

Question

If the server running Hiarc HSM loses the inode table on a power failure or other crash, how is the migrated data under its control recovered?

Answer

Even though all of the files we migrate out are tracked by inode number, they are not recorded on secondary media as such. Optical media has a valid UFS file system on it that mirrors the original file system (or at least the important part) in which the file came from. For example:

Original file: **/usr/fred**

Optical file: **/<mnt point of optical media>/<machine name>/usr/fred**

Just about the same thing is true for tape as secondary storage, although the file is recorded in what we call a “single file archive.” This is a tar image that contains only one file. The header information of the file would reveal the path to be “/usr/fred.”

This feature makes Hiarc HSM quite different from others in that we can recover the entire contents of the secondary media just by taking the union of all the pieces of media.

In the case of optical, this can be read on any other machine using the same filesystem type (standard UFS).

In the case of tape, these files can be read back on virtually any platform given the fact that gnu-tar has been ported to just about every O/S in existence. Because of the sequential nature of tape, we are not able to delete “stale” versions of files, so in the case of restoration from tape, a user might end up with “extra” files that have been deleted along the way. Better to have extra than an incomplete set.