

# Re: How to align the hard disk

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*Source:*

<http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.hardware/2007-10/msg00412.html>

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- *From:* Paul <nospam@xxxxxxxxxxx>
  - *Date:* Wed, 17 Oct 2007 11:36:30 -0400
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Rayees wrote:

Hi

I have a IO performance problem while I'm using SAP frontend at my Windows XP PC.

While contacting SAP, they said that this was due to misaligned disk.

They said. Go to "Windows System Information" (command line: winmsd). Open "Components" / "Storage" / "Disks". You will find a "Partition starting offset" or "Starting offset" in the list. The value has to be 64 \* 512 (32,768), the default is unfortunately 63 \* 512 (32,256)."

My question is how to change Partition starting offset value to 32768 instead of 32256.

Regards

Rayees

This is the manual, for a tool previously known as PowerQuest PartitionMagic. Symantec now owns it.

[ftp://ftp.symantec.com/public/english\\_us\\_canada/products/norton\\_partitionmagic/npmagic\\_8/manuals/norton\\_partitionmagic\\_8\\_manuals.htm](ftp://ftp.symantec.com/public/english_us_canada/products/norton_partitionmagic/npmagic_8/manuals/norton_partitionmagic_8_manuals.htm)

Note some of the comments here:

<http://en.wikipedia.org/wiki/Talk:Cylinder-head-sector>

"The History section here is obviously a bit out of date, since CHS tuples haven't actually corresponded to disk hardware in a very long time!"

I doubt very much, that you can establish a relationship between physical cylinders on a disk, and the logical addressing used to access them.

From this page, you can download PartInNT.zip . That program displays disk geometry. The "NT" version would be good for WinXP/Win2K.

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<http://service1.symantec.com/Support/powerquest.nsf/pfdocs/2004073190203662>  
( [ftp://ftp.symantec.com/public/english\\_us\\_canada/tools/pq/utilities/PartInNT.zip](ftp://ftp.symantec.com/public/english_us_canada/tools/pq/utilities/PartInNT.zip) )

If you unzip the file, and execute the program, it will display the partitioning info for the disk. The "sectors per track" is defined as 63 (as part of being a "large drive placeholder" for escaping the arithmetic bounds of CHS geometry). If the declaration is 63 sectors per track, then the first track contains sectors 0 through 62, and the next cylinder will begin at 63. It is possible, even when using PartitionMagic, that it will not allow you to start the partition offset from the cylinder boundary. So, I guess my issue with the information you've been given is "64 \* 512" is actually "63 \* 512" as far as the large drive placeholder values of geometry are concerned. The physical disk does not have 63 actual sectors per track, but some other value. And that value, may not even be stated in the available information for the hard drive.

To prove the point, if I use PartInNT to look at the "total sectors" in my C: partition on my 80GB drive, the sector count is 156280257. That number is evenly divisible by 63, not 64.  $63 * 2480639 = 156280257$ , so there are 2480639 tracks in my C partition, exactly. Thus the starting sector number of 63, is not an error, and not something to fool with. In my opinion.

I think the information you've been given, might have been valid 20 years ago, but not now. But I'm not an expert. You should visit [comp.sys.ibm.pc.hardware.storage](http://comp.sys.ibm.pc.hardware.storage) and ask someone there to review the advice you've been given and give comments. I think SAP is putting you to a lot of trouble for nothing.

Paul

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