

FAT and NTFS Features Comparison

- FAT - File Allocation Table
- NTFS - New Technology File System

Features	FAT32	NTFS
Introduced	Windows 95 - 1996	Windows NT 3.1 – 1993 Earliest Implementation Version
Max File Size	4 GB	8 PB + With latest Windows 10 Version
Max Partition Size	8 TB	8 PB + With latest Windows 10 Version
Per File/Folder Encryption	No	Yes Using Access-control lists (ACL)
Fault Tolerance	No	Yes
Security	Network Only	Local and Network
Compatibility	Works with all versions of Windows 95 +, Mac, Linux, game consoles, anything with a USB port.	Windows NT 3.1 + Mac OS X 10.3 + (read-only) Linux kernel version 2.6 +

- **NTFS**

Starting with Windows NT 3.1, NTFS is the default file system of Windows NT. NTFS has several technical improvements over older file systems such as an improved security system based on Access Control Lists (ACLs).

- **MFT - Master File Table**

In NTFS, all files, directories and metafile data (file name, creation date, access permissions using access control lists and size) are stored in the Master File Table. This enables fast searches of files and folders included within the MFT, without requiring any other index. Two copies of the MFT are stored in case of corruption. Locations for both files are stored in the boot sector.

- **FAT32 Support**

The FAT32 file system's big advantage is because it's so old, it's become a widely supported standard. Flash drives will often be formatted with FAT32 for maximum compatibility across computers. However, Individual files on a FAT32 formatted drive can't be over 4 GB in size. It also lacks permissions and other security features found in NTFS. Modern versions of Windows must be installed to drives formatted with NTFS.