

NAME

cmpfs - compare and archive file systems

SYNOPSIS

/etc/cmpfs [-Nmtvrseiobpqn] [tapefile] [name] dir1 [dir2]

DESCRIPTION

Cmpfs saves file systems on mag tape (or a specified file). It writes files on the tape in an archive format; i.e., the tape consists of a sequential list of file headers and files. Whereas the *tp* program collects all the file headers into a fixed-length directory on the tape, *cmpfs* writes a header, then the file, followed by another header and the file, etc. When used in the compare mode, it saves only the differences between the two file systems which are heirarchically under the *dir1* and *dir2* arguments. In this mode, *dir1* is taken to be the "old" file system, and *dir2* is taken to be the "new"; i.e., *cmpfs* will produce all changes necessary in order to take *dir1* to *dir2*. When used in the non-compare mode, it saves the entire file system under the *dir1* argument.

Note: *cmpfs* is coded to run faster if *dir1* is a path name which begins with "/". If *dir2* is present, it must also begin with a '/' in order for the program to run faster.

The flags specify what action *cmpfs* is to take:

- N** *N* is and optional one or two decimal digits which designate which tape drive the program should use. Drive 0 is default if not drive is specified.
- m** Write the output to the file *tapefile* instead of the tape drive.
- t** Produce a list of the differences between the two file systems. If the second file system is null, this will effectively be a list of all the files in the given file system. The produced listing consists of one of the flags [dcal] followed by a path name. The flags mean:
 - d** (Delete) The named file is in the *dir1* file system, but not in the *dir2* file system. This flag will never appear when the program is being run in the non-compare mode.
 - c** (Change) The named file is in both file systems and is different. "Different" may be in any of the following senses; mode, owner, group or file contents. The one exception is the case of directories; if the only difference between the two directories is their size, *cmpfs* will produce no output. This flag will never appear in the non-compare mode.
 - a** (Add) In the non-compare mode, this flag means that the file simply exists in *dir1*. In the compare mode, this flag means that the files does not exist in *dir1* but does exist in *dir2*.
 - l** (Link) The named file is a link to a previously found file. The previous file will always be associated with a *c* or *a* flag.

The list of names output by the program is in the order in which they appear in their respective directories; *cmpfs* does no sorting.

- v** Produce verbose output. For each file encountered which would produce some form of output on the requesting terminal, *cmpfs* normally outputs the entry type [dcal] and the relative path name. The verbose option expands this output to include the mode, link count, owner id, group id, and size of the file on the tape.
- r** Produce a tape representing the differences found. Each entry consists of a header containing the entry type [dcal], mode, owner id, group id, file size and name. The name contains neither the *dir1* or *dir2* name; hence it is relative. The remainder of the entry produced depends on the [dcal] flag associated with the file:

- d No further information is required for a delete entry.
- c,a The contents of the file follows starting at the next tape record — unless the file is a directory or a special file. For a directory, the contents of the directory is dumped if the eflag is specified, but not otherwise. The contents of the directory is used if the eflag is specified when the tape is read by updfs. For a special file the major/minor device specification is recorded in the entry header.
- l The "link to" name follows immediately after the header.
- s Produce entries for special files. If this flag is missing, *cmpfs* will ignore all special files it comes across. Hence if the tape is being generated for an installation which has a different device configuration, the *s* flag should be left off, or the ignore capability of the program should be used (see below).
- e Produce entries according to the current epoch time as define in the date file: */etc/epoch*. *Dir2* may not be given. when the *e* flag is specified, *cmpfs* will look through the file system specified by the *dir1* argument and output (governed by the *t*, *r* and *s* flags) those files and directories whose modification dates are later than the epoch date. The command *epoch(1M)* may be used to modify the epoch date.
- i Ignore all files on the tape which have the same relative pathname as one of the pathnames in an ignore file, or which are heirarchically lower. The name of the ignore file is taken to be the next argument in the argument list, i.e. *name*.
- o Look at only files which match a name in an only file or are heirarchically lower. The name of the only file is taken to be the next argument in the argument list.
- b Output is blocked 5120 bytes per record instead of 512.
- p ignore file *mode* when doing comparsion.
- q ignore file *user* ownership when doing comparsion.
- n ignore file *group* ownership when doing comparsion.

An ignore/only file should be a list of relative pathnames (both file names and directory names are allowed) separated by newlines. The "relative" requirement is important; for example, it should be clear that no pathname may start with a "/". Although it is logically possible to have a situation where it would be convenient to have both an ignore and an only file, *cmpfs* allows only one or the other to be used.

FILES

/tmp/fslp? link bookkeeping
/tmp/fsln? link bookkeeping
/dev/mt?

SEE ALSO

epoch(1M), *updfs(1M)*

BUGS

Cmpfs does not know about directories that begin with '.'.