StorageTek Automated Cartridge System Library Software

Quick Reference

Version 8.0.1

StorageTek Automated Cartridge System Library Software Quick Reference Guide
Part Number: 316139501

Revision History

EC	Date	Revision	Description
001631	May 2010	AA	Supports StorageTek ACSLS 8.0.1. In this release software enforcement of the right-to-use license is no longer employed in ACSLS, and no longer checks for a valid license key.

Quick Reference

Throughout this quick reference, underlines show valid command and keyword abbreviations. For example, aud is an abbreviation of the audit command. Brackets [ ] enclose optional parameters. A vertical bar (|) separates parameter choices.

Start and Stop Commands

The `acsss` command is used to start, stop, and monitor the status of the various services associated with ACSLS 8.0.1.

Command	Function
acsss enable	This is the default method to bring up ACSLS. It checks for dependencies and activates, in the proper order, the five ACSLS services and the ACSLS GUI. When this method is used, the services are configured to restart automatically after a system reboot.
acsss temp-enable	Same as `acsss enable` but services are not restarted after a system reboot.
acsss maint-enable	Intended for maintenance operations, this option brings up the ACSLS database and the GUI infrastructure. This method is used in contexts of database maintenance (`restore, import, export`), library configuration (`acsss_config`), and minor software patch installations. Neither the acsls nor the smce service are enabled.
acsss disable	This is the default method used to halt ACSLS operation. It is not a complete shutdown and allows for the database and any GUI login sessions to remain active for maintenance operations after the acsls and smce services have been disabled. The resulting state is identical to that of `acsss maint-enable` . This is the safest method to bring down the server since ACSLS and the library are placed in an idle state before the services are disabled.
acsss force-disable	Same as `acsss disable` but the operation does not wait for an idle state before disabling acsls and smce.
acsss shutdown	This renders a complete shutdown of all ACSLS services. It is intended for contexts of software installation and de-installation, and other maintenance contexts that require the database (`acsdb`) or the GUI infrastructure (`rmi-registry` and `surrogate`) to be shutdown.
acsss db	Brings up only `acsdb`. It shuts down all other services.

Command	Function
acsss status	This option provides a quick status report of the five ACSLS services and the GUI.
acsss g-status	This option displays the status of the ACSLS GUI.
acsss l-status	This option provides a verbose status summary of the five ACSLS services and includes pointers to log data for further analysis in troubleshooting contexts.
acsss p-status	Similar to `acsss status`, this report includes a listing of the various process id's that are monitored by each respective service contract.
acsss legal	This option displays the ACSLS Legal Notice in English or French.

Command Identifiers

Each command identifier corresponds to a type and consists of one or more components separated by commas.

acs_id	acs(0-31)	
cap_id	acs(0-31),lsm(0-99),cap(0-11) An asterisk (*) in a *cap_id* does the following:	
	acs,lsm,*	causes ACSLS to select the highest priority available CAP in the LSM.
	acs,*	causes ACSLS to select the highest priority available CAP in the ACS
	*	for an enter request causes ACSLS to select the CAP in the ACS with the most free cells.
	*	for an eject request causes ACSLS to select the highest priority CAP in each ACS with a volume designated for ejection.
cell_id	acs(0-31),lsm(0-99),panel(0-50),row(0-41),column(0-23)	
drive_id	acs(0-31),lsm(0-99),panel(0-50),drive(0-31)	
drive_type	Up to 10 characters transport type identifier; can be any combination of numbers (0-9) or letters (A-Z).	
lock_id	decimal number (0-32767)	
lsm_id	acs(0-31),lsm(0-99)	
media_type	Up to 10 characters media type identifier; can be any combination of numbers (0-9) or letters (A-Z). Spaces are not allowed. A common media type is the STK1R.	
owner_id	volume owner	
panel_id	acs(0-31),lsm(0-99),panel(0-50)	
pool_id	decimal number (0-65535) Specifying an asterisk (*) for the *pool_id* reassigns a volume to its current *pool_id*	
port_id	acs(0-31),port(0-15)	
request_id	unique decimal number (0-65535) assigned by the ACSLS.	
subpanel_id	acs(0-31),lsm(0-99),panel(0-50),startrow(0-41),startcolumn(0-23),endrow(0-41),endcolumn(0-23)	

vol_id	Six-character identifier consisting of any combination of numbers (0-9), letters (A-Z, a-z, or mixed case (except for use in volrpt)), dollar sign ($), pound sign (#), and leading and/or trailing spaces ( ). Use single or double quotes to enclose *vol_ids* with leading or trailing spaces. *Do not* specify *vol_ids* with embedded spaces.
volrange	Specifies an ascending range of volumes separated by a dash. For volranges in query, enter, and eject commands: If it is a numeric range, specify only the right most numeric portions of the *vol_ids* as the range. All preceding characters *must* be identical. The display commands support full alphanumeric volranges and allow wildcards '*' and '_'.

Auditing the Library

Audit the entire library - updates library configuration	audit *cap_id* server
Audit an ACS	audit *cap_id* acs *acs_id*
Audit an LSM	audit *cap_id* lsm *lsm_id*
Audit an LSM panel	audit *cap_id* panel *panel_id*
Audit an LSM subpanel	audit *cap_id* subpanel *subpanel_id*

Configuration

Run the configuration script	acsss_config
Display values of dynamic options	dv_print
Display values of static options	dv_config -s
Display values of dynamic and static options	dv_config -d

Configuration - Dynamic

ACS
 	
   Add a new ACS
 	
  Reconfigure an existing   ACS
	
	config acs new
	
	config acs *acs_id*

Drives Reconfigure all drives on an existing drive panel. This includes adding drives, updating drive types and serial numbers for existing drives, and deleting drives that were removed from the database.	config drive(s) *panel_id*
LSMs Reconfigure an existing LSM and all its components, which include CAPs and panels. Note: Use config acs to add or delete an LSM in an ACS	config lsm *lsm_id*
Ports Reconfigure port connections to an ACS.	config port(s) *acs_id*

Displaying Status

Display CAP information	<u>displa</u>y cap *cap_id* ...] [-availability *cap_availability* ...] [-status *cap_status* ...][-priority *cap_priority* ...] [-state *cap_state* ...] [-manual ∣ -automatic] [-condition *cap_condition* ...] [[-c] ∣ [-f *field* ...] [-s *sort_field* ...] [-n *n*]]
Display cell information	<u>displa</u>y cell *cell_loc* ... [-status *cell_status* ...] [[-c] ∣ [-f *field* ...] [-s *sortfield* ...] [-n *n*]]
Display drive information	<u>displa</u>y drive *drive_id* ... [-status *drive_status* ...] [-state *drive_state* ...] [-type *drive_type* ...] [-volume *vol_id* ...] [-lock *lock_id*...] [-serial *drive_serial_num* ...] [-condition *drive_condition* ...] [[-c] ∣ [-f *field* ...] [-s *sort_field* ...] [-n *n*]]
Display lock information	<u>displa</u>y lock *lock_id* ... [-user *user_id* ...] [[-c] ∣ [-f *field* ...] [-s *sort_field* ...] [-n *n*]]
Display LSM information	<u>displa</u>y lsm *lsm_id* ... [-status *lsm_status* ...] [-state *lsm_state* ...] [-free_cells *cell_count* ...] [-type *lsm_type* ...] [-serial *lsm_serial_num* ...] [-condition *lsm_condition*] [-door_open ∣ -door_closed] [[-c] ∣ [-f *field* ...] [-s *sort_field* ...] [-n *n*]]
Display panel information	display panel *panel_id* ...[-type *panel_type* ...] [[-c] ∣ [-f *field* ...] [-s *sort_field* ...] [-n *n*]]
Display pool information	display pool *pool_id* ... [-low_water *low_water_mark* ... ∣ -high_water *high_water_mark*...][-overflow ∣ -no_overflow] [[-c] ∣ [-f *field* ...] [-s *sort_field* ...] [-n *n*]]

Display port information	display port *port_id* ... [-online │ -offline] [-name *port_name* ...] [[-c] │ [-f *field* ...] [-s *sort_field* ...] [-n *n*]]
Display volume information	display volume *vol_id* ... [-home acs,lsm,panel,row,column...] [-drive *drive_loc* ...] [-data │ -scratch │ -clean] [-media *media_type* ...] [-pool *pool_id*...] [-standard │ -virtual] [-status *vol_status* ...] [-entry *entry_date* ...] [-access *access_date* ...] [-lock *lock_id* ...] [[-c] │ [-f *field* ...] [-s *sort_field* ...] [-n *n*]] [-max_use *max_use*] [-lock_time *lock_time*]

Maintaining the Database

Export database table data and ACSLS control database files to tape or a file. Use when reinstalling ACSLS or upgrading to a new ACSLS version using the same database.	db_export.sh -f [*db_file* │ *tape_device*]
Import database table data and ACSLS control database files from the export tape or file. Use when reinstalling ACSLS or upgrading to a new ACSLS version using the same database.	db_import.sh -f [*db_file* │ *tape_device*]
Back up the database	bdb.acsss -f [*backup_file* │ *tape_device*]
Bring up the database	acsss db
Recover the database after a database failure	rdb.acsss

Managing CAPS

Display CAP status	<u>query</u> <u>cap</u> *cap_id* ... | <u>all</u> or <u>display</u> cap *cap_id* ...|*
Set CAP's entry mode (manual or automatic)	<u>set</u> <u>cap</u> <u>mode</u> <u>man</u>ual | <u>aut</u>omatic *cap_id*
Set CAP's automatic selection priority	<u>set</u> <u>cap</u> <u>pri</u>ority *cap_priority cap_id*
Make manual mode CAP ready to enter labelled carts	<u>en</u>ter *cap_id*
Make multiple CAPs in an LSM ready	<u>en</u>ter *lsm_id*
Make CAP ready to enter unlabeled carts into library	<u>ve</u>nter *cap_id vol_id*

Managing Dual LMU

Display LMU and port status for both single-LMU and dual-LMU ACS configurations and desired state for ACSs and ports.	<u>query</u> <u>lmu</u> *acs_id* ... | <u>all</u>
Manually switch ACS management from the ACS's master LMU to the standby LMU	<u>sw</u>itch <u>lmu</u> *acs_id*

Managing Locks

Set your lock ID	<u>set</u> <u>lock</u> *lock_id*
Display your current lock ID or user ID	<u>show</u> <u>lock</u> | <u>user</u>
Lock a volume or drive (to your current lock ID)	<u>lock</u> <u>drive</u> | <u>vo</u>lume *identifier*
Remove active locks (to your current lock ID) on specified drives or volumes or all active locks	<u>un</u>lock <u>drive</u> | <u>vo</u>lume *identifier* ... | all
Remove all active and pending locks on specified drives or volumes	<u>clear</u> <u>lock</u> <u>dr</u>ive | <u>vo</u>lume *identifier*

Managing Scratch Pools/Volumes

Create or modify scratch pools	<u>def</u>ine <u>pool</u> *low_water_mark high_water_mark pool_id* ...[<u>ov</u>erflow]
Display scratch pool attributes	<u>query</u> <u>pool</u> *pool_id* ... | <u>all</u>
Display the status of scratch volumes in a pool	<u>query</u> <u>scr</u>atch *pool_id* ... | <u>all</u>

Set volume's scratch attribute and assign the volume to a scratch pool	set scratch *pool_id vol_id*	*volrange*
Change volume from scratch to data	set scratch off *pool_id vol_id*	*volrange*
Delete an empty scratch pool	delete pool *pool_id ...*	all
Mount a scratch volume from a specified pool (single media libraries)	mount * *drive_id pool_id*
Mount a scratch volume from the common pool (single media libraries)	mount * drive_id
Mount a scratch volume from a specified pool with specific media type	mount * *drive_id pool_id* media *media_type*
Mount a scratch volume from a specific pool, media type based on scratch preferences defined	mount * *drive_id pool_id* media *
Mount a scratch volume from common pool, media type based on defined scratch preferences	mount * *drive_id* media *
Mount a scratch volume from common pool with specified media type	mount * *drive_id* media *media_type*
Display scratch pool information for a specific pool or for all pools	display pool *pool_id ...*	*
Review pre-defined policies for volumes that are: newly entered discovered by audit or cartridge recovery re-activated by audit, cartridge recovery, or an enter	watch_vols [start|stop]
Display status of media-compatible transports for a specified scratch pool (or volume media type within the pool)	query mount * *pool_id ...* [media *media_type*	media *]

Managing Volumes

Mount a data volume or cleaning cartridge	mount *vol_id drive_id* [bypass] [readonly]
Dismount a data volume or cleaning cartridge	dismount *vol_id drive_id* [force]
Create a volume report	volrpt [-s vol │ loc │ use] [-d] [-f *filename*][-z] [-a │ -l │ -v *identifier_list*]
Use Display for dynamic reporting of library components and/or volumes.	See Display commands.
Set volume ownership	set owner *owner_id* volume *vol_id* │ *volrange*
Eject volumes from the library	eject *cap_id vol_id* │ *volrange* ...
Move volumes to a specified LSM	move *vol_id lsm_id*
Delete a volume in an offline LSM	del_vol [-n] [-d] [-f] [-q] *vol_id*
Move multiple cartridges to one or more LSMs.	moving.sh -f *vol_list_file* -t *lsm_id*...
Set cleaning cartridge attributes	set clean *max_usage* │ *vol_id* │ *volrange*
Set cleaning attributes back to data cartridges	set clean off *vol_id* │ *volrange*
Display volume information for cleaning cartridges	display volume *vol_id* │ *vol_range* │ *-clean
Display volume end of warranty and end of life percentages, sorted by end of life	display volume * [-media media type] -f media end_of_life warranty_life -s end_of_life

Query Status

ACSLS and library status	query server
ACS status	query acs *acs_id* ... │ all
LSM status	query lsm *lsm_id* ... │ all
CAP status	query cap *cap_id* ... │ all
Transport status	query drive *drive_id* ... │ all
LMU and port status for both single-LMU and dual-LMU ACS configurations	query lmu *acs_id* ... │ all
Media-compatible transports for a specified data volume	query mount *vol_id*
Media-compatible transports for a specified scratch pool (or volume media type within the pool)	query mount * *pool_id* ... [media *media_type* │ media *]
Port status	query port *port_id* .... │ all
Location of a volume	query volume *vol_id* ... │ all
Cleaning cartridge status	query clean *vol_id* ... │ all
Scratch volumes in a pool	query scratch *pool_id* ... │ all
Scratch pool attributes	query pool *pool_id* ... │ all

Request status	query request *request_id* ...	all
Display the lock status of a transport or volume	query lock drive	volume *identifier* ...	all
Display cleaning cartridge attributes	query clean *vol_id*...	all
Monitor and manage the free cells in libraries managed by ACSLS	free_cell.sh
Display license key information	get_license.sh

Varying Library Components

Change the desired state and the state of an ACS	vary acs *acs_id* ... online	offline	diagnostic [force]
Change the state of an LSM	vary lsm *lsm_id* ... online	offline	diagnostic [force]
Change the state of a CAP	vary cap *cap_id* ... online	offline	diagnostic [force]
Change the state of a transport	vary drive *drive_id* ... online	offline	diagnostic [force]
Change the desired state and the state of a port	vary port *_port_id* ... online	offline