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Rocky Enterprise Linux 9.2 Manual Pages on command 'mkfs.ntfs.8'

\$ man mkfs.ntfs.8

MKNTFS(8) System Manager's Manual MKNTFS(8)

NAME

mkntfs - create an NTFS file system

SYNOPSIS

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mkntfs [options] device [number-of-sectors]

mkntfs [ -C ] [ -c cluster-size ] [ -F ] [ -f ] [ -H heads ] [ -h ] [ -l ] [ -L volume-label ]
[ -l ] [ -n ] [ -p part-start-sect ] [ -Q ] [ -q ] [ -S sectors-per-track ] [ -s
sector-size ] [ -T ] [ -U ] [ -V ] [ -v ] [ -z mft-zone-multiplier ] [ --debug ] device [
number-of-sectors ]
```

DESCRIPTION

mkntfs is used to create an NTFS file system on a device (usually a disk partition) or file. device is the special file corresponding to the device (e.g /dev/hdXX). number-of-sectors is the number of sectors on the device. If omitted, mkntfs automatically figures the file system size.

OPTIONS

Below is a summary of all the options that mkntfs accepts. Nearly all options have two equivalent names. The short name is preceded by - and the long name is preceded by --. Any single letter options, that don't take an argument, can be combined into a single command, e.g. -fv is equivalent to -f -v. Long named options can be abbreviated to any unique prefix of their name.

Basic options

-f, --fast, -Q, --quick

Perform quick (fast) format. This will skip both zeroing of the volume and bad sector

tor checking.

-L, --label STRING

Set the volume label for the filesystem.

-C, --enable-compression

Enable compression on the volume.

-n, --no-action

Causes mkntfs to not actually create a filesystem, but display what it would do if it were to create a filesystem. All steps of the format are carried out except the actual writing to the device.

Advanced options

-c, --cluster-size BYTES

Specify the size of clusters in bytes. Valid cluster size values are powers of two, with at least 256, and at most 2097152 bytes (2MB) per cluster. If omitted, mkntfs uses 4096 bytes as the default cluster size.

Note that the default cluster size is set to be at least equal to the sector size as a cluster cannot be smaller than a sector. Also, note that values greater than 4096 have the side effect that compression is disabled on the volume (due to limitations in the NTFS compression algorithm currently in use by Windows).

-s, --sector-size BYTES

Specify the size of sectors in bytes. Valid sector size values are 256, 512, 1024, 2048 and 4096 bytes per sector. If omitted, mkntfs attempts to determine the sector-size automatically and if that fails a default of 512 bytes per sector is used.

-p, --partition-start SECTOR

Specify the partition start sector. The maximum is 4294967295 ($2^{32}-1$). If omitted, mkntfs attempts to determine part-start-sect automatically and if that fails or the value is oversized, a default of 0 is used. The partition is usable despite a wrong value, however note that a correct part-start-sect is required for Windows to be able to boot from the created volume.

-H, --heads NUM

Specify the number of heads. The maximum is 65535 (0xffff). If omitted, mkntfs attempts to determine the number of heads automatically and if that fails a default of 0 is used. Note that heads is required for Windows to be able to boot from the created volume.

-S, --sectors-per-track NUM

Specify the number of sectors per track. The maximum is 65535 (0xffff). If omitted, mkntfs attempts to determine the number of sectors-per-track automatically and if that fails a default of 0 is used. Note that sectors-per-track is required for Windows to be able to boot from the created volume.

-z, --mft-zone-multiplier NUM

Set the MFT zone multiplier, which determines the size of the MFT zone to use on the volume. The MFT zone is the area at the beginning of the volume reserved for the master file table (MFT), which stores the on disk inodes (MFT records). It is noteworthy that small files are stored entirely within the inode; thus, if you expect to use the volume for storing large numbers of very small files, it is useful to set the zone multiplier to a higher value. Note, that the MFT zone is resized on the fly as required during operation of the NTFS driver but choosing a good value will reduce fragmentation. Valid values are 1, 2, 3 and 4. The values have the following meaning:

????????????????????????????????

?MFT zone MFT zone size ?

?multiplier (% of volume size) ?

? 1 12.5% (default) ?

? 2 25.0% ?

? 3 37.5% ?

? 4 50.0% ?

????????????????????????????????

-T, --zero-time

Fake the time to be 00:00:00 UTC, Jan 1, 1970 instead of the current system time.

This is only really useful for debugging purposes.

-U, --with-uuid

Generate a random volume UUID.

-I, --no-indexing

Disable content indexing on the volume. (This is only meaningful on Windows 2000 and later. Windows NT 4.0 and earlier ignore this as they do not implement content indexing at all.)

-F, --force

Force mkntfs to run, even if the specified device is not a block special device, or appears to be mounted.

Output options

-q, --quiet

Quiet execution; only errors are written to stderr, no output to stdout occurs at all. Useful if mkntfs is run in a script.

-v, --verbose

Verbose execution.

--debug

Really verbose execution; includes the verbose output from the -v option as well as additional output useful for debugging mkntfs.

Help options

-V, --version

Print the version number of mkntfs and exit.

-l, --license

Print the licensing information of mkntfs and exit.

-h, --help

Show a list of options with a brief description of each one.

KNOWN ISSUES

When applying chkdsk to a file system, it sometimes throws a warning "Correcting errors in the uppercase file." The uppercase file is created while formatting and it defines the mapping of lower case characters to upper case ones, as needed to sort file names in directories. The warning means that the uppercase file defined on the file system is not the same as the one used by the Windows OS on which chkdsk is running, and this may happen because newer versions of Windows take into account new characters defined by the Unicode consortium.

Currently, mkntfs creates the uppercase table so that no warning is thrown by Windows Vista, Windows 7 or Windows 8. A warning may be thrown by other Windows versions, or if chkdsk is applied in succession on different Windows versions.

BUGS

If you find a bug please send an email describing the problem to the development team:

ntfs-3g-devel@lists.sf.net

AUTHORS

mkntfs was written by Anton Altaparmakov, Richard Russon, Erik Sornes and Szabolcs Szakacsics. It was ported to ntfs-3g by Erik Larsson and Jean-Pierre Andre.

AVAILABILITY

mkntfs is part of the ntfs-3g package and is available from:

<https://github.com/tuxera/ntfs-3g/wiki/>

SEE ALSO

badblocks(8), ntfsprogs(8)

ntfs-3g 2021.8.22

January 2006

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