

Active Circle Basic Operations

Active Circle Storage System

Active Media Library

Version 4.0

Abstract

This document describes some of the most commonly used features of the Active Circle archiving system.

June 2013 - Rev. 0.3

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Introduction

This document describes how to perform some common tasks and operations using the Active Circle system. The tasks involve using the Active Circle Administration Tool and File Explorer applications.

The procedures described assume that the Active Circle system has been installed and configured according to the instructions provided by your Active Circle representative. The instructions have been specifically adapted to the *Active Media Library* configuration from Active Circle, but the general procedures are valid for any Active Circle configuration.

For a complete description of the features of the applications described in this document, please see the corresponding documentation available from Active Circle:

- *Active Circle Administration Guide*
- *Active Circle File Explorer Guide*

The documents are available on the Active Circle FTP server and on the Active Circle Knowledge Base on the web: kb.active-circle.com.

Creating a new share

This section describes how to create an Active Circle share for the purpose of archiving files in a specific pool of LTO tapes.

Creating a share involves completing the following steps in the Administration Tool:

1. Create a tape pool
2. Create an archiving policy
3. Create the share

If the tape pool and the archiving policy you want to use for the new share already exist, you can skip the first two steps. If you create a new pool, you must also add it to a new or existing archive policy. The new share can be associated with an existing archiving policy instead of creating a new one.

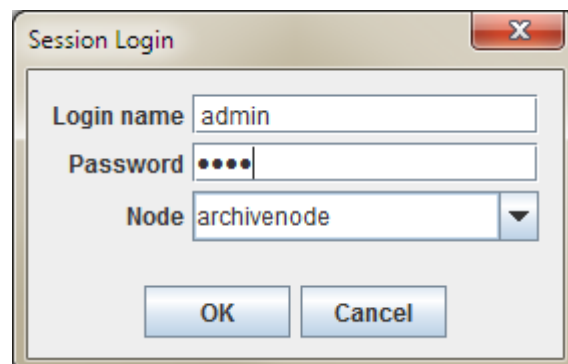
1. Start the Administration Tool by clicking on the **Administration** link on the Active Circle server home page:



2. When the login window is displayed, enter the following user identification:

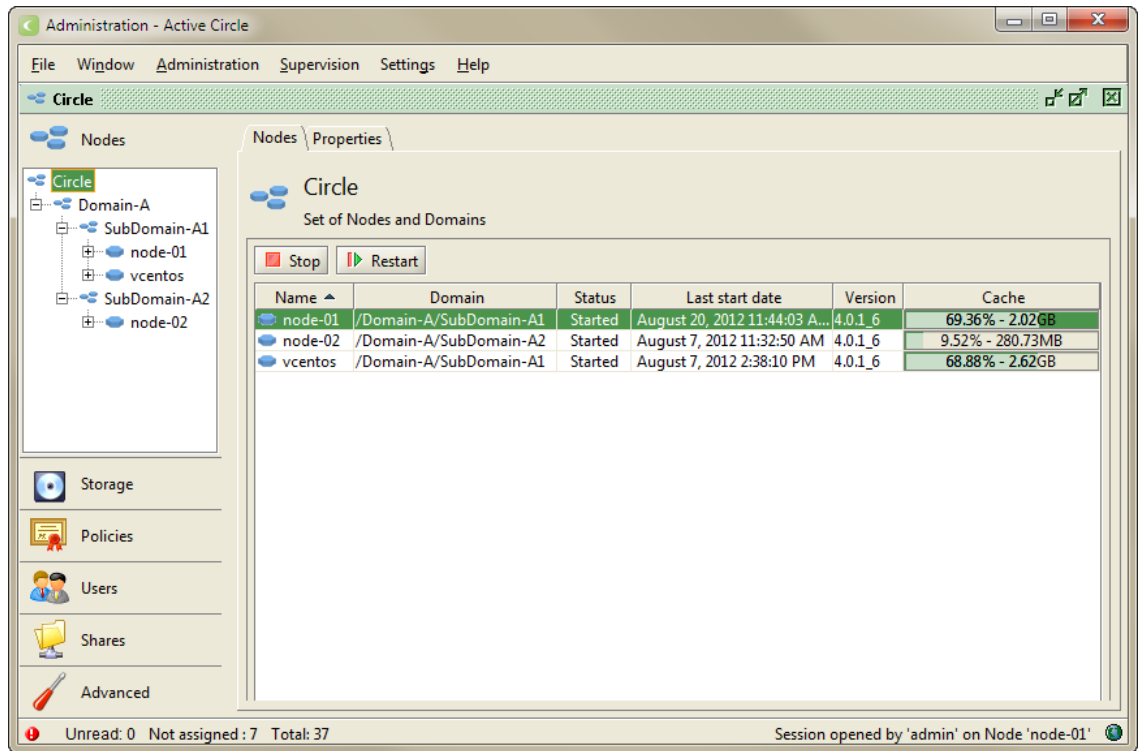
Login name: admin

Password: 1234

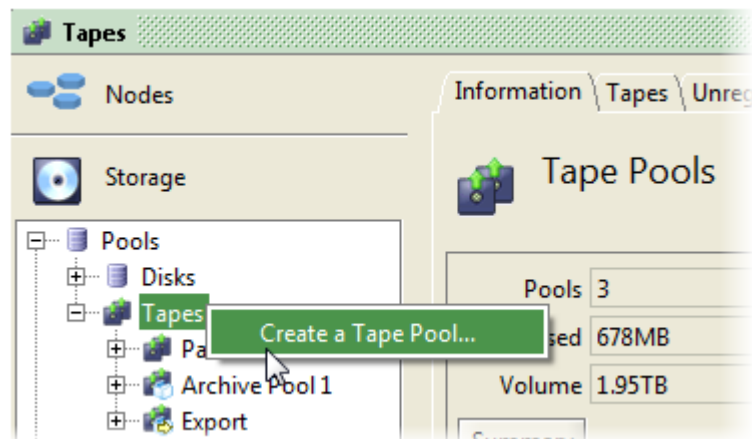


Click on **OK** to continue.

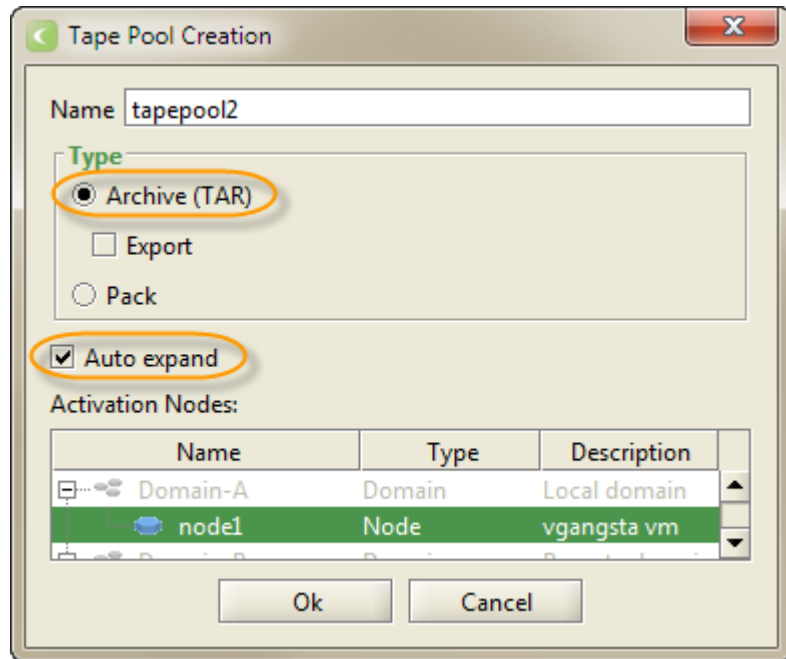
The Active Circle Administration Tool window will be displayed:



3. Create the tape pool by going to the **Storage** view, right-clicking on the **Tapes** or **Pools** item and selecting **Create a Tape Pool**:

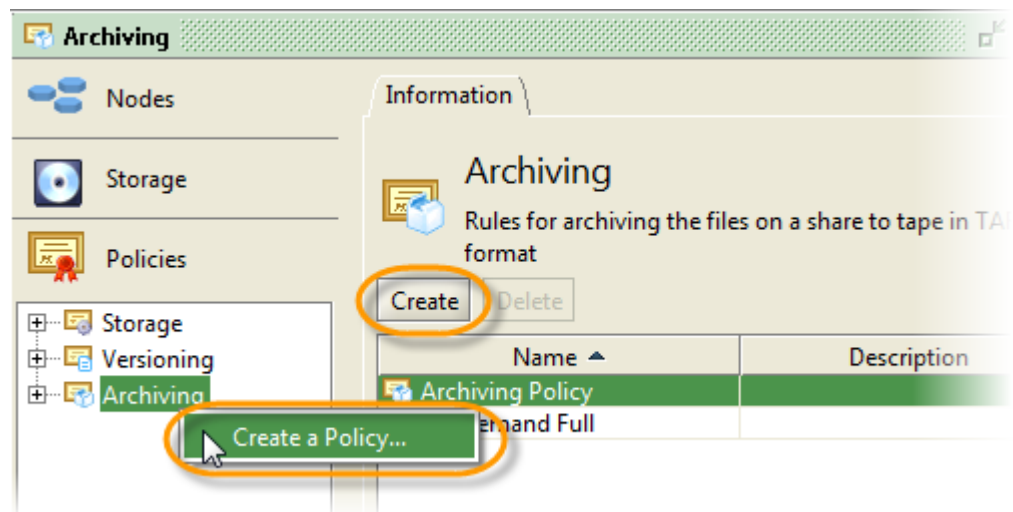


4. In the **Tape Pool Creation** dialog, enter the name of the pool and make selections as follows:
 - The pool name should not contain spaces, uppercase, accented or special characters
 - Type: **Archive (TAR)**
 - Select **Auto-expand**
 - Select the main node the pool should be activated on (for example "activenode" or "archive")



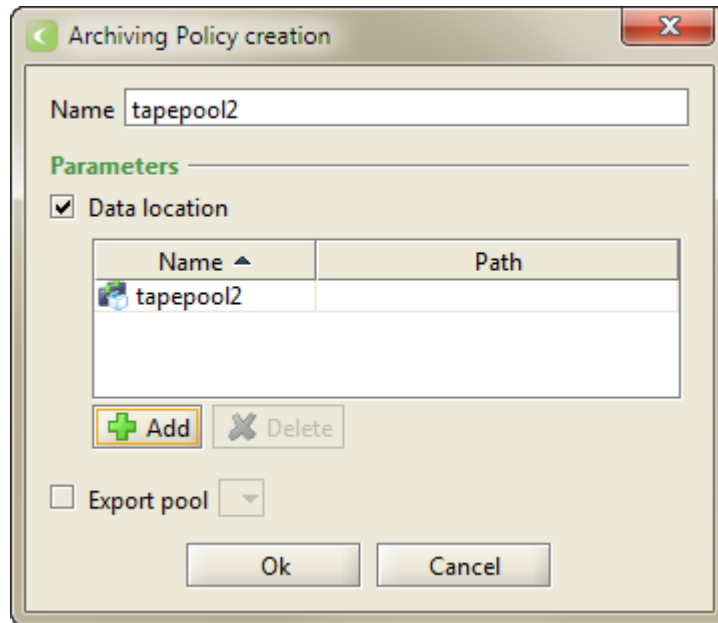
Click on **OK**.

5. Create the archiving policy by going to the **Policies** view, right-clicking on the **Archiving** item and selecting **Create a Policy**:

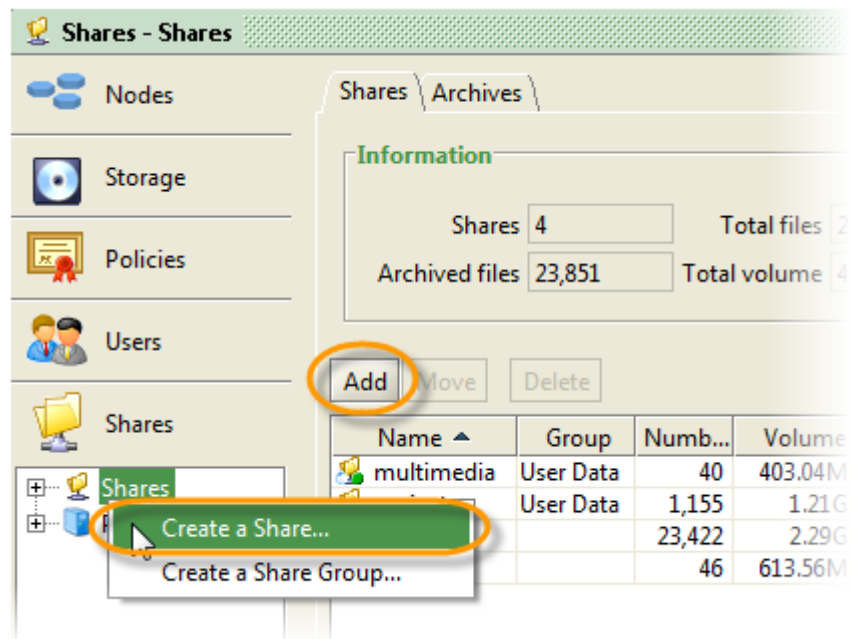


(Alternatively, you can select the **Archiving** item and then click on the **Create** button on the **Information** tab.)

6. In the **Archiving Policy Creation** dialog, enter the name of the policy and make selections as follows:
 - The policy name can be the same as the pool name you just created
 - Click on the **Add** button and select the tape pool you just created as the **Data Location**.

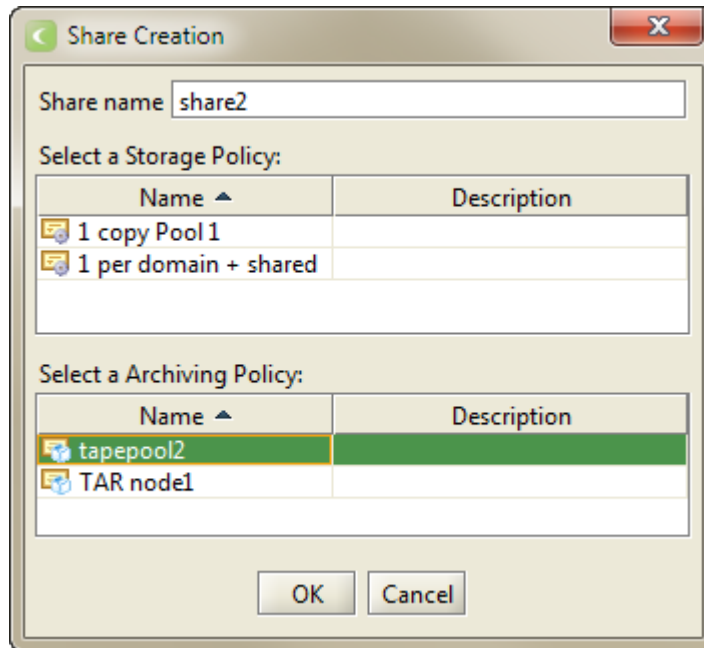


7. Create the share by going to the **Shares** view, right-clicking on the **Shares** item and selecting **Create a Share**:



(Alternatively, you can click on the **Add** button on the **Shares** tab.)

8. In the **Share Creation** dialog, enter the name for the new share and select the archiving policy that you created in the previous step. Do not use accented or special characters in the share name.



If you want to keep a copy of your data on disk, you may also select a storage policy in this dialog.

Click on **OK**.

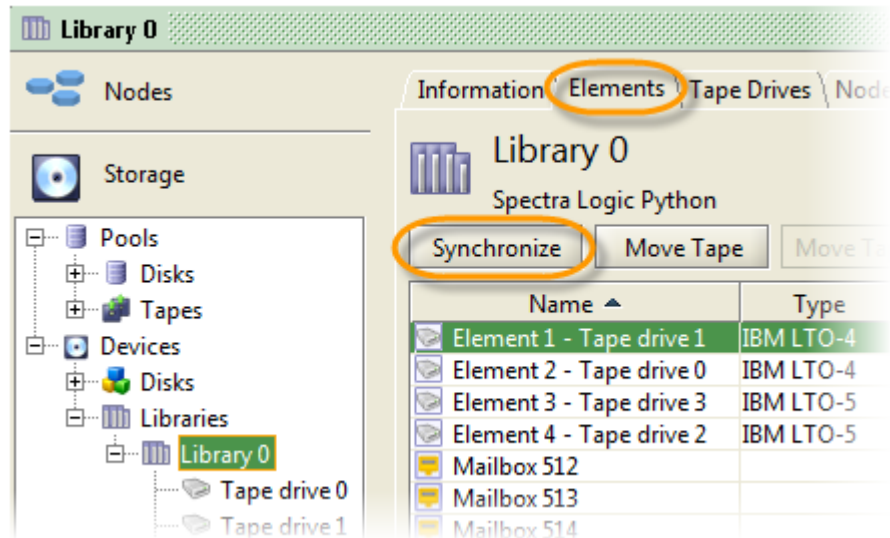
9. When the share has been created, you need to complete the share configuration in the same way as the other shares in the system have been configured. Click on the share to select it, and configure these items:
 - In the **Edit Parameters** tab, check the box **Archiving Policy processing** and define a **Processing start time** that is different than for the other shares.
 - In the **Access Controls** tab, add at least one user (such as "admin") and use the [Add Network Access Controls](#) button to add the **Default control** to the share.
 - Do not change anything on the following tabs:
 - Versioning
 - Quotas
 - Archives

Inserting tapes in a library

This section describes how to insert a tape in the library and make it appear in the Active Circle archiving system. Use this procedure when you want to insert a tape that has been previously removed from the archiving system or when you need to add a new, blank tape to the system.

1. Open the library and insert the physical tape cartridge(s) according to the instructions provided with the tape library.
2. Close the library and wait until the inventory has been updated. When the library is ready, it should say "Ready" or "Idle" on the library control panel.
3. You must now synchronize the library inventory with Active Circle. In the Administration Tool, go to the **Storage** view and click on the **Libraries** item under **Devices**.

- Under **Libraries**, select the library (normally this would be "Library 0"). On the right side of the window, select the **Elements** tab. This will display the inventory of the library:



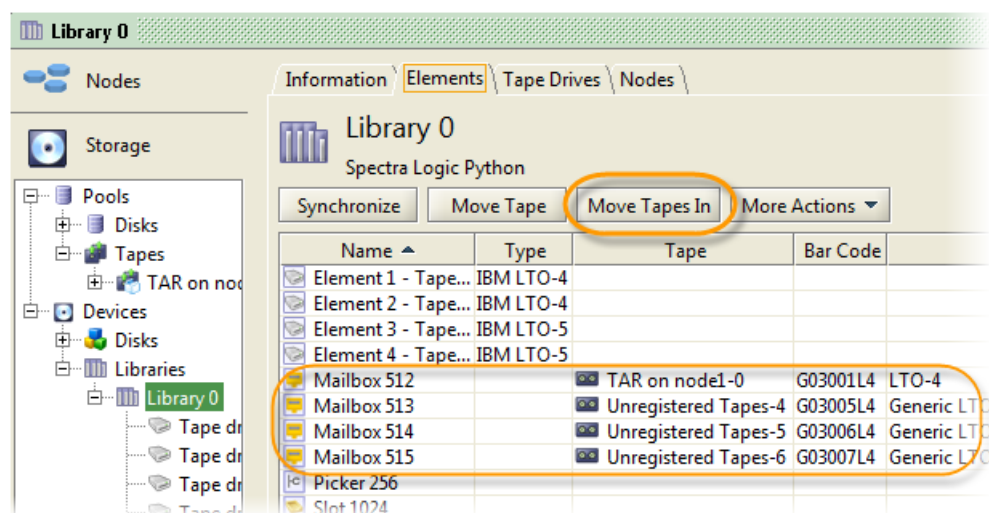
- Click on the **Synchronize** button to update the library inventory in Active Circle.



Important

You must synchronize the library using the Active Circle Administration Tool every time a tape has been removed or inserted in the library, or when the physical library configuration has been changed.

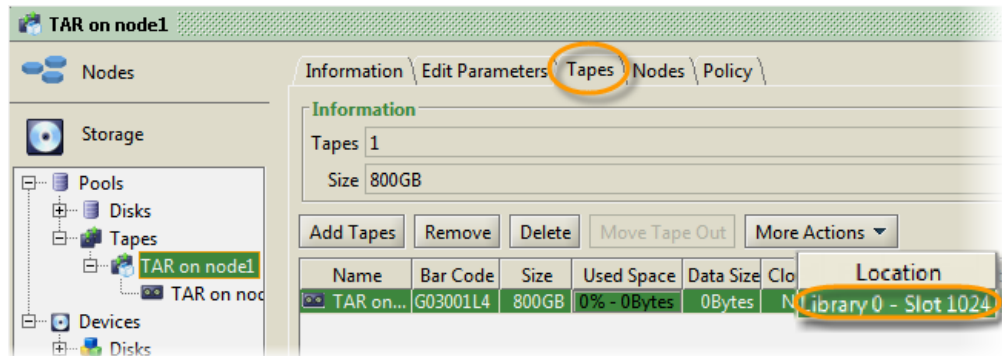
- The tapes will appear in the mailboxes in the **Elements** tab. Move the tapes into a library slot by clicking on the **Move Tapes In** button. This will move all the tapes from the mailboxes to slots in the library.



If the tape you inserted and moved in was a tape known to Active Circle, containing archives, it is now ready for use. No further operations are necessary. You can verify its location in the archiving system if you wish. This is described in the next step.

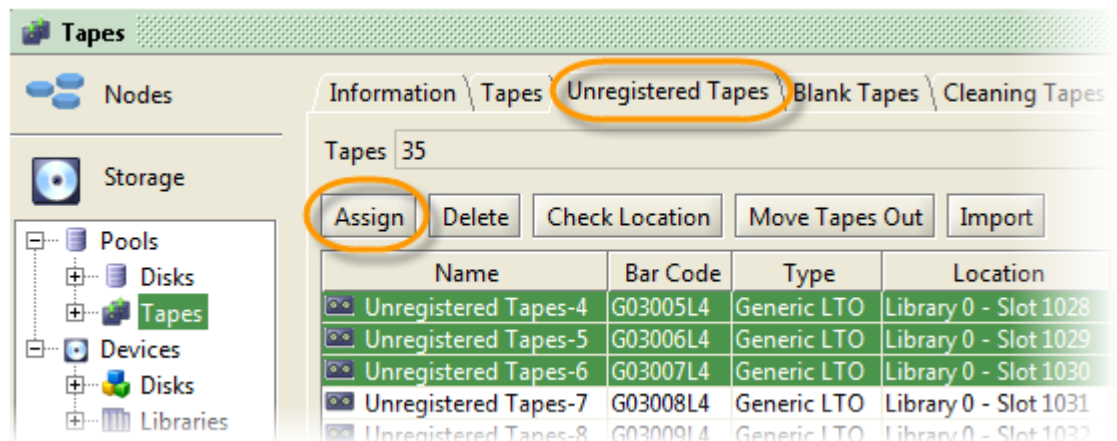
If the tape you inserted and moved in was a new tape which has never been used in Active Circle, it needs to be declared before you can use it in the archiving system. This is described in [Step 8](#).

- If the tape has already been used by Active Circle, it will automatically appear with an updated location status in the tape pool it belongs to. Instead of the status "External", the tape **Location** column will show the element in the library where the tape is located:

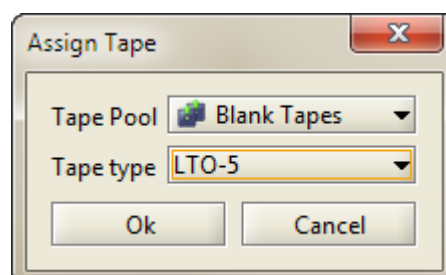


- If the tape (or tapes) you inserted is a new tape that you want to add to the archiving system, the tape will be unknown to Active Circle. The Administration Tool will initially mark the tape as "unregistered" and place it in a special tape pool called **Unregistered Tapes**. Before you can use the tape for archiving, you must declare it as a blank tape ready for use.

In the **Storage** view, click on the **Tapes** item and then select the **Unregistered Tapes** tab on the right side of the window:



- Select the tape(s) you just added to the library, and click on the **Assign** button. The **Assign Tape** dialog will be displayed:



Keep the default pool choice **Blank Tapes** and the tape type **LTO-5**.

- Click on **OK** to assign the tapes to the pool of blank tapes. The tapes belonging to the **Blank Tapes** pool will automatically be assigned to archiving tape pools by the system, when the need arises.



Note

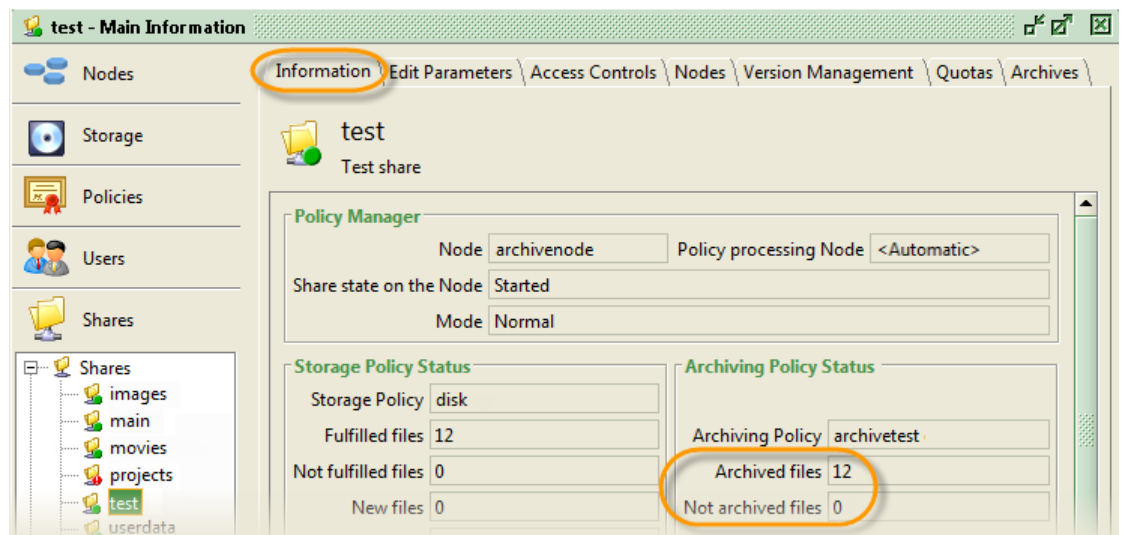
It is possible to remove and insert tapes in one operation at the physical tape library (for example if you want to remove a full tape and replace it with a blank tape at the same time). The procedures described in this document will be the same.

Verifying the archives

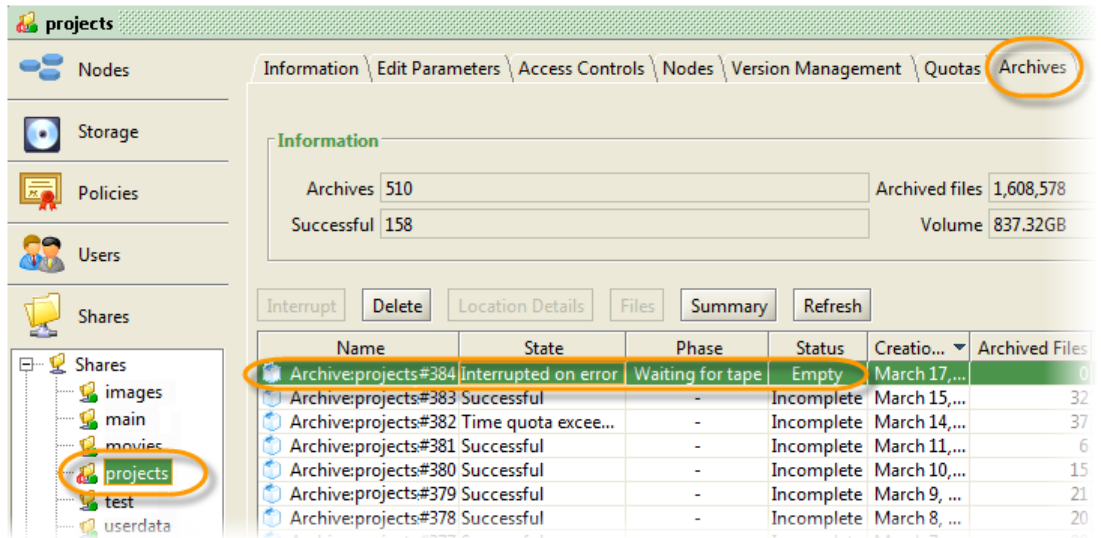
Every night, the files are automatically archived on LTO tape. Each share corresponds to one or two separate pools of tapes that can contain several tapes. The pools are linked to the share through the archiving policy that is associated with the share. Two pools per share are used if two copies are made of each archive.

You can verify the status of the archiving operations by using the Active Circle Administration Tool application. This section describes how to do it.

- Start the Administration Tool (see instructions in [Step 1](#) of “[Creating a new share](#)”).
- Select the share where you deposited your data. You find the list of shares under the **Shares** view. On the **Information** tab for the share, you will find status information for the archives, telling you how many files were archived, and how many files were not archived. If all the deposited files were successfully archived (with no new deposits in the mean time), the **Not archived files** field show be 0 (zero). The **Archived files** shows the number of files which have been archived.

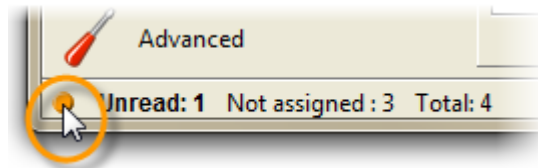


- If there is a problem, the archiving may not have been performed, or only partially. In that case there will be a red indicator on the lower left of the share icon, as shown below. To check the problem, select the share and then select the **Archives** tab:

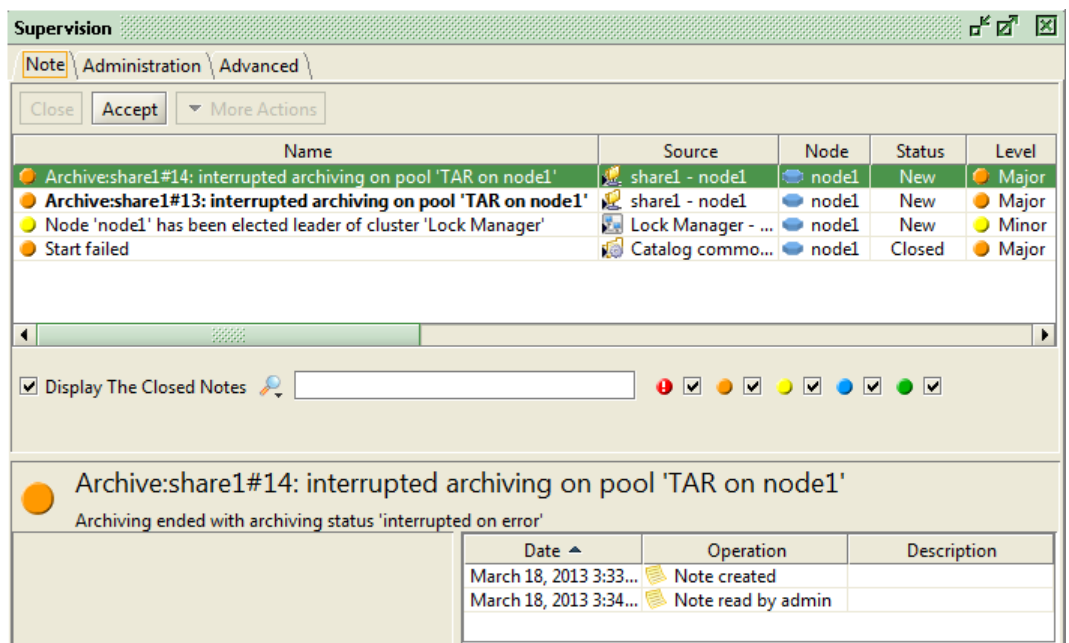


Verify the status of the last archive. By default, the result of the last archiving operation is shown at the top of the list.

4. Check if any supervision notes have been created due to the archiving error. To access the supervision notes, click on the colored dot at the lower left corner of the application window, or select the **Supervision** menu and then **New window**.



The list of notes will be shown, sorted by date (newest on top). Check the message(s) for more information about the failed archiving attempt. Note that the system can be configured so that these notes are also automatically sent by e-mail to the administrator.



Copying files from shares

You can manually retrieve files from the archiving system and create local copies of the data. The files can be located on disks or tapes, or both.

There are two ways of copying files from an Active Circle share to a destination of your choice:

- Using the standard FTP, CIFS or NFS network protocols
- Using the Active Circle File Explorer application

When the copy operation involves several files located on tapes, using the standard network protocols will not ensure that the order of the copy operations will be optimized. Depending on the location of the files on the tape(s), this can reduce performance significantly. To avoid performance degradation and ensure optimized copying, use the Active Circle File Explorer application to copy the files.

The procedure described here is independent of any automatic copying or retrieval performed by other applications you may be using in your environment.

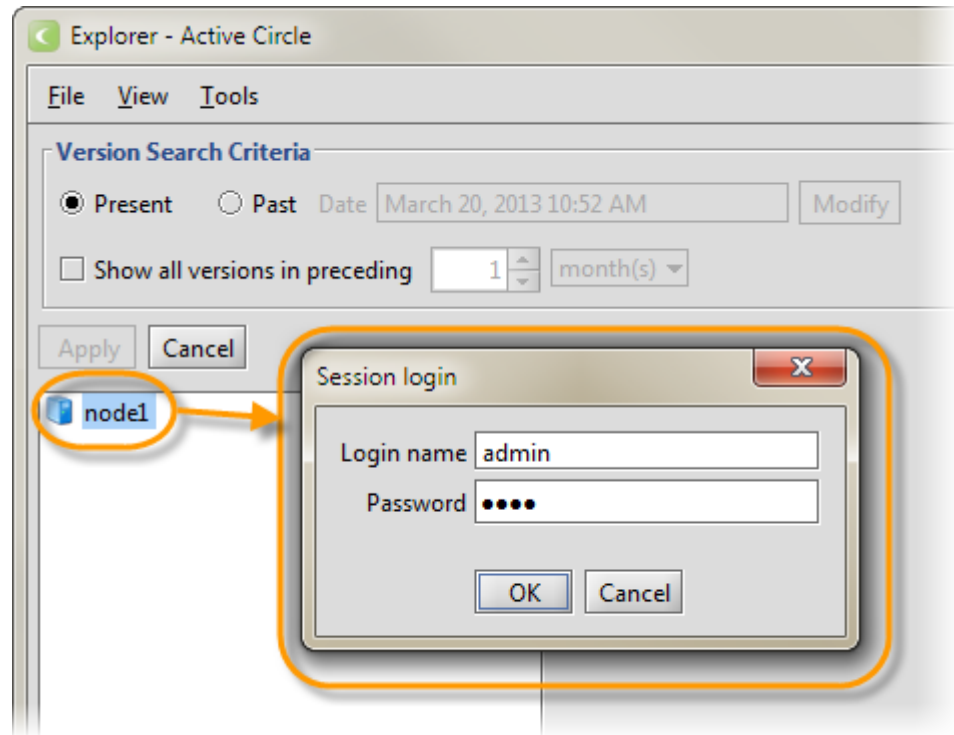
1. Start the File Explorer application by clicking on the **File Explorer** link on the Active Circle server home page:



2. When the Explorer window is displayed, click on the node you want to access (this would usually be the main node that is connected to the tape library). The **Session login** dialog is displayed. Enter the user identification:

Login name: admin

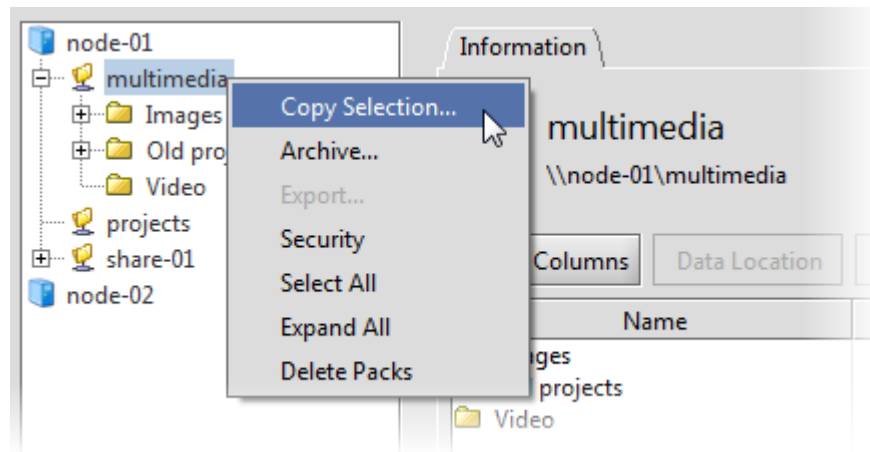
Password: 1234



3. Click on **OK** to continue.

The list of shares will be displayed in the File Explorer window.

4. Select the share containing the files you need by double-clicking on it. Select the files or folders in the list under the share or in the information pane on the right. Hold down the **Ctrl** key to select multiple files or folders.
5. Right-click on the selected files or folders and select **Copy Selection**:



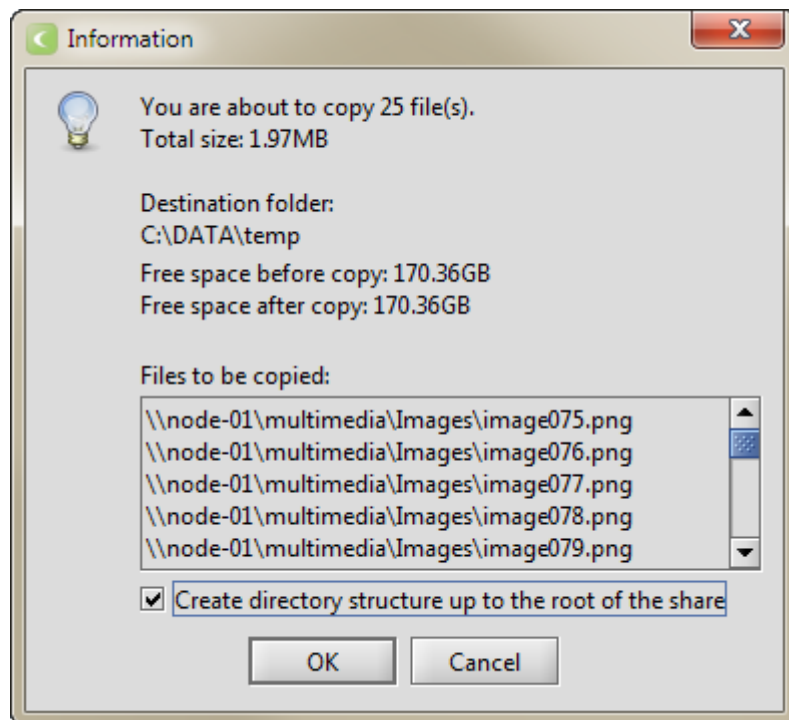
6. Select a destination folder for the copied files. The destination can be a local or an external hard disk.



Note

We recommend using an *empty* folder as the destination. If the destination folder is not empty, the program will ask you how to handle files that already exist (the options are to skip, overwrite or rename the files).

7. A window with information about the selected files will be displayed. Click on **OK** to continue.



If all the files you have selected are located on tapes which are present (online) in the tape library, the copying process will start. The file copy progress will be displayed in a window on the screen. In this case, you may skip the rest of this procedure. At the end of the process, the progress status window will stay on the screen. It will inform you if the operation was successful or if there were errors. This is described in [Step 10](#).

8. **Note**
- This and the next step only apply if some or all of the files to be copied are located on offline tapes.

If one or more of the tapes necessary to perform the file retrieval are not located in the tape library (offline), you will be asked how to proceed. A window will be displayed showing the list of offline files, giving you the following options:

Continue and Wait

Copying of any accessible files will begin immediately. A supervision note will be sent to the tape operator. Then the copy process will pause, pending tape library intervention from the operator. The copy operation will resume as soon as the requested tape has been loaded in the library, and the library has been *synchronized*.

Copy Accessible Files

This will start the copy operation for any available files in your selection. The copy process will continue until all the accessible files have been copied, and it will then

terminate. The offline files will be ignored, and no notification will be sent to the tape operator.

Cancel

Aborts the copy operation. No files will be copied, even if some of the selected files may have been available.

Click on **Continue and Wait** if you want to retrieve all the files in the selection, including those on offline tapes.


- The **Required tapes** dialog will be displayed, listing the names and bar codes of the tapes that need to be inserted in the tape library:

Name	Bar Code ▲	Tape pool
Archive Pool-0	E08003L4	Archive Pool

Note the bar code of the tape(s), and proceed to insert the corresponding tape(s) into the tape library, following the procedure described under ["Inserting tapes in a library"](#). Remember to synchronize the library inventory in Active Circle.

When ready, click on **OK** to proceed with the copy operation.

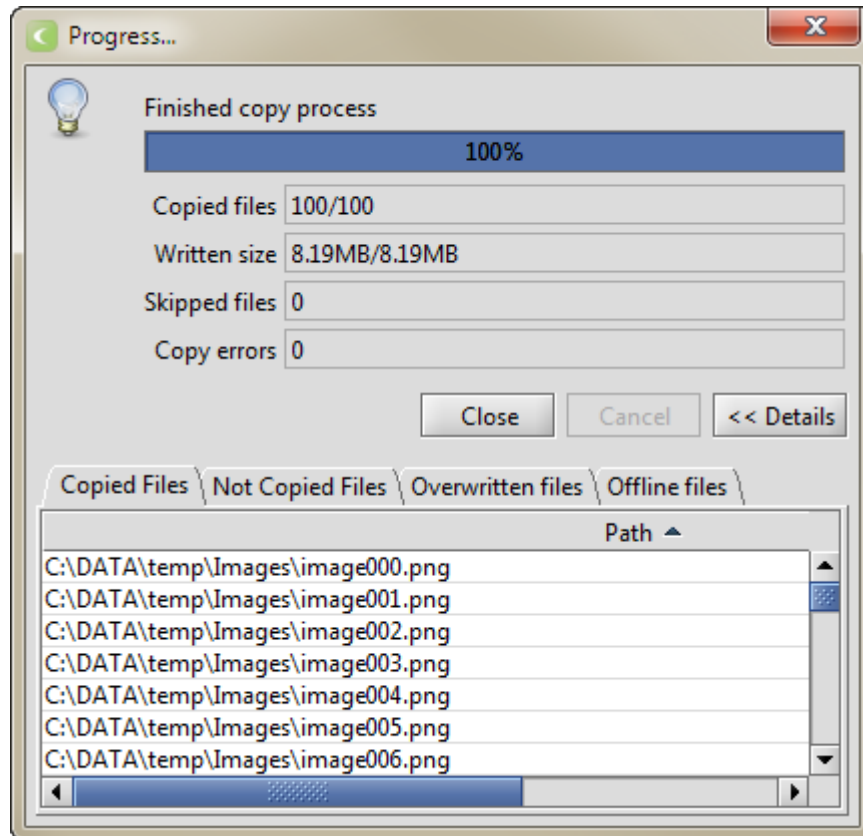
The copy progress dialog will be displayed, stating that the system is waiting for the operator to load the required tape. When the necessary tape has been inserted into the library, the copying of the remaining files will continue automatically. The progress status window will remain on the screen.



Note

If the archive data you have chosen to copy have multiple copies on different tapes, the **Required tapes** dialog will give you a list of tape pools and tapes to choose from. In this case, select the tape pool you want to use, and the corresponding tape bar codes will be displayed in the required tapes list.

- When the copying process has been completed, the progress status window will show the final status of the copy operation:



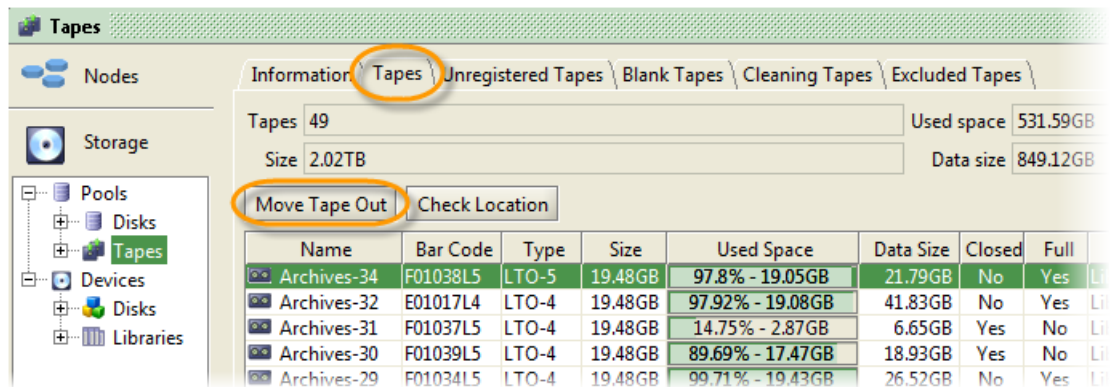
The dialog shows the number of files successfully transferred, the amount of data copied, and the number of errors encountered. If not all files were copied, an additional information message will be displayed to remind you to check the list of **Not Copied Files**. If multiple files were processed, you can click on the **Details** button to view which files were successfully copied, which files were not copied, which files were overwritten and any off-line files (for example, archived but not currently available).

Click on **Close** when you are done.

Moving tapes out of a library

When you need to physically remove one or more tapes from the tape library, you must first use the Active Circle Administration Tool to identify and move the tapes.

1. In the Administration Tool application, go to the **Storage** view and click on the **Tapes** item under **Pools**. Click on the **Tapes** tab to display the list of all the tapes in the system:



Information | **Tapes** | Unregistered Tapes | Blank Tapes | Cleaning Tapes | Excluded Tapes

Tapes 49 Used space 531.59GB
Size 2.02TB Data size 849.12GB

Move Tape Out Check Location

Name	Bar Code	Type	Size	Used Space	Data Size	Closed	Full	Location
Archives-34	F01038L5	LTO-5	19.48GB	97.8% - 19.05GB	21.79GB	No	Yes	Li
Archives-32	E01017L4	LTO-4	19.48GB	97.92% - 19.08GB	41.83GB	No	Yes	Li
Archives-31	F01037L5	LTO-4	19.48GB	14.75% - 2.87GB	6.65GB	Yes	No	Li
Archives-30	F01039L5	LTO-4	19.48GB	89.69% - 17.47GB	18.93GB	Yes	No	Li
Archives-29	F01034L5	LTO-4	19.48GB	99.71% - 19.43GB	26.52GB	No	Yes	Li

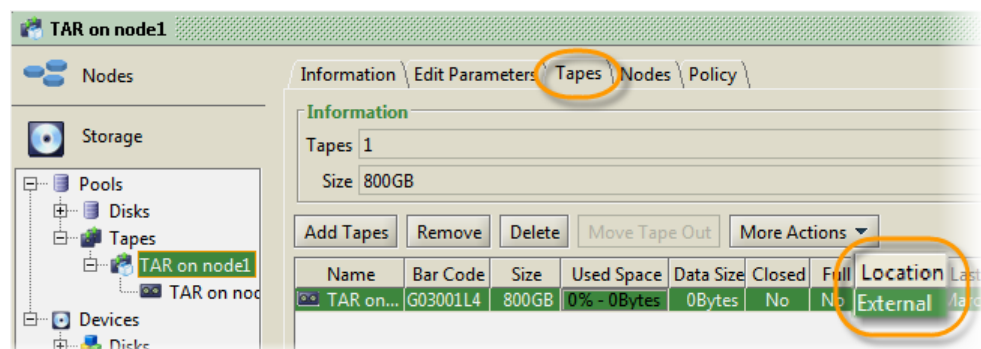
- Identify one or more tapes to move out (for example the ones that are full). Click on the tape to select it. To select more than one tape, hold down the **Ctrl** key while you click on several tapes.
- Click on the **Move Tape Out** button to move the tape(s) to the library mailbox.
- Physically remove the tape(s) from the tape library.
- Close the library and wait until the inventory has been updated. When the library is ready, it should say "Ready" or "Idle" on the library control panel.
- Synchronize the library with Active Circle by going to the **Storage** view, selecting the library and clicking on the **Synchronize** button in the **Elements** tab (see [Step 4](#) in "Inserting tapes in a library" for more details).



Important

You must synchronize the library using the Active Circle Administration Tool every time a tape has been removed from or inserted in the library, or when the physical library configuration has been changed.

- Once a tape has been moved out and the library synchronized, the tape will no longer be listed in the **Elements** tab of the library. However, the tape still exists in the archiving system, and it is still associated with its tape pool. To verify the status of a tape that has been moved out, select the tape pool it belongs to under the **Tapes** item. Click on the **Tapes** tab, and check the status in the **Location** column. It should state "External":



TAR on node1

Information | Edit Parameters | **Tapes** | Nodes | Policy

Information

Tapes 1 Size 800GB

Add Tapes Remove Delete Move Tape Out More Actions

Name	Bar Code	Size	Used Space	Data Size	Closed	Full	Location
TAR on...	G03001L4	800GB	0% - 0Bytes	0Bytes	No	No	External



Note

It is possible to remove and insert tapes in one operation at the physical tape library (for example if you want to remove a full tape and replace it with a blank tape at the same time). The procedures described in this document will be the same.