

NAME

mkfs - construct a Logical File System (LFS)

SYNOPSIS

/etc/mkfs [options] *device* *nfn* *ncyl* *trkf* *secf* *blkf*

DESCRIPTION

Mkfs constructs a Logical File System on disk. The LFS software is implemented as a pseudo device driver which provides a simple file system implemented through the UNIX raw I/O facility. The LFS consists of a set of contiguously allocated files, specified by their logical file numbers, which are manipulated by LFS operations.

Options:

An optional character string consisting of a dash (-) followed by any combination of the characters *y*, *n*, or *v* whose meanings are as follows:

- y* unconditionally make the LFS (no user interaction)
- n* don't make the LFS (no user interaction)
- v* verbose output (LFS header information).

- device** The block-special file corresponding to the physical disk area upon which the LFS will be built. Before executing *mkfs*, *device* must be created by the *mknod(1)* command.
- nfn** The maximum number of logical file numbers (lfns) to be allowed. Legal lfns start at 1 and range up to and including *nfn*. There is currently a limitation of 65,535 lfns per file system.
- ncyl** The number of cylinders in the LFS disk area.
- trkf** The number of tracks per cylinder.
- secf** The number of 512 byte sectors per track.
- blkf** The size of a LFS block; i.e., all files will be allocated in multiples of *blkf* sectors.

An example of *mkfs* follows:

```
/etc/mkfs /dev/lfs 40000 156 19 22 2
```

creates an LFS with 40,000 files spanning 156 cylinders for a DEC RPO4/5/6 disk (under CB-UNIX, 156 cylinders is the maximum size file system possible).

SEE ALSO

lfs(3C)

DIAGNOSICS

Diagnostics are given if *device* cannot be opened or is not a block device, if the wrong number of arguments are given, or if parameters are unintelligible.

LIMITATIONS

At most 65,535 logical files are allowed per file system. Each logical file system must be less than 32,768 LFS blocks in size. This is since the system *malloc* routine is used to manage free space, and the size is stored in a short integer. Making *blkf* larger can help compensate for this limitation.