

What is the Master Boot Code?

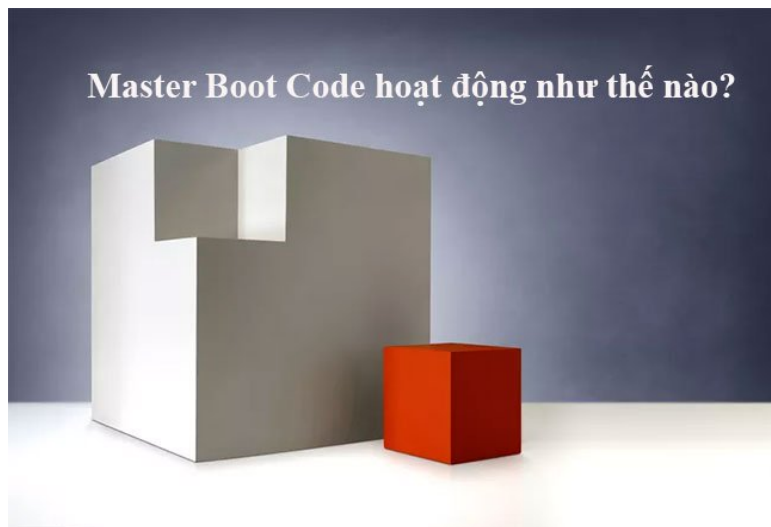
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Specifically, in a typical Master Boot Record, the Master Boot Code occupies 446 bytes of the 512 bytes of the Master Boot Record - the remaining space is used by the partition table (64 bytes) and disk signature (disk signature) 2 bytes.

How does the Master Boot Code work?

Assuming the Master Boot Code is properly executed by the BIOS, it will control the boot for the Volume Boot Code, part of the Volume Boot Sector, on the hard drive partition containing the operating system.



How does the Master Boot Code work?

Master Boot Code is only used on primary partitions. Non-active partitions, such as those on external hard drives, can store data such as file backups, for example, do not need to boot, because they do not contain the operating system and therefore there is no reason to need the Master Boot Code.

Here are the actions that Master Boot Code follows (according to Microsoft):

1. Scan the partition table for the active partition.

2. Find the starting sector of the active partition.
3. Load a copy of the boot sector from the active partition into memory.
4. Transfer control to executable code in boot sector.

The Master Boot Code uses the CHS fields from the partition table to determine the boot sector of the partition.

Error Master Boot Code

The files that Windows needs to boot into the operating system can sometimes be corrupted or missing.

Master Boot Code errors can occur due to anything, from a virus attack, replacing data with malicious code, to physical damage to the hard drive.

Identify error Master Boot Code

One of these errors may be displayed if the Master Boot Code cannot find the boot sector, preventing Windows from booting:

Missing operating system

Invalid partition table

Error loading operating system

MBR Error 1

MBR Error 2

One way you can fix errors in Master Boot Code is to reinstall Windows. Although this may be the first thing you think about, if you don't want to go through the process of fixing errors, this is a fairly drastic solution.

Consider a few other simpler, more capable ways to fix these issues.

How to fix the Master Boot Code error

You can usually open the Command Prompt to run commands in Windows, but problems with the Master Boot Code mean that Windows won't start. In these cases, you will need to access the Command Prompt from outside Windows.

In Windows 10, Windows 8, Windows 7 and Windows Vista, you can try to fix the Master Boot Code error by rebuilding the Boot Configuration Data (BCD) with the **bootrec** command .

The **bootrec** command can be run in Windows 10 and Windows 8 through **Advanced Startup Options** . In Windows 7 and Windows Vista, you can run the same command, but it is done through **System Recovery Options** .

In Windows XP and Windows 2000, the **fixmbr** command is used to build a new Master Boot Record by rewriting the Master Boot Code. This command is available in Recovery Console.

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