Synchronization Prerequisites And Considerations

Synchronization prerequisite information and considerations to take note of before setting up the active Sync process.

Synchronization Prerequisite

To be able to synchronize you will need the following components and information:

1. The TapeTrack Synchronization Suite software fully installed.
2. The address and port of your TapeTrack Server.
3. The User-ID and password of your TapeTrack Server.
4. The TapeTrack Customer-ID and Media-ID for the tapes being synchronized.
5. The TapeTrack Repository-IDs for each location that a tape volume may be moved to.
6. The ability to extract data from your backup or tape management software using either an ODBC connection or command line interface.
7. Access to schedule a task under Windows Task Scheduler or cron(8).

CPU And Bandwidth Considerations

The TapeTrack Synchronization Suite programs are written in C and are optimized to use minimal CPU and bandwidth.

To calculate the potential bandwidth used during a synchronization, the program will download a cache of volume information with each volume record consisting of approximately 300 bytes. If the volume also has a description, an additional 256 bytes may be downloaded.

This means that if you have a library of 10,000 tape volumes, each of which has a description the cache will be: (10,000 x 300 bytes) + (10,000 x 256 bytes) = 5.5 megabytes.

The 5.5 megabytes is then compressed using level 9 gzip(3) compression which usually compresses down to approximately 1 megabyte.

Then, if 100 tapes are updated, this would consume (100 x 300 bytes + 100 x 256 bytes) 55KB of uploaded data. This data is usually compressed at a ratio of 2:1, which means that the total upload bandwidth is around 28KB.

Synchronization vectors

The TapeTrack Synchronization Suite is designed in a way that it can be implemented to synchronize data using the following techniques:

1. Direct invocation from a source computer, where the data is pushed to a TapeTrack Server.

2. Direct invocation from the TapeTrack server where data is pulled from a source computer and then updated locally on the TapeTrack Server.
3. Invocation via the inetd(8) service to provide a dedicated synchronization server where data can be send via the netcat(1) command.
4. Invocation via procmail(5) to facilitate the automated processing of data via email.

Security considerations

All TapeTrack data sent to and received from the TapeTrack server is encrypted using AES 256 bit private key encryption.

In addition, all password values are also hashed using the MD5 algorithm before them being encrypted, this ensures that any memory dump of the server address space will never show the unencrypted password.