	Revision	Description
EC000249	April 2008	First	A	ACSL 7.3 provides support for the SL3000.
EC000758	November 2008	Second	BA	ACSL with PUT0801

Summary of Changes

Customer Contacts

■ Customer Support

Customer support is available 24 hours a day, seven days a week, to customers with Sun or StorageTek maintenance contracts and to Sun employees.

■ Customer-initiated Maintenance

Customer-initiated maintenance begins with a telephone call from you to Sun StorageTek Support. You receive immediate attention from qualified Sun personnel, who record problem information and respond with the appropriate level of support.

To contact Sun StorageTek Support about a problem:

1. Call:

1-800-872-4786

(1-800-USA-4SUN)

2. Describe the problem to the call taker. The call taker will ask several questions and will either route your call to or dispatch a support representative.

If you have the following information when you place a service call, the process will be easier:

Account name	_____
Site location number/Sun contract number	_____
Contact name	_____
Telephone number	_____
Version of ACSLS	_____
OS platform	_____
Libraries	_____

Problem description

■ Sun's Worldwide Offices

You may contact any of Sun's worldwide offices to discuss complete storage, service, and support solutions for your organization. You can find address and telephone number information on Sun's external Web site at:

<http://www.sun.com/worldwide/>

Contents

Summary of Changes	v
Customer Contacts	vii
Customer Support	vii
Customer-initiated Maintenance	vii
Sun's Worldwide Offices	viii
Contents	ix
Preface	xi
About this Book	xi
Audience	xi
About the Software	xi
Conventions for Reader Usability	xi
Typographic	xi
Keys	xii
Enter Command	xii
Symbols	xii
Related Documentation	xiii
ACSLs Documentation	xiii
ACSLs Information on the Sun Website	xiii
1: Overview	1
Software Requirements	1
Features and Enhancements	1
Co-hosting on the ACSLS Server	3
LSMs Supported	3
Tape Drives Supported	4
Tape Media Supported	8
Tape Drive and Media Compatibility Supported	11
Solaris Requirements	14
AIX Requirements	15

Contents

Preface

■ About this Book

Automated Cartridge System Library Software (ACSL) is Sun StorageTek's UNIX server software that controls a Sun StorageTek Automated Cartridge System (ACS). The Sun StorageTek ACS family of products consists of fully automated, tape cartridge-based data storage and retrieval systems. ACSL supports network access to different client systems that can range from workstations to mainframes to supercomputers running on a variety of operating systems.

Audience

This Installation Guide is for the individual responsible for installing ACSL. It is expected that you already have a working knowledge of the following:

- UNIX file and directory structure
- How to use UNIX commands and utilities for your platform
- UNIX system files
- How to do typical UNIX system administrator tasks, such as logging on as root and setting up user accesses to a UNIX application

About the Software

This guide supports ACSL 7.3 (PUT0801).

Conventions for Reader Usability

Conventions are used to shorten and clarify explanations and examples within this book.

Typographic

The following typographical conventions are used in this book:

- **Bold** is used to introduce new or unfamiliar terminology, or it's used in steps to indicate either an action or a decision the user has to make.

- Letter Gothic is used to indicate command names, filenames, and literal output by the computer.
- Letter Gothic Bold is used to indicate literal input to the computer.
- *Letter Gothic Italic* is used to indicate that you must substitute the actual value for a command parameter. In the following example, you would substitute your name for the “username” parameter.

Logon username

- A bar (|) is used to separate alternative parameter values. In the example shown below either username or system name must be entered.

Logon *username | systemname*

- Brackets [] are used to indicate that a command parameter is optional.
- Ellipses (...) are used to indicate that a command may be repeated multiple times.
- This guide shows all ACSLS commands in lowercase. You can, however, enter these commands in all lowercase, all uppercase, or any combination of uppercase and lowercase. Single underlines show minimum command abbreviations. For example, aud and au are valid forms of the audit command.

Keys

Single keystrokes are represented by double brackets [[]] surrounding the key name. For example, press [[ESC]] indicates that you should press only the escape key.

Combined keystrokes use double brackets and the plus sign (+). The double brackets surround the key name and the plus sign is used to add the second keystroke. For example, press [[ALT]]+C indicates that you should press the alternate key and the C key simultaneously.

Enter Command

The instruction to “press the <Enter> key” is omitted from most examples, definitions, and explanations in this book.

For example, if the instructions asked you to “enter” Logon pat, you would type in Logon pat *and* press <Enter>.

However, if the instructions asked you to “type” Logon pat, you would type in Logon pat and you would *not* press <Enter>.

Symbols

The following symbols are used to highlight text in this book.

WARNING: Information necessary to keep you from damaging your hardware or software.

CAUTION: Information necessary to keep you from corrupting your data.

Hint: Information that can be used to shorten or simplify your task or they may simply be used as a reminder.

Note: Information that may be of special interest to you. Notes are also used to point out exceptions to rules or procedures.

Related Documentation

ACSLs Documentation

The *ACSLs Documentation CD-ROM*, is automatically shipped with the product package and is provided in PDF format. These documents are:

- *ACSLs 7.3 Product Information*
- *ACSLs 7.3 Administrator's Guide*
- *ACSLs 7.3 Messages*
- *ACSLs 7.3 Installation Guide*
- *ACSLs 7.3 Quick Reference*

ACSLs Information on the Sun Website

In addition to the PDF collections on the *ACSLs Information CD-ROM*, the Sun website provides PDF collections for ACSLS. The URL is:

<http://docs.sun.com>

Overview

1

Automated Cartridge System Library Software (ACSL) is Sun StorageTek's server software that controls a StorageTek Automated Cartridge System (ACS). ACSL accesses and manages information stored in an ACS through command processing across a network. The software includes a system administration component and interfaces to client system applications, and library management facilities.

ACSL 7.3 with PUT0801 uses the relational database PostgreSQL. The change to use PostgreSQL only changes the internal database used by ACSL. It has no impact on the ACSL API client interface or `cmd_proc`. The porting to use this new database includes basic database functions, backup and restore utilities, as well as the import/export utility.

With ACSL 7.3, we specify a minimum memory requirement of 512MB and a swap requirement of 1GB (on disk).

Please check the Sun website for any maintenance releases.

■ Software Requirements

ACSL 7.3 with PUT0801 requires the following software levels:

- The minimum supported Solaris version is Solaris-10, Update-4 (08/07). A supported version of PostgreSQL is included as part of the standard Solaris installation and no special installation procedures are necessary for PostgreSQL. If you are running in Solaris Zones, be sure to apply the latest Solaris patch cluster.
- AIX 5.3, Technology Level (TL) 6 and AIX 6.1. PostgreSQL 8.1.4 is supported, but is not bundled with AIX. It is included with the ACSL 7.3 CD, and must be installed separately.

■ Features and Enhancements

ACSL 7.3 with PUT0801 provides the following features and enhancements:

- Sun StorageTek Virtual Tape Library (VTL) support

Sun VTL is a new LSM type that is visible when you use the `display` command. It identifies generic virtual libraries as implemented in the FalconStor-based Sun VTL product line. A Sun VTL library can be configured, managed and operated just like any other single-LSM, SCSI-

attached library. ACSLS License Key limits are still applied against volumes residing in Sun VTL libraries.

- Access Expansion Module (AEM) support
 - The AEM will provide a bulk enter capability for the SL3000. It is not designed for enters or ejects of small numbers of cartridges.
 - The maximum CAP priority for an AEM is 1

To prevent a small number of cartridges from being automatically selected when the CAP ID is wild-carded (with an asterisk), ACSLS does not allow AEMs to be set to a priority greater than 1. This reduces the chances of an AEM being automatically selected for small enters and ejects.

- CAP Aliasing

With PUT0801, you are no longer able to alias CAP 0. Cap 0 is reserved for the Access Expansion Module (AEM) on the right and has special characteristics. Because of this, only CAP numbers 1 and 2 can be used as aliases.

- Drive End-of-Life and Cartridge Warranty and End-of-Life Percentages

The display command now shows nicely formatted drive end-of life percentages, as well as the cartridge warranty life and end-of-life percentages. They are displayed as a three-digit percentage with a resolution of .1 percent followed by a percent (%) sign. The command is:

```
display volume vol_id ... -f warranty_life end_of_life
```

Example Output:

vol_id	Warranty_life	End_of_life
NA0163	54.8%	49.8%
RC0003	119.7%	108.8%

- An -f (force) option added to the del_vol utility

The force option permits you to re-enter cartridges that were stuck in a tape drive. With the -f option, you can delete a volume or mark it absent without verifying if the volume is actually in the library. This permits you to delete from the database a volume that was in a faulty tape drive. Using this option, you can remove the volume from the drive, delete it from the database, then re-enter the volume for normal library use while the drive is being repaired.

- New Status Bar

On Solaris installations, a new status bar will display the current status of the software startup sequence. When you start the software using rc.acsss, an ASCII status bar will display the current status toward initialization completion. This display can be suppressed using rc.acsss -q. Detailed status can be displayed using rc.acsss -s.

- Support for T10000B drives

■ Co-hosting on the ACSLS Server

We do not test, certify, or support co-hosting of other applications on ACSLS servers unless you are running in a Zone (container) environment. This applies to this release and prior releases. ACSLS must be the only application running in a Zone.

Management of Sun StorageTek SCSI libraries within Solaris zones is supported by ACSLS when you install the STKchanger driver package in the global zone.

■ LSMs Supported

- 4410 LSMs
- 9310 LSMs
- 9360 LSMs
- 9740 SCSI-Attached LSMs
- 9740 HLI-Attached LSMs
- 9710 LSMs
- 9714 LSMs
- 9730 LSMs
- 9738 LSMs
- L20, L40, L80 LSMs
- L180 LSMs
- L700 LSMs
- L700e PTP
- SL500 LSMs
- L5500 LSMs
- SL3000 LSM
- SL8500 LSMs
- Sun StorageTek Virtual Tape Library (VTL)

■ Tape Drives Supported

The following table is used to translate drive types between applications. The Drive Type Name represents the drive type in cmd_proc and event log messages. The ACSAPI Drive Type Number is used in ACSLS software operations and ACSAPI client communications.

Notes:

The last column in the Tape Drives table identifies when ACSLS support for that tape drive and its associated media was added (only after ACSLS 7.0).

Table 1. Tape Drives Supported.

ACSAPI Drive Type Number	Drive Domain (hex and character, if applicable)	Drive Type Reported by Library (decimal)	Drive Type Name	Tape Drive Description	ACSLs Support if after 7.0
0	00h	64	4480	StorageTek 18-track	
1	00h	08	4490	StorageTek Silverton 36-track	
2	00h	32	9490	StorageTek TimberLine 36-track high performance	
3	00h	16	SD3	StorageTek Redwood Helical	
4	00h	04	4890	StorageTek Twin Peaks 36-track	
5	01h	01 (65)*	DLT2000	Quantum DLT2000	
6	01h	02 (66)*	DLT2000XT	Quantum DLT2000XT	
7	01h	03 (67)*	DLT4000	Quantum DLT4000	
8	01h	04 (68)*	DLT7000	Quantum DLT7000	
9	00h	02	9840	StorageTek T9840A	
10	00h	33	9491	StorageTek TimberLine EE 36-track	
11	01h	07 (71)*	DLT8000	Quantum DLT8000	
12	00h	03	9840-3590	T9840A with IBM 3590 emulation	

ACSAPI Drive Type Number	Drive Domain (hex and character, if applicable)	Drive Type Reported by Library (decimal)	Drive Type Name	Tape Drive Description	ACSLs Support if after 7.0
13	00h	05	T9940A	T9940A with SCSI/ Fibre or VSM3490	
14	00h	06	9940--3590	T9940A with 3590 emulation	
15	01h	20 (84)*	SDLT	Super DLT 220	
16	00h	01	T9840B	High Performance 9840 with SCSI/ Fibre or VSM3490	
17	00h	07	T9840B35	T9840B with 3590 emulation	
18	4Ch ("L")	48	HP-LTO	HP LTO Generation 1	
19	4Ch ("L")	49	IBM-LTO	IBM LTO Generation 1	
20	4Ch ("L")	50	CER-LTO	Certance LTO Generation 1	
21	00h	09	T9940B	T9940B with SCSI/ Fibre or VSM3490	
22	00h	10	T9940B35	T9940B with 3590 emulation	
23				<i>reserved</i>	
24	01h	21 (85)*	SDLT-320	Super DLT 320	
25	00h	11	T9840C	T9840C with Fibre or VSM3490	
26	00h	12	T9840C35	T9840C with 3590 emulation	
27	4Ch ("L")	51	HP-LTO-2	HP LTO Generation 2	
28	4Ch ("L")	52	IBM-LTO-2	IBM LTO Generation 2	
29	4Ch ("L")	53	CER-LTO-2	Certance LTO Generation 2	
30	01h	23 (87)*	SDLT-600	Super DLT 600	ACSLs 7.1

ACSAPI Drive Type Number	Drive Domain (hex and character, if applicable)	Drive Type Reported by Library (decimal)	Drive Type Name	Tape Drive Description	ACSLs Support if after 7.0
31	54h ("T")	13	T1A	T10000A with Fibre or VSM3490	ACSLs 7.1 with PUT0501
32	54h ("T")	14	T1A35	T10000A with IBM 3592 emulation	ACSLs 7.1 with PUT0501
33	4Ch ("L")	54	HP-LTO-3	HP LTO Generation 3	ACSLs 7.1 with PUT0501
34	4Ch ("L")	55	IBM-LTO-3	IBM LTO Generation 3	ACSLs 7.1 with PUT0501
35	4Ch ("L")	56	CER-LTO-3	Certance LTO Generation 3	ACSLs 7.1 with PUT0501
36				<i>reserved</i>	
37	54h ("T")	24	T1AE	T10000A, fibre or VSM3490, with encryption enabled	ACSLs 7.1 with PUT0602
38	54h ("T")	25	T1AE35	T10000A - IBM 3592 emulation with encryption enabled	ACSLs 7.1 with PUT0602
39				<i>reserved</i>	
40				<i>reserved</i>	
41	00h	18	T9840D	T9840D, fibre or VSM3490	ACSLs 7.1 with PUT0602
42	00h	19	T9840D35	T9840D - IBM 3592 emulation (MVS attach)	ACSLs 7.1 with PUT0602
43	00h	20	T9840DE	T9840D, fibre or VSM3490, with encryption enabled	ACSLs 7.1 with PUT0602

ACSAPI Drive Type Number	Drive Domain (hex and character, if applicable)	Drive Type Reported by Library (decimal)	Drive Type Name	Tape Drive Description	ACSL S Support if after 7.0
44	00h	21	T9840DE5	T9840D- IBM 3592 emulation (MVS attach) with encryption enabled	ACSL S 7.1 with PUT0602
45	01h	24 (88)*	DLT-S4	Quantum DLT-S4	ACSL S 7.1 with PUT0602
46	4Ch ("L")	57	HP-LTO4	HP LTO Generation 4	ACSL S 7.1 with PUT0701
47	4Ch ("L")	58	IBM-LTO4	IBM LTO Generation 4	ACSL S 7.1 with PUT0701
48				<i>reserved</i>	
49	54h ("T")	26	T1B	T10000B with Fibre or VSM3490	ACSL S 7.1 with PUT0701 & PTF or ACSL S 7.2 with PUT0702
50	54h ("T")	27	T1B35	T10000B with IBM 3592 emulation	ACSL S 7.1 with PUT0701 & PTF or ACSL S 7.2 with PUT0702
51	54h ("T")	28	T1BE	T10000B with Fibre or VSM3490 and encryption	ACSL S 7.1 with PUT0701 & PTF or ACSL S 7.2 with PUT0702

ACSAPI Drive Type Number	Drive Domain (hex and character, if applicable)	Drive Type Reported by Library (decimal)	Drive Type Name	Tape Drive Description	ACSLs Support if after 7.0
52	54h ("T")	29	T1BE35	T10000B with encryption and IBM 3592 emulation	ACSLs 7.1 with PUT0701 & PTF or ACSLS 7.2 with PUT0702
53	54h ("T")	34	T1C	T10000C with Fibre or VSM3480	ACSLs 7.3 with PUT0801
54	54h ("T")	35	T1C35	T10000C with IBM 3592 emulation	ACSLs 7.3 with PUT0801
55	54h ("T")	36	T1CE	T10000C with Fibre or VSM3480 and encryption	ACSLs 7.3 with PUT0801
56	54h ("T")	37	T1CE35	T10000C IBM 3592 emulation with encryption enabled	ACSLs 7.3 with PUT0801

■ Tape Media Supported

The following table lists the compatible tape media supported for each transport type.

Note:

- * Legacy StorageTek media do not have a media domain on the label. They are reported as media domain **0** (zero).
- ** 3480 cartridges do not have a media type label. They are reported as media type **1**.
- *** DLT cartridges do not have a media domain on the label. They are reported as media domain **1**. SDLT cartridges with 7 character barcodes are also reported as media domain **1**.
- **** When a media type is reported as cleaning cartridge "maybe", both data or cleaning cartridges can have this media type.

Table 2. Tape Media Supported

ACSAPI Media Type Number	Media Type Name	Media Description	Media Domain (on label)	Media Type (on label)	Cleaning Cartridge ****
0	3480	3480 18 or 6-track	0*	1**	maybe
1	3490E	3490E 36-track	0*	E	no
2	DD3A	StorageTek Redwood (Helical) 10GB	0*	A	no
3	DD3B	StorageTek Redwood (Helical) 25GB	0*	B	no
4	DD3C	StorageTek Redwood (Helical) 40GB	0*	C	no
5	DD3D	StorageTek Redwood Cleaning Cartridge	0*	D	yes
6	DLTIII	Quantum DLT III -10GB	1***	C	maybe
7	DLTIV	Quantum DLT IV - 20GB or 35GB	1***	D	no
8	DLTIIIXT	Quantum DLT IIIxt - 15GB	1***	E	no
9	STK1R	T9840A, T9840B, T9840C or T9840D data cartridge	0*	R	no
10	STK1U	T9840A, T9840B, 9840C cleaning cartridge	0*	U	yes
11	EECART	9490EE 36-track	0*	Z	no
12		<i>reserved</i>			
13	STK2P	9940 data cartridge	0*	P	no
14	STK2W	9940 cleaning cartridge	0*	W	yes
15		<i>reserved</i>			
16	LTO-100G	LTO Generation 1 data cartridge	L	1	no
17	LTO-50GB	LTO Generation 1 data cartridge	L	A	no
18	LTO-35GB	LTO Generation 1 data cartridge	L	B	no
19	LTO-10GB	LTO Generation 1 data cartridge	L	C	no

ACSAPI Media Type Number	Media Type Name	Media Description	Media Domain (on label)	Media Type (on label)	Cleaning Cartridge ****
20	LTO-CLN2	IBM cleaning cartridge	C	2	yes
21	LTO-CLN3	Certance cleaning cartridge	C	3	yes
22	LTO-CLN1	HP cleaning cartridge	C	1	yes
23	SDLT	Super DLT Generation I cartridge	1***	S	maybe
24		<i>reserved</i>			
25	LTO-CLNU	LTO universal cleaning cartridge	C	U	yes
26	LTO-200G	LTO Generation 2 data cartridge	L	2	no
27	SDLT-2	Super DLT Generation II data cartridge	1***	2	no
28	T10000T1	T10000 data cartridge	T	1	no
29	T10000TS	T10000 "sport" data cartridge	T	S	no
30	T10000CT	T10000 cleaning cartridge	C	T	yes
31	LTO-400G	LTO Generation 3 data cartridge	L	3	no
32	LTO-400W	LTO Generation 3 WORM data cartridge	L	T	no
33		<i>reserved</i>			
34	SDLT-S1	Super DLT Generation I data cartridge in SDLT-220 format	S	1	maybe
35	SDLT-S2	Super DLT Generation I data cartridge in SDLT-320 format	S	2	no
36	SDLT-S3	Super DLT Generation II data cartridge	S	3	no
37	SDLT-S4	Super DLT Generation 4 data cartridge	S	4	no
38	SDLT-4	Super DLT Generation 4 data cartridge	1***	4	no
39	STK1Y	T9840D cleaning cartridge	0*	Y	yes
40	LTO-800G	LTO Generation 4 data cartridge	L	4	no

ACSAPI Media Type Number	Media Type Name	Media Description	Media Domain (on label)	Media Type (on label)	Cleaning Cartridge ****
41	LTO-800W	LTO Generation 4 WORM data cartridge	L	U	no

■ Tape Drive and Media Compatibility Supported

The following table lists the compatible media for each drive type. Use these values as input to the `media media_type` and `drive drive_type` parameters on ACSLS commands.

Table 3. Drive and Media Compatibility

Drive Type (<i>drive_type</i>)	Compatible Media (<i>media_type</i>)	
	Data Cartridge	Cleaning Cartridge
4480	3480,	3480
4490	3480, 3490E	3480
4890	3480, 3490E	3480
9490	3480, 3490E	3480
9490EE	3480 (read only), 3490E, EECART	3480
SD3	DD3A, DD3B, DD3C	DD3D
9840	STK1R	STK1U
9840-3590	STK1R	STK1U
T9840B	STK1R	STK1U
T9840B35	STK1R	STK1U
T9840C	STK1R	STK1U
T9840C35	STK1R	STK1U
T9840D	STK1R	STK1Y
T9840D35	STK1R	STK1Y
T9840DE	STK1R	STK1Y
T9840DE5	STK1R	STK1Y
T9940A	STK2P	STK2W
9940A-3590	STK2P	STK2W
T9940B	STK2P	STK2W
T9940B35	STK2P	STK2W

Drive Type (<i>drive_type</i>)	Compatible Media (<i>media_type</i>)	
	Data Cartridge	Cleaning Cartridge
DLT2000	DLTIII	DLTIII
DLT2000XT	DLTIII, DLTIIIXT	DLTIII
DLT4000	DLTIII, DLTIIIXT, DLTIV	DLTIII
DLT7000	DLTIII, DLTIIIXT, DLTIV	DLTIII
DLT8000	DLTIII, DLTIIIXT, DLTIV	DLTIII
SDLT	SDLT, SDLT-S1, DLTIV	SDLT, SDLT-S1
SDLT-320	SDLT, SDLT-S1, SDLT-S2, DLTIV	SDLT, SDLT-S1
SDLT-600	SDLT, SDLT-2, SDLT-S1, SDLT-S2, SDLT-S3	SDLT, SDLT-S1
DLT-S4	SDLT-2, SDLT-4, SDLT-S2, SDLT-S3, SDLT-S4	SDLT,
HP-LTO	LTO-100G, LTO-50GB, LTO-35GB, LTO-10GB	LTO-CLN1, LTO-CLNU
IBM-LTO	LTO-100G, LTO-50GB, LTO-35GB, LTO-10GB	LTO-CLN2, LTO-CLNU
CER-LTO	LTO-100G, LTO-50GB, LTO-35GB, LTO-10GB	LTO-CLN3, LTO-CLNU
HP-LTO-2	LTO-200G, LTO-100G, LTO-50GB, LTO-35GB, LTO-10GB	LTO-CLN1, LTO-CLNU
IBM-LTO-2	LTO-200G, LTO-100G, LTO-50GB, LTO-35GB, LTO-10GB	LTO-CLN2, LTO-CLNU
CER-LTO-2	LTO-200G, LTO-100G, LTO-50GB, LTO-35GB, LTO-10GB	LTO-CLN3, LTO-CLNU
HP-LTO-3	LTO-400G, LTO-400W, LTO-200G, LTO-100G, LTO-50GB, LTO-35GB, LTO-10GB	LTO-CLN1, LTO-CLNU
IBM-LTO-3	LTO-400G, LTO-400W, LTO-200G, LTO-100G, LTO-50GB, LTO-35GB, LTO-10GB	LTO-CLN2, LTO-CLNU

Drive Type (<i>drive_type</i>)	Compatible Media (<i>media_type</i>)	
	Data Cartridge	Cleaning Cartridge
CER-LTO-3	LTO-400G, LTO-400W, LTO-200G, LTO-100G, LTO-50G, LTO-35GB, LTO-10G	LTO-CLN3, LTO-CLNU
HP-LTO4	LTO-800G, LTO-800W, LTO-400G, LTO-400W, LTO-200G	LTO-CLNU
IBM-LTO4	LTO-800G, LTO-800W, LTO-400G, LTO-400W, LTO-200G	LTO-CLNU
T1A	T10000T1, T10000TS	T10000CT
T1A35	T10000T1, T10000TS	T10000CT
T1AE	T10000T1, T10000TS	T10000CT
T1AE35	T10000T1, T10000TS	T10000CT
T1B	T10000T1, T10000TS	T10000CT
T1B35	T10000T1, T10000TS	T10000CT
T1BE	T10000T1, T10000TS	T10000CT
T1BE35	T10000T1, T10000TS	T10000CT

Note: For information about transport media, go to:
http://www.storagetek.com/products/tape_storage.html

■ Solaris Requirements

The following tables provides an overview of the software requirements for the Solaris platform.

Table 4. Solaris Requirements

Requirement	Description
Operation systems	Solaris 10 Update 4 is the minimum supported OS level for SPARC and X86 platforms. The latest Solaris patch cluster is recommended. The patch update is <i>required</i> if you are using Solaris zones.
ACSAPI Clients must support ACSAPI packet version 3 or higher	<p>ACSLs supports these ACSAPI packet versions:</p> <ul style="list-style-type: none"> • Packet version 3 (minimum) • Packet version 4 (recommended) <p>The CSC Developer's Toolkit is used to create ACSAPI clients.</p> <p>Note: The CSC Developer's Toolkit and ACSLS have supported packet version 3 since 1993.</p> <p>Support for versions 1 and 2 ended May 1, 2002.</p>
memory	512 MB minimum
file systems	<p>swap - 1 GB minimum</p> <p>/export/home - 2 GB minimum</p> <p>/export/backup - 3 GB minimum</p>

■ AIX Requirements

The following tables provides an overview of the software requirements for the AIX platform.

Table 5. Solaris Requirements

Requirement	Description
Operation systems	AIX 5.3, TL6 and AIX 6.1.
ACSAPI Clients must support ACSAPI packet version 3 or higher	<p>ACSLs supports these ACSAPI packet versions:</p> <ul style="list-style-type: none"> • Packet version 3 (minimum) • Packet version 4 (recommended) <p>The CSC Developer's Toolkit is used to create ACSAPI clients.</p> <p>Note: The CSC Developer's Toolkit and ACSLS have supported packet version 3 since 1993.</p> <p>Support for versions 1 and 2 ended May 1, 2002.</p>
memory	512 MB minimum
file systems	<p>swap - 1 GB minimum</p> <p>/export/home - 2 GB minimum</p> <p>/export/backup - 3 GB minimum</p>

