

Re: Boot.ini file help

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On Wed, 4 Jul 2007 07:45:12 +0100, "M.I.5¾"

chkdsk does not normally re-write the MBR. But if you try to check the Windows system drive (usually C:) or the drive that the swap file is on (if different), this cannot be done while Windows is running. Hence chkdsk writes an MBR that causes (or should cause) the machine to boot into a DOS mode; reboots the machine and runs scandisk. It then reverses the procedure once scandisk has done its stuff.

No, that's not what happens, even conceptually.

System bootup process...

PSU and motherboard electronic handshake; power on
BIOS POST, processes boot device lists
BIOS loads 1st sector from boot HD (MBR)
MBR code identifies active partition, loads 1st sector of that (PBR)

It is at this point the OS begins. Win9x boot process...

PBR loads C:\IO.SYS
C:\IO.SYS processes C:\Winboot.ini, C:\MSDOS.SYS
If Windows is to be booted, boots Windows
If DOS mode to be booted, loads Command.com and that's it

In contrast, XP's boot process...

PBR loads C:\NTLDR
C:\NTLDR processes C:\Boot.ini
If DOS or Win9x, executes C:\BootSect.dos as if it were PBR
If XP, finds and boots OS via partition syntax

Both Win9x and XP will "fix" the file system if the "dirty" flag is set, and will do this and then check the HD for surface errors if the "disk failed" flag is set, but the mechanisms differ.

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In Win95/98, DOS mode Scandisk is run during the early stages of boot, before Windows starts, so that you don't have Windows writing to the file system that you haven't "fixed" yet. The behaviour of Scandisk (in this setting) is controlled by Scandisk.ini

In WinME, the DOS mode phase of boot was welded into a solid lump, which precluded hooks to DOS mode Scandisk. So it launches Windows Scandisk, and this does get interrupted by Windows writes to disk. Scandisk.ini still exists, but is ignored; a more limited set of control can be applied through Scandisk's Advanced options.

In XP, there is no DOS mode OS present, nor is there a DOS mode phase of the boot process. Instead, AutoChk is invoked to auto-"fix" early in the GUI phase of startup, and there is no way to control the behavior of this other than to disable it completely.

Note that in NONE of the above situations does the OS write to or change MBR, which precedes the OS boot and is thus not a part of the OS for the OS to change.

"For every complex question, there's a simple answer – and it's wrong." H.L. Mencken
