

# IBM System Storage TS3500 Tape Library

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## Command Line Interface

The IBM® TS3500 Tape Library Command Line Interface (CLI) program can be used to access the TS3500 Tape Library from a CLI. This is in addition to the TS3500 Tape Library Web Specialist. The TS3500 CLI can be downloaded from the web at the following URL: <http://www-01.ibm.com/support/docview.wss?uid=ssg1S4000854>.

The TS3500 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 TS3500 CLI, the following prerequisites apply:

- The TS3500 Tape Library must be at a firmware level 8xxx (or higher).
- The Advanced Library Management System (ALMS) must be installed and enabled.
- Java 5.0 or later must be installed.

Cartridge movement using the TS3500 CLI is generally performed based on the current cartridge location:

### 1. Moving to storage

- If currently in storage, then use `prestageDataCartridges` only if library contains a High Density (HD) frame.
- If currently in a drive, then use `moveFromDrive`.
- If currently in I/O with Virtual I/O disabled, then use `moveFromIo`.
- If currently in I/O with Virtual I/O enabled, then use `assignDataCartridges`.
- If currently in a shuttle, then use `moveFromShuttle`.

### 2. Moving to drive

- If currently in storage, then use `moveToDrive`.
- If currently in a drive, then use `moveFromDrive`, followed by `moveToDrive`.
- If currently in I/O with Virtual I/O disabled, then use `moveFromIo` followed by `moveToDrive`.
- If currently in I/O with Virtual I/O enabled, then use `assignDataCartridges` followed by `moveToDrive`.
- If currently in a shuttle, then use `moveFromShuttle` followed by `moveToDrive`.

### 3. Moving to I/O

- If currently in storage, then use `removeDataCartridges`.
- If currently in a drive, then use `moveFromDrive` followed by `removeDataCartridges`.
- If currently in I/O with Virtual I/O disabled, then use `moveFromIo` followed by `removeDataCartridges`.
- If currently in I/O with Virtual I/O enabled, then use `removeDataCartridges`.
- If currently in a shuttle, then use `moveFromShuttle` followed by `removeDataCartridges`.

Some move commands allow you to specify which cartridge to move by either its 8-character volume serial (VOLSER) number 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 the following:

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

Moves from an I/O slot location are supported by the following:

- `moveFromIo`

The format for storage locations is frame number, column number, row number (F,C,R) for a library without an HD frame and F,C,R,T (tier number) for a library with an HD frame. The format for I/O locations is F,R. As shown, the fields must be separated by commas without spaces. For example, for a `removeDataCartridges` input file in an HD library, you could have the following:

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

For an `assignDataCartridges` input file in a non-HD library, the logical library `test1tolib` is included:

```
F1,C2,R8, test1tolib
F2,C1,R25, test1tolib
ZZZ000L4, test1tolib
```

For a `moveFromIo` command, you could have the following:

```
java -jar TS3500CLI.jar -a <ip address> --moveFromIo F1,R4 -u <user id> -p <password>
```

### Supported Actions:

#### **-assignDataCartridges**

Assigns data cartridges to a logical library

#### **-assignShuttleStation**

Assigns the shuttle station at the given frame to a logical library

#### **-batch**

Performs actions specified within a file

#### **-bulkAssignDataCartridges**

Assigns multiple cartridges at the same time instead of one at a time

#### **-bulkAssignDataCartridgesByLogicalLibrary**

Giving a logical library, assigns multiple cartridges at the same time instead of one at a time

#### **-cleanDrive**

Cleans a drive at the given location, designated by frame and row

#### **-createCapRanges**

Creates a new Cartridge Assignment Policy (CAP)

#### **-createRoleModifyAny**

Creates or modifies a role to have modify any permissions

#### **-createRoleViewOnly**

Creates or modifies a role to have view only permissions

- deleteCapRanges**  
Deletes all existing CAP ranges
- destageDataCartridges**  
Destages cartridges based on a list of VOLSERs or locations in a file
- downloadLogs**  
Downloads library logs specified by log type
- libraryFirmwareUpdate**  
Updates the library firmware
- moveFromAllDrives**  
Demounts all full drives
- moveFromDrive**  
Demounts a cartridge from a specific drive, designated by frame and row
- moveFromIo**  
Moves the specified cartridge from the I/O station into a storage slot
- moveFromShuttle**  
Moves a cartridge from a shuttle station specified by either VOLSER or frame number
- moveToDrive**  
Mounts a cartridge to a specific drive
- powerCycleDrive**  
Power® cycle the drive at the given location, designated by frame and row
- prestageDataCartridges**  
Prestages cartridges to cache based on a list of VOLSERs or locations in a file
- removeDataCartridges**  
Removes the data cartridges (cartridges moved to the I/O station)
- removeExpiredCleaningCartridges**  
Removes all expired cleaning cartridges
- resetNodeCards**  
Resets all specified node cards
- setLibraryTime**  
Sets the Library date and time to that of the CLI host
- setMaxSocketExceptionRetries**  
Sets the maximum number of Socket Exception retry attempts
- setShuttleBeaconLightBlink**  
Sets the shuttle station beacon light-emitting diode (LED) to blink at the given frame
- setShuttleBeaconLightOff**  
Sets the shuttle station beacon LED off at the given frame
- setShuttleBeaconLightOn**  
Sets the shuttle station beacon LED on at the given frame
- setShuttleStationOffline**  
Sets the shuttle station offline at the given frame
- setShuttleStationOnline**  
Sets the shuttle station online at the given frame
- shuttleCarFirmwareUpdate**  
Updates the shuttle car firmware

**-shuttleDiscoverConnections**  
Runs discover connections at the given shuttle frame

**-shuttleDistributeConnections**  
Runs distribute connections at the given shuttle frame

**-unassignShuttleStation**  
Unassigns the shuttle station at the given frame

**-version**  
Displays version information about the TS3500 CLI

**-viewAccessor**  
Views the accessor status and usage statistics

**-viewAvailableLibraryLogs**  
Views all downloadable library logs

**-viewBepRanges**  
Views the encryption policy ranges

**-viewCapRanges**  
Views all Cartridge Assignment Policy ranges in the physical library

**-viewCleaningCartridges**  
Views all cleaning cartridges

**-viewDataCartridges**  
Views all data cartridges

**-viewDriveDetails**  
Views detailed information about a drive at the given frame and row

**-viewDriveSummary**  
Views the drive summary

**-viewDriveVPD**  
Views the drive VPD information

**-viewFibreChannel**  
Views the Fibre Channel settings

**-viewIoStation**  
Views the I/O station

**-viewLibraryVPD**  
Views the library VPD information

**-viewLogicalLibraries**  
Views the logical library settings

**-viewLogicalLibraryDetails**  
Views the detailed information about a given logical library

**-viewNodeCards**  
Views the node card information

**-viewRolePermissions**  
View the role permissions

**-viewRoles**  
View the roles and their permissions

**-viewShuttleStations**  
Views the shuttle station settings

**-viewSystemSummary**

Views the physical library system summary

**-viewSystemSummaryDetails**

View physical library system summary for the specified frame

**Command Parameters:**

The following CLI parameters are supported:

- ?** Shows help
- :** -Action (REQUIRED)
- a** Tape library DNS name or IP address (REQUIRED)
- d** Turns on extra debug tracing and stores in local TS3500CLI.log file (used for problem determination)
- f** Specified frame #
- h** Shows help
- k** <keystore>, Full path and file name of keystore holding the public/private key pair used with SSL. (REQUIRED if Secure Socket Layer [SSL] is enabled.)
- ll** Specified logical library
- p** Tape library password (used only if Web Security is enabled)
- r** Drive row number
- s** <storepass>, Keystore password used with SSL (REQUIRED if SSL is enabled.)
- setMaxSocketExceptionRetries**  
<Number of Retries>, Sets the limit of socket exception retries before failing the action (default is unlimited retries)
- t** Sets timeout value in milliseconds (default is to never timeout, which may cause CLI to appear to hang)
- u** Tape Library User ID (used only if Web Security is enabled)
- 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 parameter is added, the progress messages are included in the output. When using the CLI with scripting, you probably do not want the progress messages included in the output.
- w** The last two characters of the drive world wide node name (WWNN) to specify the drive (instead of using -f and -r)

**SSL Access:**

Like the TS3500 Tape Library Web Specialist, the TS3500 CLI can be used with or without SSL enabled on the TS3500 Tape Library. Refer to the *TS3500 Tape Library Information Center* at the following URL for instructions on enabling SSL on the tape library: <http://publib.boulder.ibm.com/infocenter/ts3500tl/v1r0/index.jsp>.

**TS3500 Web Specialist:** When accessing the TS3500 with SSL enabled, the only change necessary is changing the URL of the library from http to https. The TS3500 Tape Library's certificate used with SSL is stored in the browser. The web server in the TS3500 has the private key.

**TS3500 CLI:** When accessing the library with SSL enabled, the TS3500 Tape Library's certificate first needs to be exported from the browser and imported to a keystore. If there are multiple TS3500 Tape Libraries, this process needs to be done for every SSL-enabled library that will be accessed via the CLI. This can be done using the free IBM Java tool, Keytool. Keytool can be found at the following URL: <http://www.ibm.com/developerworks/java/jdk/security/50/secguides/keytoolDocs/KeyToolUserGuide-150.html>.

1. Enable SSL by using the TS3500 Tape Library Web Specialist. From the specialist, go to **Access -> Secure Socket Layer**.
2. Using a browser, go to that SSL-enabled TS3500 Tape Library. This loads the library's certificate into the browser.
3. View the certificate and export it to a file. In Mozilla Firefox this is done by performing the following steps:
  - a. Go to **Tools -> Options -> Advanced -> View Certificates**.
  - b. Under the Server column, select the row with your library's IP address.
  - c. Click **Export**.
  - d. Leave file type as X.509 Certificate (PEM) and click **Save**.

**Note:** On some versions of some browsers the **Export** option is not available. In this situation, perform the following steps to view the certificate and export it to a file instead:

- a. Click on the IP address just to the left of the URL.
  - b. Click **More Information**.
  - c. Click **View Certificate**.
  - d. Select the Detail tab.
  - e. Click **Export**.
  - f. Leave file type as X.509 Certificate (PEM) and click **Save**.
4. Import the certificate into a keystore. Using Keytool enter the following: `keytool -import -file <complete path and filename of your exported certificate file> -keystore <complete path and filename of keystore file to use/create> -storepass <your password for the keystore> -alias <unique identifier for this certificate/library>`.
  5. Two additional parameters, `-k <keystore>` and `-s <storepass>` need to be added to the CLI command. The `<keystore>` is the full path and filename of the keystore created with Keytool. The `<storepass>` is the keystore's password.

#### **Command Format:**

##### **assignDataCartridges**

```
java -jar TS3500CLI.jar -a <dns or ip addr of your library> --assignDataCartridges <full path and filename of input file> -u <user id> -p <password>
```

For the assignDataCartridges action, 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
```

The following command would be used:

```
C:\$User\Applications\TS3500_CLI>java -jar TS3500CLI.jar -a <DNS or IP address of your library>
--assignDataCartridges c:\$User\Applications\TS3500_CLI\volsters.txt -u <user id> -p <password>
```

The assignDataCartridges action assigns one single cartridge at a time. The advantage is that you get to know the actual status result of each individual cartridge. The disadvantage is that it takes longer than bulkAssignDataCartridges.

With bulkAssignDataCartridges, a group of cartridges is assigned at one time based on the cartridges that it finds per bucket and range as it walks through each frame and their buckets and ranges. The advantage is that it is faster and even indicates which cartridges were assigned (but only when there are no failures). The disadvantage is that if there is an error, the CLI does not indicate which ones failed, only that they failed.

### **assignShuttleStation**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --assignShuttleStation -f
<shuttle frame number> -ll <logical library name> -u <user id> -p <password>
```

For the assignShuttleStation action, both the -f frame and -ll logical library arguments are required. The shuttle station must be offline when being assigned or unassigned. To operate command on all shuttle stations in one action, specify "all" for the shuttle frame number.

### **batch**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --batch <full path and filename
of input file> -u <user id> -p <password>
```

For the batch action, the input file would take the following format:

```
-action #1
-action #2
```

### **bulkAssignDataCartridges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --bulkAssignDataCartridges <full
path and filename of input file> -u <user id> -p <password>
```

For the bulkAssignDataCartridges action, 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 testltolib, you could create a text file named volsters.txt containing the following lines:

```
ZZZ000L4, testltolib
ZZZ001L4, testltolib
F1,C2,R8,T0, testltolib
F2,C1,R25,T3, testltolib
```

The following command would be used:

```
C:\$User\Applications\TS3500_CLI>java -jar TS3500CLI.jar -a <DNS or IP address of your library>
--bulkAssignDataCartridges c:\$User\Applications\TS3500_CLI\volsters.txt -u <user id> -p
<password>
```

### **bulkAssignDataCartridgesByLogicalLibrary**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --bulkAssignDataCartridges <full
path and filename of input file> -ll <source logical library> -u <user id> -p <password>
```

For the bulkAssignDataCartridgesByLogicalLibrary action, only cartridges that are already assigned to the specified source logical library will be searched and then assigned to their new logical library, specified in the input file. This method is faster than bulkAssignDataCartridges if you only need cartridges from one logical library. For this action, the input file would take the following format:

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

### **cleanDrive**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --cleanDrive -f <drive frame
number> -r <drive row number> -u <user id> -p <password>
```

### **createCapRanges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --createCapRanges <full path and
filename of input file> -u <user id> -p <password>
```

The input file has the following format:

```
Cartridge Assignment Policy volser range #1, Logical Library name
Cartridge Assignment Policy volser range #2, Logical Library name
```

For example, if you wanted to create three Cartridge Assignment Policies and associate them with the logical library named testltolib, you could create a text file named cap.txt containing:

```
ZZZ000-ZZZ999, testltolib
YYY111-YYY888, testltolib
XXX222-XXX666, testltolib
```

The following command would be used:

```
C:\$User\Applications\TS3500_CLI>java -jar TS3500WebInterfaceCLI_v1.0_20100128.jar -a <DNS or
IP address of your library> --createCapRanges C:\$User\Applications\TS3500_CLI\cap.txt -u <user
id> -p <password>
```

### **createRoleModifyAny**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --createRoleModifyAny <Role Name>
-u <user id> -p <password>
```

### **createRoleViewOnly**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --createRoleViewOnly <Role Name>
-u <user id> -p <password>
```

### **deleteCapRanges**



```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --deleteCapRanges -u <user id> -p <password>
```

### **destageDataCartridges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --destageDataCartridges <full path and filename of input file> -u <user id> -p <password>
```

The input file has the following format:

```
volser or location #1  
volser or location #2
```

### **downloadLogs**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --downloadLogs  
<ALL,EVENT,SHUTTLE_EVENT,SERVO,NVRAM_EVENT,VIO,ESM,ES_DATA,EXCEPTION,ERROR,NVRAM_DUMP,  
MASTER_CONSOLE,MRPD,STATISTICS,CAR_LOGS> -u <user id> -p <password>
```

Multiple log types must be separated by commas without spaces. An optional argument -f <frame number> will download only that frame's logs for the specified log type(s). To get both accessors' logs for that type when specifying a frame number, use frame 1.

### **libraryFirmwareUpdate**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --libraryFirmwareUpdate <full path and filename of input file> -u <user id> -p <password>
```

The TS3500 Tape Library firmware can be downloaded from IBM Fix Central at the following URL:  
<http://www.ibm.com/support/fixcentral>.

### **moveFromAllDrives**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --moveFromAllDrives -u <user id> -p <password>
```

### **moveFromDrive**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --moveFromDrive -f <drive frame number> -r <drive row number> -u <user id> -p <password>
```

Either -f and -r, or -w, can be used to designate which tape drive. The -f and -r options supply the frame and row location of the drive. The -w option is the last 2 characters of the drive's WWNN. The moveFromDrive action will first attempt to move back to the home slot and if home slot is full, it will move to first empty storage slot.

### **moveFromIo**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --moveFromIo <VOLSER or location> -u <user id> -p <password>
```

VIO must be disabled for moveFromIo to work.

### **moveFromShuttle**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --moveFromShuttle <8-character VOLSER> -u <user id> -p <password>
```

Either an 8-character VOLSER or the -f <frame number> option must be specified for the move.

### **moveToDrive**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --moveToDrive <VOLSER or location> -f <drive frame number> -r <drive row number> -u <user id> -p <password>
```

Either -f and -r, or -w, can be used to designate which tape drive. The -f and -r options supply the frame and row location of the drive. The -w is the last 2 characters of the drive's WWNN.

### **powerCycleDrive**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --powerCycleDrive -f <drive frame number> -r <drive row number> -u <user id> -p <password>
```

### **prestageDataCartridges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --prestageDataCartridges <full path and filename of input file> -u <user id> -p <password>
```

The input file has the following format:

```
volser or location #1  
volser or location #2
```

### **removeDataCartridges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --removeDataCartridges <full path and filename of input file> -u <user id> -p <password>
```

The input file has the following format:

```
volser or location #1  
volser or location #2
```

### **removeExpiredCleaningCartridges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --removeExpiredCleaningCartridges -u <user id> -p <password>
```

### **resetNodeCards**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --resetNodeCards  
<ALL,ACCA,ACCB,MCC1,MCC2,MCC3,MCC4,MCC5,MCC6,MCC7,MCC8,MCC9,MCC10,MCC11,MCC12,MCC13,MCC14,MCC15,  
MCC16,OPA1,MDAA,MDAB,SMC2,SMC3,SMC4,SMC5,SMC6,SMC7,SMC8,SMC9,SMC10,SMC11,SMC12,SMC13,SMC14,SMC15,  
SMC16> -u <user id> -p <password>
```

Multiple node cards must be separated by commas without spaces. If ALL is selected on a library with firmware level B480 or higher, a Non-Disruptive Library Reset (NDLR) will be performed.

### **setLibraryTime**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --setLibraryTime -u <user id> -p <password>
```

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

### **setShuttleBeaconLightBlink**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --setShuttleBeaconLightBlink -f <shuttle frame number> -u <user id> -p <password>
```

To operate the command on all shuttle stations in one action, specify “all” for the shuttle frame number as shown in the following example:

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --setShuttleBeaconLightBlink -f ALL -u <user id> -p <password>
```

### **setShuttleBeaconLightOff**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --setShuttleBeaconLightOff -f <shuttle frame number> -u <user id> -p <password>
```

To operate the command on all shuttle stations in one action, specify “all” for the shuttle frame number.

### **setShuttleBeaconLightOn**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --setShuttleBeaconLightOn -f <shuttle frame number> -u <user id> -p <password>
```

To operate the command on all shuttle stations in one action, specify “all” for the shuttle frame number.

### **setShuttleStationOffline**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --setShuttleStationOffline -f <shuttle frame number> -u <user id> -p <password>
```

To operate the command on all shuttle stations in one action, specify “all” for the shuttle frame number.

### **setShuttleStationOnline**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --setShuttleStationOnline -f <shuttle frame number> -u <user id> -p <password>
```

To operate the command on all shuttle stations in one action, specify “all” for the shuttle frame number.

### **shuttleCarFirmwareUpdate**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --shuttleCarFirmwareUpdate <full path and file name of file containing the firmware> -f <shuttle frame number> -u <user id> -p <password>
```

The shuttle car must be present in the library at the specified frame.

### **shuttleDiscoverConnections**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --shuttleDiscoverConnections -f <shuttle frame number> -u <user id> -p <password>
```

### **shuttleDistributeConnections**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --shuttleDistributeConnections -f  
<shuttle frame number> -u <user id> -p <password>
```

### **unassignShuttleStation**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --unassignShuttleStation -f  
<shuttle frame number> -u <user id> -p <password>
```

For the unassignShuttleStation action, the shuttle station must be offline. To operate the command on all shuttle stations in one action, specify “all” for the shuttle frame number.

### **-version**

```
java -jar TS3500CLI.jar --version
```

### **-viewAccessor**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewAccessor -u <user id> -p  
<password>
```

### **-viewAvailableLibraryLogs**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewAvailableLibraryLogs -u  
<user id> -p <password>
```

Displays the Download Library Logs page. Does not display available Shuttle Car logs. To see which shuttle cars are present, use viewShuttleStations.

### **-viewBepRanges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewBepRanges -u <user id> -p  
<password>
```

### **-viewCapRanges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewCapRanges -u <user id> -p  
<password>
```

### **viewCleaningCartridges**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewCleaningCartridges -u <user  
id> -p <password>
```

### **viewDataCartridges**

To run the viewDataCartridges action, enter the following command:

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewDataCartridges -u <user  
id> -p <password>
```

Response time is dependent on the firmware level. There was a performance improvement added in firmware levels B560 and later. On a 2200 slot, 2000 cartridge, TS3500 Tape Library running a firmware level prior to B560, the command took about .17 seconds per cartridge, or stated another way, about 268

cartridges per minute. With B560 or later, the response time is improved. The command has no impact on library mount performance or tape drive throughput performance.

**Note:** In firmware level prior to B560, in order to ensure there are no missing or duplicate data cartridges in the response, viewDataCartridges must be used while the library is idle (not performing cartridge movement). If viewDataCartridges cannot be run while the library is idle, then it is recommended that the user perform the action twice consecutively and then remove all duplicates from the resulting combined responses.

#### **viewDriveDetails**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewDriveDetails -f <drive frame number> -r <drive row number> -u <user id> -p <password>
```

#### **viewDriveSummary**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewDriveSummary -u <user id> -p <password>
```

#### **viewDriveVPD**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewDriveVPD -u <user id> -p <password>
```

#### **viewFibreChannel**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewFibreChannel -u <user id> -p <password>
```

#### **viewIoStation**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewIoStation -u <user id> -p <password>
```

#### **viewLibraryVPD**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewLibraryVPD -u <user id> -p <password>
```

#### **viewLogicalLibraries**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewLogicalLibraries -u <user id> -p <password>
```

#### **viewLogicalLibraryDetails**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewLogicalLibraryDetails <logical library name> -u <user id> -p <password>
```

#### **viewNodeCards**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewNodeCards -u <user id> -p <password>
```

#### **viewRolePermissions**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewRolePermissions <Role Name>
-u <user id> -p <password>
```

#### **viewRoles**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewRoles -u <user id> -p
<password>
```

#### **viewShuttleStations**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewShuttleStations -u <user
id> -p <password>
```

#### **viewSystemSummary**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewSystemSummary -u <user id>
-p <password>
```

#### **viewSystemSummaryDetails**

```
java -jar TS3500CLI.jar -a <DNS or IP address of your library> --viewSystemSummaryDetails <frame
number> -u <user id> -p <password>
```

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