

What is NTFS? What is FAT32? Compare NTFS and FAT32

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Concept of FAT and NTFS

FAT16 is a FAT file system (FAT16 - to distinguish it from FAT32) published in 1981 offering a new way of organizing and managing files on hard disks, floppy disks, and used on MS-DOS. However, when hard disk capacity is increasing rapidly, FAT16 has revealed many limitations. With 16-bit address space, FAT16 only supports up to 65,536 links (clusters) on a partition, causing significant waste of capacity (up to 50% of capacity for hard drives over 2 GB).

FAT32 is the file system introduced in Windows 95 Service Pack 2 (OSR 2), which is considered an extended version of FAT16. Since 32-bit address space is used, FAT32 supports multiple clusters on a more partition, so more disk space is used. Also with the ability to support the size of partitions from 2GB to 2TB and the maximum length of file names extended to 255 characters made FAT16 quickly forgotten. However, the disadvantage of FAT32 is its high security and fault tolerance (Fault Tolerance).

NTFS is New Technology File System, the file system is introduced with the first version of Windows NT (this version also supports FAT32). With 64-bit address space, the ability to change the size of a cluster independent of hard disk capacity, NTFS virtually eliminates the limitations of the number of clusters and the maximum size of files on a disk partition. hard.

NTFS uses the MFT (Master File Table) file management board in place of the familiar FAT table to increase storage capacity, file and folder security, and the ability to encrypt data to each file. In addition, NTFS has high fault tolerance, allowing users to close a not responding application without affecting other applications. However, NTFS is not suitable for low capacity drives (under 400 MB) and cannot be used on floppy disks.

Compare FAT32 and NTFS

NTFS is a much more advanced file system than FAT32. It has all the features of modern file system and FAT32 is not available. You should use NTFS to replace FAT32 for the following reasons:

FAT32 does not support security features such as management rights, encryption . like NTFS. This problem is especially effective for Windows. With NTFS, you may not need to use encryption utilities or set a hidden

password, etc., because this is an existing feature of NTFS, as long as you know how to exploit it. The use of utilities that are not available in the operating system to work directly with the disk is still less risky.

FAT32 has very poor recovery and fault tolerance compared to NTFS. There are some suggestions that NTFS is not very compatible with the disk-checking or disk-repair programs that a user has been used to for a long time, so it will be extremely inconvenient in case the disk is damaged. Rest assured because NTFS is a file system capable of recording the operations that the operating system has been manipulating on the data, it is able to immediately identify the files that are crashed without having to re-scan the entire file system, making the data recovery process more reliable and fast. This is an advantage that FAT 32 doesn't have.

When a power failure occurs suddenly, Windows 98, 2000, XP . must scan the disk again when rebooting if the disk is formatted with FAT32. While reformatting the hard disk using NTFS, there is absolutely no need to scan the disk again, because the NTFS system has information about the data integrity recorded on the disk and it takes very little time to know logically. whether or not my disk has an error and if so, the system will recover itself very simply and quickly. With FAT32, it must scan the entire file much longer. A Windows 2000, XP system will be much more stable if installed on a partition formatted with NTFS. In addition, NTFS is equipped with Microsoft's very good disk checking and repair tool.

NTFS has the ability to access and process delicious compressed files just like accessing uncompressed files, which not only saves the hard disk but also increases the life of the hard disk.

Many people complained that it was impossible to access hard disks formatted with NTFS while on DOS, Windows 98 or WinME . Actually, DOS, Windows 98 and Windows ME were too old and their software was useful. No more.

NTFS places the user quota on the device, which is extremely handy for corporate systems. Especially handy when 'silently' prohibits children from copying malicious movies into their 'secret' folders in the hard disk. In addition, NTFS has many other advanced advanced utilities for other advanced users such as ' mount partition ', create hard links' to a file, support RAID, etc.

If you have actually decided to choose NTFS as a 'spouse charm' then you can quit FAT 32 completely from now on. There are a lot of utilities to convert from FAT 32 to NTFS depending on your choice. More convenient, using the utility kit available in Hirenboot boot CDs is very popular today.

However, FAT32 is still useful on very weak configuration computers, can only run Windows 98. FAT16 and FAT32 are still used to format memory cards, because devices accept cards Remember, like a digital camera, the music player still hasn't seen anything compatible with NTFS. FAT16 is always the first choice when you want to copy your data from a Windows-based computer to a machine running another operating system such as Mac. Most current Macs cannot identify USB memory cards formatted with FAT 32.

SWITCH

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