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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'mtree.5' command

$ man mtree.5

MTREE(5) BSD File Formats Manual MTREE(5)

NAME

mtree ? format of mtree dir hierarchy files

DESCRIPTION

The mtree format is a textual format that describes a collection of filesystem objects. Such files are typically used to create or verify directory hierarchies.

General Format

An mtree file consists of a series of lines, each providing information about a single filesystem object. Leading whitespace is always ignored. When encoding file or pathnames, any backslash character or character outside of the 95 printable ASCII characters must be encoded as a back? slash followed by three octal digits. When reading mtree files, any ap? pearance of a backslash followed by three octal digits should be con? verted into the corresponding character.

Each line is interpreted independently as one of the following types:

Blank Blank lines are ignored.

Comment Lines beginning with # are ignored.

Special Lines beginning with / are special commands that influence the interpretation of later lines.

Relative If the first whitespace-delimited word has no / characters, it is the name of a file in the current directory. Any rela? tive entry that describes a directory changes the current di?

rectory.

dot-dot As a special case, a relative entry with the filename .. changes the current directory to the parent directory. Op? tions on dot-dot entries are always ignored.

Full If the first whitespace-delimited word has a / character af? ter the first character, it is the pathname of a file rela? tive to the starting directory. There can be multiple full entries describing the same file.

Some tools that process mtree files may require that multiple lines de? scribing the same file occur consecutively. It is not permitted for the same file to be mentioned using both a relative and a full file specifi? cation.

Special commands

Two special commands are currently defined:

/set This command defines default values for one or more keywords. It is followed on the same line by one or more whitespace-separated keyword definitions. These definitions apply to all following files that do not specify a value for that key? word.

/unset This command removes any default value set by a previous /set command. It is followed on the same line by one or more key? words separated by whitespace.

Keywords

After the filename, a full or relative entry consists of zero or more whitespace-separated keyword definitions. Each such definition consists of a key from the following list immediately followed by an '=' sign and a value. Software programs reading mtree files should warn about unrec? ognized keywords.

Currently supported keywords are as follows:

cksum The checksum of the file using the default algorithm speci? fied by the cksum(1) utility.

device The device number for block or char file types. The value must be one of the following forms:

format,major,minor[,subunit]

A device with major, minor and optional subunit fields. Their meaning is specified by the operating's system format. See below for valid formats.

number

Opaque number (as stored on the file system).

The following values for format are recognized: native, 386bsd, 4bsd, bsdos, freebsd, hpux, isc, linux, netbsd, osf1, sco, solaris, sunos, svr3, svr4, and ultrix.

See mknod(8) for more details.

contents The full pathname of a file that holds the contents of this file.

flags The file flags as a symbolic name. See chflags(1) for infor? mation on these names. If no flags are to be set the string ?none? may be used to override the current default.

gid The file group as a numeric value.

gname The file group as a symbolic name.

ignore Ignore any file hierarchy below this file.

inode The inode number.

link The target of the symbolic link when type=link.

md5 The MD5 message digest of the file.

md5digest A synonym for md5.

mode The current file's permissions as a numeric (octal) or sym? bolic value.

nlink The number of hard links the file is expected to have.

nochange Make sure this file or directory exists but otherwise ignore all attributes.

optional The file is optional; do not complain about the file if it is not in the file hierarchy.

resdevice The ?resident? device number of the file, e.g. the ID of the device that contains the file. Its format is the same as the one for device.

ripemd160digest

The RIPEMD160 message digest of the file.

rmd160 A synonym for ripemd160digest.

rmd160digest

A synonym for ripemd160digest.

sha1 The FIPS 160-1 (?SHA-1?) message digest of the file.

sha1digest A synonym for sha1.

sha256 The FIPS 180-2 (?SHA-256?) message digest of the file.

sha256digest

A synonym for sha256.

sha384 The FIPS 180-2 (?SHA-384?) message digest of the file.

sha384digest

A synonym for sha384.

sha512 The FIPS 180-2 (?SHA-512?) message digest of the file.

sha512digest

A synonym for sha512.

size The size, in bytes, of the file.

time The last modification time of the file.

type The type of the file; may be set to any one of the following:

block block special device

char character special device

dir directory

fifo fifo

file regular file

link symbolic link

socket socket

uid The file owner as a numeric value.

uname The file owner as a symbolic name.

SEE ALSO

cksum(1), find(1), mtree(8)

HISTORY

The mtree utility appeared in 4.3BSD-Reno. The MD5 digest capability was added in FreeBSD 2.1, in response to the widespread use of programs which can spoof cksum(1). The SHA-1 and RIPEMD160 digests were added in

FreeBSD 4.0, as new attacks have demonstrated weaknesses in MD5. The SHA-256 digest was added in FreeBSD 6.0. Support for file flags was added in FreeBSD 4.0, and mostly comes from NetBSD. The ?full? entry format was added by NetBSD.