

IBM System Storage TS4500 Tape Library



Command Line Interface

The IBM TS4500 Command Line Interface (CLI) program can be used to access the TS4500 library from a CLI. It is an addition to TS4500 management GUI commands. The TS4500 CLI can be downloaded from the web at the following URL:
<http://www-01.ibm.com/support/docview.wss?uid=ssg1S4001255>

The TS4500 CLI provides the ability to access library functions through a command line interface. All view commands create a comma-separated value (csv) style output. The output is directed to the command prompt window by default, but can also be redirected to a file. To redirect the output to a file, you can add > output_filename to the end of the command.

In order to use the TS4500 Tape Library CLI, the following prerequisites apply:

- Java 6.0 or later must be installed.

Cartridge movement using the TS4500 CLI is generally performed based on the current cartridge location:

1. Moving to storage

- If currently in storage, then use `prestigeDataCartridges` only if library contains a High Density frame
- If currently in drive, then use `moveFromDrive`
- If currently in I/O with Virtual I/O enabled, then use `assignDataCartridges`

2. Moving to drive

- If currently in storage, then use `moveToDrive`
- If currently in drive, then use `moveFromDrive`, followed by `moveToDrive`
- If currently in I/O with Virtual I/O enabled, then use `assignDataCartridges` followed by `moveToDrive`

3. Moving to I/O

- If currently in storage, then use `removeDataCartridges`
- If currently in drive, then use `moveFromDrive` followed by `removeDataCartridges`
- If currently in I/O with Virtual I/O enabled, then use `removeDataCartridges`

Some move commands allow you to specify which cartridge to move by either its 8-character volser or its current location in the library. By supporting moves by location, cartridges with an Unknown volser can be moved via the CLI.

Moves from a storage slot location are supported by:

- `assignDataCartridges`
- `bulkAssignDataCartridges`
- `bulkAssignDataCartridgesByLogicalLibrary`
- `destageDataCartridges`
- `moveToDrive`
- `prestigeDataCartridges`
- `removeDataCartridges`

The format for storage locations F#,C#,R#,T# for a library with a High Density frame. The format for

I/O locations is F#,R#. As shown, the fields must be separated by commas without spaces.

Example: For a removeDataCartridges input file in a High Density library, you could have the following:

```
F1,C2,R8,T0  
F2,C1,R25,T3  
F1,C1,R10,T1
```

or using volser:

For an assignDataCartridges input file to the logical library **testlib**:

```
AAA000L4, testlib  
ABC001L4, testlib  
ZZZ000L4, testlib
```

You can run the CLI from any directory. However, it is simplest to run it from the directory where the TS4500CLI.jar file is stored. Running it from that directory enables you to execute the CLI commands without entering the path name of the TS4500CLI.jar file. However, if you run the CLI from any other directory, you must include the entire path name of the TS4500CLI.jar file as a part of the command. Running the CLI from the directory where the TS4500CLI.jar file is stored, Your command looks like this:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --[cli_command]
```

Supported Actions

- assignDataCartridges

Use the **assignDataCartridges** command to assign or reassign data cartridges to a logical library.

- batch

Use the **batch** command to instruct the system to perform multiple commands that are specified in a file.

- bulkAssignDataCartridges

Use the **bulkAssignDataCartridges** command to assign cartridges in bulk, rather than assigning cartridges one at a time. You can bulk-assign up to 100 cartridges to a common logical library.

- bulkAssignDataCartridgesByLL

Use the **bulkAssignDataCartridgesByLL** command to assign, in bulk, cartridges from a common logical library source to multiple logical library destinations.

- cleanDrive

Use the **cleanDrive** command to perform a cleaning on a given drive.

- codeUpdate

Use the **codeUpdate** command to update the library firmware.

- continueCloseLibraryVerify

This command executes the last step in the library verify process for IO stations.

See **startLibraryVerify** and **continueLibraryVerify**.

- continueLibraryVerify

This command executes the second step in the library verify process for IO stations.

See **startLibraryVerify** and **continueCloseLibraryVerify**.

- createBEP

Use the **createBEP** command to create a bar code encryption policy.

- createKeyLabelMapping

Use the **createKeyLabelMapping** command to create a key label mapping.

- createVolserRanges

Use the **createVolserRanges** command to create one or more new VOLSER ranges.

- deleteBEP

Use the **deleteBEP** command to delete a bar code encryption policy.

- deleteKeyLabelMapping

Use the **deleteKeyLabelMapping** command to delete a key label mapping.

- deleteVolserRanges

Use the **deleteVolserRanges** command to delete VOLSER ranges.

- destageDataCartridges

Use the **destageDataCartridges** command to move cartridges from their cartridge cache locations (as specified in a text file) to a high-density slot.

- downloadDrivesLog

Use the **downloadDrivesLog** command to download a .zip file with the logs from the given drives. This command is useful for troubleshooting.

- downloadLog

Use the **downloadLog** command to download a .zip file with the logs from all of the node cards. This command is useful for troubleshooting.

- downloadSnapshot

Use the **downloadSnapshot** command to download a specific snapshot from the library.

- driveCodeUpdate

Use the **driveCodeUpdate** command to update the firmware in a specified drive or specified list of drives.

- editKeyLabelMapping

Use the **editKeyLabelMapping** command to edit a key label mapping.

- getVIOStatus

Use the **getVIOStatus** command to shows the status of the virtual I/O (VIO) flag on the library.

- modifyAdvancedEncSettings

Use the **modifyAdvancedEncSettings** command to make the advanced encryption settings more or less restrictive for data that is stored in a library.

- modifyBEP

Use the **modifyBEP** command to edit a bar code encryption policy.

- modifyFibreChannelSettings

Use the **modifyFibreChannelSettings** command to set ports speed and topology for a specified drive. Speed and topology are the same for both ports in the drive.

- modifyVolserRanges

Use the **modifyVolserRanges** command to modify existing VOLSER ranges.

- modifyVolserReporting

Use the **modifyVolserReporting** command to set whether the VOLSER is reported to the host in a six-character format or an eight-character format.

- moveFromAllDrives

Use the **moveFromAllDrives** command to eject all cartridges from all full drives

- moveFromDrive

Use the **moveFromDrive** command to eject a single cartridge from a drive and move it to the home storage location.

- moveToDrive

Use the **moveToDrive** command to move a cartridge from a storage location to a specified drive location.

- prestageDataCartridges

Use the **prestageDataCartridges** command to move cartridges from the high-density slots to cartridge cache locations specified in a text file.

- removeDataCartridges

Use the **removeDataCartridges** command to remove the data cartridges from a storage location to the I/O station.

- resetDrive

Use the **resetDrive** command to power cycle a specific drive.

- resetNodeCards

Use the **resetNodeCards** command to reset one or more specified node cards.

- restoreConfiguration

Use the **restoreConfiguration** command to restore the databases to the library.

- saveConfiguration

Use the **saveConfiguration** command save the databases to the user computer.

- setAutoEjectCleaningCarts

Use the **setAutoEjectCleaningCarts** command to set the enabled or disabled flag for the auto eject expired cleaning cartridges function in the library.

- setDrivePortsId

Use the **setDrivePortsId** command to set the ports IDs for a specified drive (Port 1 and Port 2).

- setLibraryTime

Use the **setLibraryTime** command to set the library's date and time to that of the server on which CLI is running.

- setMaximumVIOCartridges

Use the **setMaximumVIOCartridges** command to update the number of virtual I/O slots for the logical library.

- setNMADetection

Use the **setNMADetection** command to sets (to on or off) the NMA detection flag in the library.

- setRolePermissions

Use the **setRolePermissions** command with the output from the **viewRolePermissions** command. This command instructs the system to change the permissions for a specified role.

- setScannerSpeed

Use the **setScannerSpeed** command to set the speed of the scanner.

- setSlotOffline

Set offline a given slot

- setSlotOnline

Set online a given slot

- setSSL

Use the **setSSL** command to set the SSL flag to enabled or disabled.

- setSSLForEKM

Use the **setSSLForEKM** command to set the SSL flag to enabled or disabled for a given EKM (ip).

- showQueuedExports

Sets flag to Show/Hide (true, false) queued exports

- startLibraryVerify

This command starts the library verify process for IO stations.
See **continueLibraryVerify** and **continueCloseLibraryVerify**.

- viewAccessor

Use the **viewAccessor** command to show the accessor's status and usage statistics.

- viewBEP

Use the **viewBEP** command to show a list of all VOLSER ranges showing the BEP settings.

- viewCleaningCartridges

Use the **viewCleaningCartridges** command to view high-level information for all cleaning cartridges in a library.

- viewDataCartridges

Use the **viewDataCartridges** command to view high-level information for all data cartridges in a library.

- viewDriveDetails

The **viewDriveDetails** provides a display of several aspects of the drive that are useful for troubleshooting.

- viewDriveSummary

Use the **viewDriveSummary** command to show all of the drives in the library.

- viewDriveVPD

Use the **viewDriveVPD** command to show vital product data (VPD) information for all drives.

- **viewFibreChannel**

Use the **viewFibreChannel** command to show the Fibre Channel settings for both ports in each drive.

. **viewIoStation**

Use the **viewIoStation** command to view a summary of information for all cartridges in the I/O station.

- **viewKeyLabelMapping**

Use the **viewKeyLabelMapping** command to view the list of available key labels.

- **viewLogicalLibraries**

Use the **viewLogicalLibraries** command to list the high-level information for all logical libraries.

- **viewLogicalLibraryDetails**

Use the **viewLogicalLibraryDetails** command to show the name, type, maximum cartridges, the number of virtual I/O slot addresses, and the number of drive addresses in a specified logical library.

- **viewNodeCards**

Use the **viewNodeCards** command to show a summary of information about the node cards.

- **viewOfflineComponents**

Shows all slots currently offline

- **viewRolePermissions**

Use the **viewRolePermissions** command to display a list of all the permissions for a specified role.

- **viewRoles**

Use the **viewRoles** command to display a list of all the defined roles in the library.

- **viewSnapshots**

Use the **viewSnapshots** command to display a list of all available snapshots in the library.

- **viewSystemSummary**

Use the **viewSystemSummary** command to view the physical library system summary.

- **viewSystemSummaryDetails**

Use the **viewSystemSummaryDetails** command to view detailed information about a specified frame.

- **viewUsers**

Use the **viewUsers** command to display a list of all the users in the library.

- **viewVolserRanges**

Use the **viewVolserRanges** to list all of the VOLSER ranges in the physical library.

- **viewVolserRangesByLL**

Use the **viewVolserRangesByLL** to list all of the VOLSER ranges for each logical library in the physical library.

Command Parameters

The following CLI parameters are supported.

-? : Shows help
-- : -Action, REQUIRED
-ip : Tape library ip address, REQUIRED
-f : Specified frame #
-h : Shows help
-p : Tape Library Password
-r : Drive row #
--ssl: Use this flag when using a library with SSL enabled
-u : Tape Library User ID
-version: Shows CLI TS4500 version
-v or --verbose : The default mode for the CLI is “quiet”. In quiet mode, progress messages are not included in the output. When the -v or --verbose parameters is added, the progress messages are included in the output. When using the CLI with scripting, you probably will not want the progress messages included in the output

SSL access:

Like the TS4500 Tape Library Web Management GUI, the TS4500 CLI can be used with or without SSL enabled on the TS4500 Tape Library.
When accessing the library with SSL enabled you need to add the “ssl” flag to the list of parameters:
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --ssl --[cli_command]
Command format:

assignDataCartridges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --assignDataCartridges  
fileName.txt
```

Assigns data cartridges to a logical library. This command receives as input, a text file with one or more assign operations. The input file would take the following format:

```
volser or location #1, Logical Library name  
volser or location #2, Logical Library name
```

For **example**, if you wanted to assign four cartridges to the logical library named testlib, you could create a text file named volsers.txt containing the following lines:

```
ZZZ000L4, testlib  
ZZZ001L4, testlib  
F1,C2,R8,T0, testlib  
ZZZ002L4, testlib
```

batch

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --batch fileName.txt
```

Perform actions specified within a file. Each line in the file will be interpreted as a new command. The input file would take the following format:

```
--commandName [commandParameters]
```

Example:

fileName.txt will contain:

```
--viewLogicalLibraries  
--viewIoStation  
--viewAccessor  
--viewRoles  
--viewLogicalLibraryDetails VIO255  
--bulkAssignDataCartridges bulk.txt,LTO_6
```

bulkAssignDataCartridges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] -- bulkAssignDataCartridges  
fileName.txt, LibTest
```

Assigns multiple cartridges at the same time instead of one at a time. The cartridges will be assigned in bulks of size 100 as maximum. The bulk will be assigned to a same logical library.

Example:

fileName.txt will contain:

```
F1,C2,R8,T0  
F2,C2,R8,T0  
F3,C2,R8,T0  
F1,C3,R18,T5
```

Or

```
A00023JA  
A00024JA  
A00025JA
```

bulkAssignDataCartridgesByLL

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --bulkAssignDataCartridgesByLL  
fileName.txt
```

Assigns multiple cartridges at the same time instead of one at a time. This command allows to assign data cartridges to different logical libraries (different destiny LL). The cartridges will be assigned in bulks of size 100 as maximum.

The input file would take the following format:

```
volser or location #1, Logical Library name  
volser or location #2, Logical Library name
```

Example:

fileName.txt will contain:

```
F1,C2,R8,T0, testllolib1
```


F2,C2,R8,T0, testltolib2

F3,C2,R8,T0, testltolib3

Or

A00034JA, testltolib1

A00035JA, testltolib2

A00036JA, testltolib3

cleanDrive

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --cleanDrive -f [# frame] -c [# column] -r [# row]
```

Cleans a given drive

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [userName] -p [password] --cleanDrive -f 1 -c 4 -r 1
```

codeUpdate

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --codeUpdate [firmware image file]
```

Updates library firmware. The firmware image file must have extension .afwz

continueCloseLibraryVerify

```
java -jar TS4500CLI.JAR -ip [LCC ip] -u [userName] -p [password] --continueCloseLibraryVerify
```

This command is the last step in the library verify process for IO stations. Previous command: continueLibraryVerify

Once each command is done , a message with instructions will be shown to the user. When continueCloseLibraryVerify is done, will give you the test result.

continueLibraryVerify

```
java -jar TS4500CLI.JAR -ip [LCC ip] -u [userName] -p [password] --continueLibraryVerify
```

This command is the second step in the library verify process for IO stations. Previous command: startLibraryVerify

Once each command is done , a message with instructions will be shown to the user. When continueCloseLibraryVerify is done, will give you the test result.

createBEP

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --createBEP [Volser start],[Volser end],[Logical library name],[media type], [KLM 1 index ], [KLM 2 index - optional]
```

Creates a cartridges encryption policy

The parameters required for this command are:
Volser Start,

Volser End,

Logical library name

Media type : Possible values are LTO, 3592

Key label mapping index 1 : You need to run “viewKeyLabelMapping” command first, to get the current list of valid indexes.

Key label mapping index 2 : This is an optional value (used for JAG drives).

Example:

This will create an encryption policy for the volser range TTT200-TTT300 with the logical library “test1”, media type 3592, and the KLM 1

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --createBEP  
TTT200,TTT300,test1,3592,1
```

createKeyLabelMapping

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --createKeyLabelMapping  
[keyLabelFrom],[Key mode],[keyLabelTo]
```

Create a key label mapping

The required parameters for this command are:

keyLabelFrom: This is a string that cannot be repeated in the list of key labels.

KeyModeFrom: The possible values are:

- Wrapped-Hash
- Wrapped-Default
- Wrapped-Clear
- Direct-Default-Set
- Direct-Specific

When using WRAPPED-DEFAULT keyLabelTo is disabled.

KeyLabelTo: This is a string.

The max length of keyLabelFrom and keyLabelTo is 50 characters.

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --createKeyLabelMapping  
START,Wrapped-Hash,END
```

createVolserRanges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --createVolserRanges  
fileName.txt
```

Creates new volser ranges. This command receives as input, a text file with one or more volser ranges. The input file would take the following format:

startRange,endRange,LLName,mediaType[LTO,3592],[TRUE/FALSE] (flag to enable this range only for new cartridges)

Example:

fileName.txt will contain:

UAA9RH,UBB9RH,Lib1,3592,FALSE

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --createVolserRanges  
fileName.txt
```

deleteBEP

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --deleteBEP [BEP index]
```

Deletes a cartridge encryption policy. You need to execute “viewBEP” command before, to get the index of the BEP that will be deleted.

deleteKeyLabelMapping

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --deleteKeyLabelMapping [KLM  
index]
```

Deletes a key label mapping. You need to execute “viewKeyLabelMapping” command before, to get the index of the key label mapping that will be deleted.

deleteVolserRanges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --deleteVolserRanges  
fileName.txt
```

Deletes all the volser ranges with the file. The input file would take the following format:

Logical Library Name,startRange,endRange

Example:

fileName.txt will contain:

Lib1,TUU9RH,TXX9RH

destageDataCartridges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --destageDataCartridges [textFile.txt]
```

or

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --destageDataCartridges [volser1],  
[volser2],...
```

Destages cartridges based on a list of locations (or volsers) in a file or a list of volsers in the command line. The cartridges must be in TIER = 0. The input file would take the following format:

F1,C2,R4,T0

F2,C5,R2,T0

F1,C4,R8,T0

F1,C2,R6,T0

or

A00045JA

A00046JA

A00047JA

Example:

Using a text file:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --destageDataCartridges moves.txt
```

or

using a list of volsers:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --destageDataCartridges  
A00000JA,A00001JA,A00002JA
```

downloadDrivesLog

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --downloadDrivesLog
```

Downloads the zip file with the selected drive's logs.

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [userNAme] -p [password] --downloadDrivesLog ALL  
java -jar TS4500CLI.jar -ip [LCC ip] -u [userNAme] -p [password] --downloadDrivesLog  
F1C2R4,F1C3R4
```

downloadLog

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --downloadLog
```

Downloads the zip file with all the library logs.

downloadSnapshot

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --downloadSnapshot [Index]
```

Downloads the selected snapshot. This command must be used after “viewSnapshots” to get the index for the snapshot.

driveCodeUpdate

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --driveCodeUpdate [image file] -l [list  
of drives] --reset [reset option]
```

Updates drive firmware. This command requires the following parameters:

Filename of Fw image and list of drives to be updated. If the file is not in the same directory where CLI is running you need to include the whole path, i.e: C:\myPath\driveCode.afwz

The list of drives has this format:

F#C#R#,F#C#R#,... . The list must be preceded by “-l” (L in lowercase stands for Location)

There are “,” to separate drives, but not to separate frame,column and row

--reset : Possible values are : IMMEDIATE, UNLOAD, MANUAL. When using IMMEDIATE, the drives must be empty.

editKeyLabelMapping

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --editKeyLabelMapping [KLM index],  
[Key label from],[Key mode],[Key label to]
```

Edit a key label mapping. You need to execute “viewKeyLabelMapping” command before, to get the index of the key label mapping that will be edited.

The parameters required by this command are:

Index: You need to execute “viewKeyLabelMapping” to get this value.

keyLabelFrom: This is a string that cannot be repeated in the list of key labels.

KeyModeFrom: The possible values are:

- Wrapped-Hash
- Wrapped-Default
- Wrapped-Clear
- Direct-Default-Set
- Direct-Specific

When using WRAPPED-DEFAULT keyLabelTo is disabled.

KeyLabelTo: This is a string.

The max length of keyLabelFrom and keyLabelTo is 50 characters.

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --editKeyLabelMapping  
1,START,Wrapped-Hash,END2
```

getVIOStatus

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --getVIOStatus
```

Shows the status of the VIO flag on the library.

modifyAdvancedEncSettings

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --modifyAdvancedEncSettings  
LLName,Advanced Method [TRUE / FALSE], Advanced Policy[0-7], Density code[0-2], Key  
path[1,2,3,4,6]
```

Modifies the advanced encryption settings for a Logical Library. The advanced fields are:

Advanced method, advanced policy, density code and key path.

The parameters required by this command are:

Logical Library Name, Advanced Method [TRUE / FALSE], Advanced Policy*, Density code**, Key path***

*Advanced policy can take any of these possible values:

- No advanced setting = 0
- Don't encrypt if no policy = 1
- Encrypt if no policy = 2
- Policy required = 3

- Never encrypt (policy override) = 4
- Always encrypt (policy override) = 5
- Internal label – Selective Encryption = 6
- Internal label – Encrypt all = 7

**Density code can take any of these possible values:

- No advanced setting = 0
- Shows Encryption = 1
- Masks Encryption = 2

***Key path can take any of these possible values:

- No advanced setting = 1
- System = 2
- Application (IBM) = 3
- Application (T10) = 4
- Library = 6

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --modifyAdvancedEncSettings
Library1,TRUE,2,2,2
```

modifyBEP

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --editBEP [BEP index] --KLM1 [KLM1
index] --BEP [true/false] --KLM2 [KLM2 index]
```

Edits a cartridges encryption policy. The parameters required for this command are:

Index: You need to run “viewBEP” command first, to get the current list of valid indexes.

Key label mapping index 1 : You need to run “viewKeyLabelMapping” command first, to get the current list of valid indexes. The parameter is --KLM1

Key label mapping index 2 : This is an optional value. The parameter is --KLM2

Bep enabled: Possible values are True , false. The parameter is --BEP

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --editBEP 1 --KLM1 3 --BEP false --
KLM2 1
```

modifyFibreChannelSettings

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --modifyFibreChannelSettings
[speed,topology]-f [Drive frame] -c [Drive column] -r [Drive row]
```

Sets ports speed and topology for the given drive. Speed and topology will be the same for both ports.

The parameters required by this command are:

[Speed ,Topology] -f [frame] -c [column] -r [row]

For Speed valid values are: Auto,1,2,4,8. The values are in Gb/s.

For Topology valid values are: Auto-L,L,N,Auto-N

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --modifyFibreChannelSettings 4,N -f 1 -c 1 -r 1
```

modifyVolserRanges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --modifyVolserRanges fileName.txt
```

Allows to modify Logical Library, media Type and the flag to enable the volser range only for new cartridges.

The parameters required by this command are:

FileName.

Each line in the file will be interpreted as a volser range. The parameters are:

startRange*,endRange*,LLName,mediaType [LTO,3592],[TRUE/FALSE] (flag to enable only for new cartridges).

* : These values are used to get the range index in the table, so those values cannot be modified.

The input file would take the following format:

starRange,endRange,LL name, media Type [LTO,3592], Enable [true/false].

Example:

fileName.txt will contain:

```
UAA9RH,UBB9RH,Library 1,3592,TRUE
```

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --modifyVolserRanges fileName.txt
```

modifyVolserReporting

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --modifyVolserReporting [Logical library name],[6/8]
```

Modifies Volser Reporting value to host (6 or 8) .

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --modifyVolserReporting Lib1,6
```

moveFromAllDrives

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --moveFromAllDrives
```

Demounts all full drives.

moveFromDrive

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --moveFromDrive -f [frame index] -c [column index] -r [row index]
```

Ejects a cartridge from a given drive.

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --moveFromDrive -f 1 -c 4 -r 1
```

moveToDrive

Using cartridge location:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --moveToDrive F#,C#,R#,T# -f [Drive frame index] -c [Drive column index] -r [Drive row index]
```

or

using cartirdge volser:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --moveToDrive [Volser] -f [Drive frame index] -c [Drive column index] -r [Drive row index]
```

Mounts a cartridge to the given drive.

prestageDataCartridges

Using a text file:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --prestageDataCartridges [text file name]
```

or

using a list of volsers

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --prestageDataCartridges [Volser 1],[Volser 2],...
```

Prestages cartridges based on a list of locations (volsers) in a file. Cartridges must be in TIER >= 3.

The input file would take the following format:

F#,C#,R#,T#

F#,C#,R#,T#

F#,C#,R#,T#

or

[VOLSER1]

[VOLSER2]

Example:

F1,C2,R4,T3

F2,C5,R2,T3

F1,C4,R8,T4

F1,C2,R6,T4

VOLSER is also accepted

A00045JA
A00046JA
A00047JA

Using a text file:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --prestigeDataCartridges moves.txt
```

or
using a list of volsers:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --prestigeDataCartridges  
A00000JA,A00001JA,A00002JA
```

removeDataCartridges

Using a text file

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --removeDataCartridges  
fileName.txt
```

or

using a list of volsers

```
>> java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --removeDataCartridges  
[Volser 1],[Volser 2],...
```

Remove the data cartridges (cartridges moved to the I/O station).

The input file would take the following format:

volser or location #1

volser or location #2

Example:

fileName.txt will contain:

F1,C2,R8,T0

F1,C3,R18,T5

Or

A00045JA

A00047JA

Using a text file:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --removeDataCartridges  
fileName.txt
```

or

using a list of volsers:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --removeDataCartridges  
A00000JA,A00001JA,A00002JA
```

resetDrive

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --resetDrive -f [Drive frame index] -c  
[Drive column index] -r [Drive row index]
```

Power cycles a given drive

resetNodeCards

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --resetNodeCards [Cards list]
```

Resets all specified node cards

The required parameters are:

A comma separated list of the nodes to be reset. Accepted values are:

ALL,ALLLCA,ALLACC,ALLSMC,ALLXYC,ALLPLUS,XYCPLUS,ACCPLUS,LCAPLUS,XYA,XYB,OPC1,SMC[2-16],ACCA,ACCB,LCA[1-31],LCAB[1-31]

restoreConfiguration

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --restoreConfiguration [configuration backup file .db]
```

Restores all databases to the library.

The required parameter is:

File name: If the file is not in the same directory where CLI is running you must include the full path.

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --restoreConfiguration TS4500_221214_Lib.dbz
```

saveConfiguration

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --saveConfiguration
```

Saves all databases to the user computer. The file will be save in the same directory where the CLI is running. The file name is "TS4500_date_libName.dbz".

setAutoEjectCleaningCarts

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setAutoEjectCleaningCarts [ENABLED/DISABLED]
```

Sets ENABLED/DISABLED the auto eject expired cleaning cartridges flag in the library.

The required parameter is:

flag value:

ENABLED for ON

DISABLED for OFF

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setAutoEjectCleaningCarts ENABLED
```

setDrivePortsId

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setDrivePortsID [port 1 id],[port 2 id] -f [Drive frame index] -c [Drive column index] -r [Drive row index]
```

Sets the ports Ids for a given drive (Port 1 and Port 2).

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setDrivePortsID 18,21 -f 1 -c 1 -r 1
```

setLibraryTime

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setLibraryTime
```

Sets library date and time to that of the server on which the CLI is running.

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setLibraryTime
```

setMaximumVIOCartridges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setMaximumVIOCartridges Lib1,200
```

Update the number of Virtual I/O slots for the logical library.

The required parameters are:

The lower limit of the accepted values is the number of physical IO slots. If the library has two IO magazines, each with 18, the valid range of values will be : [36-255]

Logical library name, value [Total number of IO slots – 255]

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setMaximumVIOCartridges Lib1,200
```

setNMADetection

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setNMADetection [TRUE/FALSE]
```

Sets ON/OFF the NMA detection flag in the library.

setRolePermissions

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setRolePermissions [text file with accesses] -role [role name]
```

This command is used with “viewRolePermissions” output. The user will be able to change the existing permissions for a given role using the “viewRolePermissions” output saved in a text file. The possible permissions are:

“Read only”: User will have only read access to the web page.

“Modify”: User can execute edit operation in the web page.

“No Access”: User won't be able to see the web page.

The output file from “viewRolepermissions” can be edited to change any of the access levels for the listed pages, using the above values (Read only, modify, no access).

This new file will be used as a parameter for “setRolePermissions” command. The new values will be set for the given role.

Example:

The file can contain all of the pages or just the ones that will change.

Action,	Access Level
Cartridges,	No Access
Cartridges by Logical Library,	No Access
Cleaning Cartridges,	No Access
Drives,	No Access
Drives by Logical Library,	No Access
Email Notifications,	Read Only
Email Recipients,	Read Only
Encryption Internal,	Read Only
Encryption Key Manager,	Read Only

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setRolePermissions  
rolePermissions.txt -role Service
```

setScannerSpeed

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setScannerSpeed [Speed value]
```

Sets scanner speed.

The possible values for speed are:

speed: 0,30,40,50,60,70,80,90,100

0 = Nominal speed

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setScannerSpeed 100
```

setSlotOffline

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --setSlotOffline -f [Frame index] -c  
[Column index] -r [Row index]
```

Set offline a given storage slot.

The required parameters are:

-f Frame index

-c Column index
-r Row index

when using r = 0 , all the rows for the given column will be set offline

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --setSlotOffline -f 1 -c 3 -r 1
```

setSlotOnline

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --setSlotOnline -f [Frame index] -c [Column index] -r [Row index]
```

Set online a given storage slot.

The required parameters are:

-f Frame index
-c Column index
-r Row index

when using r = 0 , all the rows for the given column will be set offline

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --setSlotOnline -f 1 -c 3 -r 1
```

setSSL

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setSSL [ENABLED/DISABLED]
```

Enables or disables connection using Secure Socket Layer

setSSLForEKM

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setSSLForEKM [ENABLED/DISABLED] -EKM [ip of EKM server]
```

Enables or disables the SSL connection of the given EKM server

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --setSSLForEKM ENABLED -EKM 9.7.120.123
```

showQueuedExports

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --showQueuedExports [Logical
```

library name],[TRUE/FALSE]

Set flag to Show/Hide (true, false) queued exports

The required parameters are:

Logical library name, Flag value [True/false] : SHOW = TRUE, HIDE = FALSE

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --showQueuedExports Lib1,TRUE
```

startLibraryVerify

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --startLibraryVerify
```

This command starts the library verify process for IO stations. To complete this process we need to run 3 different commands:

startLibraryVerify

continueLibraryVerify

continueCloseLibraryVerify

viewAccessor

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewAccessor
```

Shows accessor's status and usage statistics.

viewAdvancedEncryptionSettings

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewAdvancedEncryptionSettings  
[Logical Library Name]
```

Shows the encryption settings for a given logical library.

Example:

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewAdvancedEncryptionSettings  
LibOne
```

viewBEP

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewBEP
```

Show a list of all the volser ranges showing the BEP settings.

viewCleaningCartridges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewCleaningCartridges
```

Shows all the cleaning cartridges in the library

viewDataCartridges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewDataCartridges
```

Shows all the data cartridges in the library

viewDriveDetails

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewDriveDetails -f [Drive frame index] -c [Drive column index] -r [Drive row index]
```

Shows details of the given drive.

viewDriveSummary

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewDriveSummary
```

Shows a list with some details of all the drives in the library

viewDriveVPD

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewDriveVPD
```

Shows VPD information for all drives

viewFibreChannel

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewFibreChannel
```

Shows the Fibre Channel settings for both Ports in each drive.

viewIoStation

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewIoStation
```

Shows all the cartridges in IO station.

viewKeyLabelMapping

java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewKeyLabelMapping
Shows the list of available key labels.

viewLibraryVPD

java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewLibraryVPD

Shows the library VPD information

viewLogicalLibraries

java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewLogicalLibraries

Lists all the logical libraries. Queued Exports, VOLSER Reporting (6/8 characters) are CLI only columns.

viewLogicalLibraryDetails

java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewLogicalLibraryDetails [Logical Library Name]

Shows the details of the given logical library.

viewNodeCards

java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewNodeCards

Shows information on the node cards

viewOfflineComponents

java -jar TS4500CLI.jar -ip [LCC ip] -u [user] -p [password] --viewOfflineComponents

View offline storage slots

viewRolePermissions

Saving output to a text file:

java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewRolePermissions [roleName] > rolePermissions.txt

Displaying output in command window

java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewRolePermissions [roleName]

Displays a list of all the permissions for a given role. The output can be display in the command window or save to a text file using ">". When user save the output the file can be use in "setRolePermissions" command. It will show a list of the web pages available in the library and its corresponding access level.

viewRoles

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewRoles
```

Displays a list of all the defined roles in the library

viewSnapshots

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewSnapshots
```

Shows the list of available snapshots in the library.

viewSystemSummary

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewSystemSummary
```

Shows the physical library system summary. It will display information about each frame in ascending order, and at the end a summary with total numbers on the whole library will be displayed.

viewSystemSummaryDetails

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewSystemSummaryDetails  
[Frame number]
```

Shows physical library system summary for a particular frame

viewUsers

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewUsers
```

Displays a list of all the users in the library.

viewVolserRanges

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewVolserRanges
```

Shows all the volser ranges in the physical library.

viewVolserRangesByLL

```
java -jar TS4500CLI.jar -ip [LCC ip] -u [username] -p [password] --viewVolserRangesByLL
```

Shows all the volser ranges assigned to each logical library.