

**Topic : Reading Data on Cache-A Tapes
 From Non-Cache-A Devices**

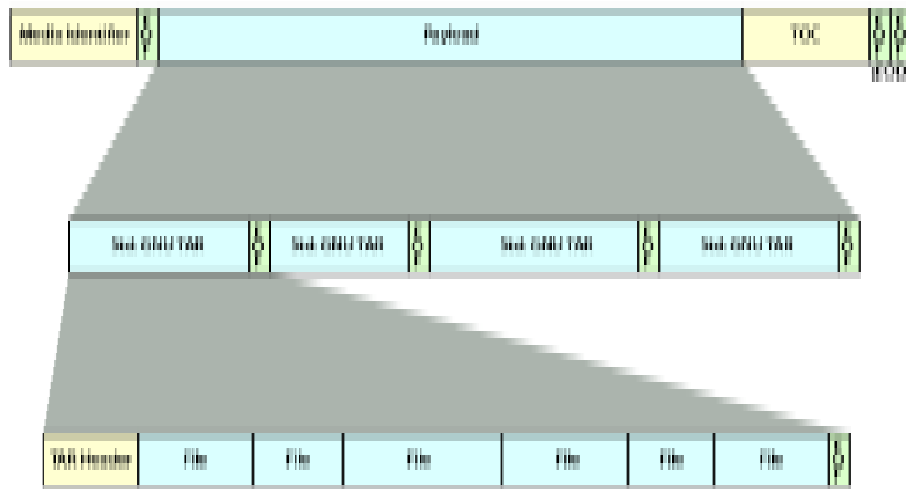
Reference Release: v3.4

Date : November 28, 2017

Summary:

Cache-A Archive Appliances create tapes using a standard Unix ‘tar’ format that can be read by any Unix or Linux machine as well as appropriately configured PCs and Macs with connected LTO tape drives. This brief outlines the general process for using any such computer to recover data written by any Cache-A system.

The following diagram shows how Cache-A places data on tape:



Cache-A Data Format on Tape

Note that the TOC file (Table Of Contents) at the end of data contains Cache-A’s proprietary index to the contents of this tape and is not readable, but everything else can be recovered and read by the following procedure. Note also that each tar session is separated by an EOF marker.

Procedure:

1. Make a target directory on your target hard drive into which data is to be recovered (we have called the directory "Recover" in the command below)
2. Insert the tape and assure that it has been rewound to the beginning
This will require issuing the appropriate command for your system, in Linux, something similar to: `mt -f /dev/nst0 rewind` would be required.
3. Issue the ‘tar’ command including the appropriate identification for the tape device on your system – a long form of the command would be:

```
tar --verbose --extract --file [tape_device] --blocking-  
factor 300--directory ./restore_directory
```

or the abbreviated form:

```
tar xvf [tape_device] -b 300 -C
```

(tar can normally sense the blocking factor but some older versions of tar need an explicit value)

4. Keep running the above tar command multiple times. Every other time you run it – it will indicate an EOF mark - this is normal as noted above.
5. You will know you have restored all tar sessions when you see it extract the TOC, which will have a filename like: serial#.tgz where serial# is the media ID # of the tape.

This process may require many iterations to complete. Each archive session on a Cache-A system will create one or more tar sessions. Some tapes may have very few large ones, but in some workflows where users make many small archives, there can be hundreds or more tar sessions.

Alternately the tar sequence can be automated with the following command (type all on one line):

```
while [ 1 ]; do tar -xvf /dev/nst0 -b 300 -C  
/media/vtape/restore_directory/; done
```

You'll have to keep an eye on this process as it recovers. When it reaches the end of the archive, you will get a continuous series of repeated errors indicating that the files cannot be read. Press Ctrl+C to stop the command.

6. Once at the end of data, run the following to rewind and eject:

```
mt -f /dev/nst0 rewind  
mt -f /dev/nst0 eject
```

7. All files that were restored can now be found in the restore_directory