

**NAME**

mkfs.exfat – create an exFAT filesystem

**SYNOPSIS**

**mkfs.exfat** [ **-b** *boundary\_alignment* ] [ **-c** *cluster\_size* ] [ **-f** ] [ **-h** ] [ **-L** *volume\_label* ] [ **--pack-bitmap** ] [ **-v** ] *device*  
**mkfs.exfat** **-V**

**DESCRIPTION**

**mkfs.exfat** creates an exFAT filesystem by writing on a special file using the values found in the arguments of the command line. It is invoked automatically by **mkfs(8)** when it is given the **-t exfat** option.

As an example, to make a filesystem on the first partition on the first SCSI disk, use:

**mkfs.exfat /dev/sda1**

**OPTIONS**

**-b, --boundary-align=alignment**

Specifies the alignment for the FAT and the start of the cluster heap. The *alignment* argument is specified in bytes or may be specified with **m/M** suffix for mebibytes or **k/K** suffix for kibibytes and should be a power of two. Some media like SD cards need this for optimal performance and endurance, in which case *alignment* should be set to half of the card's native boundary unit size. If the card's native boundary unit size is not known, refer to the following table of boundary unit sizes recommended by the SD Card Association.

Card Capacity Range		Cluster Size	Boundary Unit
	≤8 MiB	8 KiB	8 KiB
>8 MiB	≤64 MiB	16 KiB	16 KiB
>64 MiB	≤256 MiB	16 KiB	32 KiB
>256 MiB	≤1 GiB	16 KiB	64 KiB
>1 GiB	≤2 GiB	32 KiB	64 KiB
>2 GiB	≤32 GiB	32 KiB	4 MiB
>32 GiB	≤128 GiB	128 KiB	16 MiB
>128 GiB	≤512 GiB	256 KiB	32 MiB
>512 GiB	≤2 TiB	512 KiB	64 MiB

**-c, --cluster-size=size**

Specifies the cluster size of the exFAT file system. The *size* argument is specified in bytes or may be specified with **m/M** suffix for mebibytes or **k/K** suffix for kibibytes and must be a power of two.

**-f, --full-format**

Performs a full format. This zeros the entire disk device while creating the exFAT filesystem.

**-h, --help**

Prints the help and exit.

**-L, --volume-label=label**

Specifies the volume label to be associated with the exFAT filesystem.

**--pack-bitmap**

Attempts to relocate the exFAT allocation bitmap so that it ends at the alignment boundary immediately following the FAT rather than beginning at that boundary. This strictly violates the SD card specification but may improve performance and endurance on SD cards and other flash media not designed for use with exFAT by allowing file-system metadata updates to touch fewer flash allocation units. Furthermore, many SD cards and other flash devices specially optimize the allocation unit where the FAT resides so as to support tiny writes with reduced write amplification but expect only larger writes in subsequent allocation units — where the exFAT bitmap would be placed by default. Specifying **--pack-bitmap** attempts to avoid the potential problems associated with issuing many small writes to the bitmap by making it share an allocation unit with the FAT. If there is insufficient space for the bitmap there, then this option will have no effect, and the

bitmap will be aligned at the boundary as by default.

**-v, --verbose**

Prints verbose debugging information while creating the exFAT filesystem.

**-V, --version**

Prints the version number and exits.

**SEE ALSO**

**mkfs(8), mount(8),**