

Re: AW: what's the story with the FAT32, 32GB limit ?

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- *From:* "Ken Blake, MVP" <kblake@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Thu, 16 Aug 2007 13:20:56 -0700
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On Thu, 16 Aug 2007 21:58:24 +0200, "247SPY" <nospam@invalid> wrote:

My explanation of yo questions:

1. FAT

Yes, it's true that

FAT32 (FAT is the FileAllocationTable, something like pointers, showing to the real physical location 'files' are located (as you know, there are just 0s and 1s – binary data) was originally limited to 32GB (FAT16 to 16GB), and it has got something to do with the physical design of elder HDDs and the ability to handle the addresses, sectors, clusters etc.). Later there were 'tricks' used to ship around those limitations (as everybody knows, FAT was developed by MicroShit (also NTFS) and as everybody knows, they don't know much about their own techniques (and therefore don't give rich infos about their products ;-).

2. DOS

Bill once said (in DOS days), that noone will ever need a bigger RAM than a few kBytes, which has been the reason for some smart programmers to 'imitate' a bigger one (EMM386) for DOS, to have the possibility using larger Programs under DOS.

3. NTFS

And the same for NTFS:

invented by M\$, designed for NT (counter player to UNIX), not readable (except with tricky little programs) by FAT OSes like Win98, Win95, Win 1 to 3..... Because of the new technique of hiding files, crypting files, setting access permissions of files, HDDs etc. Integrated in NTFS

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there is the ACL (Access Control List), where all the permissions etc. are written down (something like a map for your NTFS formatted HD). File-/HD-size limits are given by the (imperfect) design and only thinking as far as they can see (even if there's misty weather ;-)) or simply not being able to create a bigger one (because of development of technology).

So if you can read a NTFS partition on a non-NTFS OS, you need to install (perhaps by M\$update) a program, that can decrypt the file-system on a local computer.

And when you download a file from a NTFS server to a FAT partition? Well, quite easy to explain: In the Network you don't have direct access to the partition, only to the File list of the server (as I said, all data is binary), and the server decrypts the file on his side, then sends it to your Network Card (by IP and MAC) and your PC stores it in the right format (because the File-System has got nothing to do with the file itself, it only says, how and where the data is saved on disk)

As you can see, you need a bit of technical knowledge and 'history' of Computers, to understand, what noone can understand at first sight. As you can see: The one and only reason is a mix of development in key technologies (e.g. older parts for older HDs would have been too big, to integrate them in a 5,25" shelter).

Hope, this helped you a little, to understand, why silly things happen in Computer industry (but also in other industries, like car. Why don't they build economical cars? Answer:

1. They first have to sell the bad versions, to manipulate the customers for wanting a better product, and therefore buy something new.
2. The Oil-industry wants to sell more, not less oil in a year

But don't think about that, consume!

4. Partition Magic: As you can read above, there are software tricks used, if the hardware is limited.

Why do you think M\$ bought SysInternals???? Because they knew more about Windows than M\$ itself, and therefore wrote better programs than M\$ would ever release.....

Sorry, if you can't cope with my english, but I'm german – and no, I don't have problems to understand, what you are talking about ;-))))))

But that's really enough for now, cheers

jameshanley39@xxxxxxxxxxxx:

On Aug 14, 11:49 pm, "Paul Randall" <paulr...@xxxxxxxxxxxx> wrote:

<jameshanle...@xxxxxxxxxxxx> wrote in message

Re: AW: what's the story with the FAT32, 32GB limit ?

(next, the 137gb limit ;-) !)

Up until I started using Vista, I have avoided NTFS. My 300 GB

drives work

just fine formatted FAT32. I partition/format with GDisk.exe, a DOS

program

provided with Norton Ghost. W98 DOS accesses these files just fine. Norton's DOS Disk Edit can play with the contents (master boot

record,

partition table, directory, individual file contents, or any sector

of my

choice) just the way I want it to. The applications that I use that

handle

large files automatically split files so that none has to exceed 2GB.

NTFS

is a black box which I know I will have to learn to trust. I'm not

quite

there yet.

You can access NTFS from DOS too, there are programs like NTFS Pro. It's not a GUI shell. It's more like a TSR program, and you wouldn't know it's there, and you can access all your drives. It does the job properly.

I recall that it didn't let me do a virus check on an NTFS drive from DOS though! maybe that used too much RAM or more memory than NTFS

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Pro
was banking on! But it's very good. There may be other free ones

(that

can read and write).

Another great alternative, and why many people don't even use that program anymore. Is Win XP PE. booting a rubbishy version of win xp off a CD. (win xp has no prob reading NTFS).

Maybe a linux boot disk can do it too.

All these options are easier than putting the drive in another
machine

that runs win xp or an OS that sees NTFS.

Regarding Norton DOS Disk edit. I kow I guess it lets you read/write at the byte level, and sounds very cool. But what have/can you use it for ?

e.g. what have you done playing with partitions ? the boot record ? files ? at that level..

What 137 GB limit?

Win xp pre sp1 didn't let you create a partition or format, to more than 137GB. So you had to resize it with a prog like partition magic.

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Ken Blake, Microsoft MVP Windows – Shell/User
Please Reply to the Newsgroup

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