

Macintosh HFS Filesystem for Linux

HFS stands for ``Hierarchical File System'' and is the filesystem used by the Mac Plus and all later Macintosh models. Earlier Macintosh models used MFS (``Macintosh File System''), which is not supported, MacOS 8.1 and newer support a filesystem called HFS+ that's similar to HFS but is extended in various areas. Use the hfsplus filesystem driver to access such filesystems from Linux.

Mount options

When mounting an HFS filesystem, the following options are accepted:

creator=cccc, type=cccc

Specifies the creator/type values as shown by the MacOS finder used for creating new files. Default values: '????'.

uid=n, gid=n

Specifies the user/group that owns all files on the filesystems. Default: user/group id of the mounting process.

dir_umask=n, file_umask=n, umask=n

Specifies the umask used for all files, all directories or all files and directories. Defaults to the umask of the mounting process.

session=n

Select the CDROM session to mount as HFS filesystem. Defaults to leaving that decision to the CDROM driver. This option will fail with anything but a CDROM as underlying devices.

part=n

Select partition number n from the devices. Does only make sense for CDROMS because they can't be partitioned under Linux. For disk devices the generic partition parsing code does this for us. Defaults to not parsing the partition table at all.

quiet

Ignore invalid mount options instead of complaining.

Writing to HFS Filesystems

HFS is not a UNIX filesystem, thus it does not have the usual features you'd expect:

- o You can't modify the set-uid, set-gid, sticky or executable bits or the uid and gid of files.
- o You can't create hard- or symlinks, device files, sockets or FIFOs.

HFS does on the other have the concepts of multiple forks per file. These non-standard forks are represented as hidden additional files in the normal

hfs.txt

filesystems namespace which is kind of a cludge and makes the semantics for the a little strange:

- o You can't create, delete or rename resource forks of files or the Finder's metadata.
- o They are however created (with default values), deleted and renamed along with the corresponding data fork or directory.
- o Copying files to a different filesystem will loose those attributes that are essential for MacOS to work.

Creating HFS filesystems

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The hfsutils package from Robert Leslie contains a program called hformat that can be used to create HFS filesystem. See <http://www.mars.org/home/rob/proj/hfs/> for details.

Credits

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The HFS drivers was written by Paul H. Hargrovea (hargrove@sccm.Stanford.EDU) and is now maintained by Roman Zippel (roman@ardistech.com) at Ardis Technologies.

Roman rewrote large parts of the code and brought in btree routines derived from Brad Boyer's hfsplus driver (also maintained by Roman now).