

Re: Fat32 vs NTFS ?

Source:

<http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.general/2005-03/0261.html>

From: DevilsPGD (*ihatespam_at_crazyhat.net*)

Date: 02/28/05

Date: Sun, 27 Feb 2005 19:45:49 -0700

In message <1124qifnpran34c@corp.supernews.com> Ad
<graphi47uk@y.a.h.o.o.co.uk> wrote:

>*DevilsPGD wrote:*

>>

>> *Sure, if it's user data located in the cluster(s) that become unreadable*

>> *you're pretty much out of luck no matter what file system you use*

>

>*Correct, so if you are using NTFS or fat32, you still lose the data.*

The difference is the amount of data lost — With NTFS there is no single cluster or even set of contiguous clusters that would result in the drive being lost.

In addition, there is no disk operation which will result in data loss if the system is powered off mid-write. Obviously if an application is writing a file to disk, any part of that file which hasn't been saved will be lost, but the file system itself will be able to rollback to the previous state.

>>>*I am not sure how to use it really, since I have never needed it.*

>>>*I can not see how any compression can be a performance boost.*

>>

>>

>> *I have some VHD files that are around 4GB in size, but compress to 25% of their original size.*

>>

>> *When I copy one of those VHD files the drive only reads 1GB and writes*

>> *1GB. If compression was disabled, the drive would have had to read 4GB,*

>> *then write 4GB.*

>>

>> *In other words, with compression enabled there is only 2GB of disk I/O,*

>> *whereas with compression disabled there would have been 8GB of disk I/O.*

>

>*But surley this would be slower, due to the compression*

NTFS compression is typically noticeably slower on a 486 or a first generation Pentium. Anything newer will handle it efficiently enough that even in a worst case scenario, the CPU usage is negligible (And the decompression happens faster than the drive can read)

>> *The other factor is that while CPU speeds have drastically increased over the past few years, hard drive speeds haven't kept pace. Even if the goal was simply to read the file (and do something with it other than just write it, which doesn't require a decompression/recompression) you can still see a performance boost in some cases.*

>
>*But not for the normal person in the street who just wants to use their computer, for writing the odd letter, surfing the net and playing a few games.*

This candidate will rarely be appending files, they will normally be creating new files — This is what NTFS is optimized for (With regards to avoiding fragmentation)

>> *My laptop's drive spins at 4200rpm, which results in a read speed of approximately 25MB/s. However, since it has a 3.0GHz CPU which is largely idle most of the time. It only takes a few percentage of CPU to decompress a NTFS compressed file which is being read at 25MB/s, so the resulting read speed for a file which is compressed 50% is roughly 50MB/s.*

>
>*That is a slow hard drive? most of them are around 7200 now, or are laptop hard drives slower?*

Laptop drives are slower. My desktop's primary drives run at 10,000rpm, but it's still noticeably faster to read compressed data than non compressed data if the compression ratio is 2:1 or higher.

>> *Imagine this taken to an extreme — An external USB drive connected to a PC with only USB 1.1 ports. You'd do a lot better with better compression than NTFS offers (NTFS compression is optimized for low CPU use rather than the best possible compression)*

>>
>
>*But how many people would really need to use it and to be honest, how many people would know how to use it?*

It's one checkbox when the drive is formatted, after that every file created on the drive will be compressed automatically.

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Peter: I read a book about this sort of thing once.

Brian: Are you sure it was a book? Are you sure it wasn't nothing?

Peter: Oh yeah