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Using the information given in this article you will be able to:

- Repair the Windows 8/7/Vista boot menu
- Edit, delete or add entries to the boot menu
- Restore a seemingly lost operating system

Windows 8/7/Vista: Solve All Kinds of Boot Problems with the Boot Configuration Data Editor

Apart from the default operating system, many users install a second version of Windows on their hard drive, for example, to test out Windows 8 but still retain Windows 7 as the main operating system for day-to-day use. If you remove one of the operating systems, or install an older Windows version alongside a newer one, you may well encounter problems. You might not be able to boot your PC because the Boot Configuration Data has been altered, or maybe options are missing from your boot menu. You can use BcdEdit, the Boot Configuration Data Editor, to solve these problems when booting multiple Windows versions. Read now how to edit and repair the Windows Boot Menu using BcdEdit in this article.

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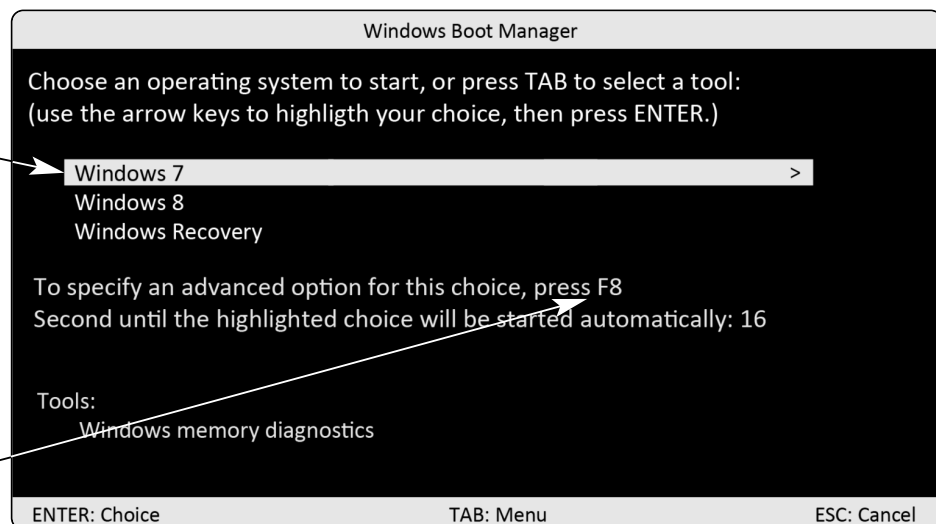
Choose Between Multiple Operating Systems with the Windows Boot Manager

Boot menu selection

If you have multiple versions of Windows installed on your PC, the Windows Boot Manager gives you a way to choose which operating system to load. The menu will be automatically displayed if more than one version of Windows is installed on your system. Use the arrow keys to select the Windows version you want to start, then press **Enter**.

The chosen operating system is shown with a grey highlight

Use **F8** to get to the Advanced Options menu



In the example above, you can choose between three operating systems in the Windows Boot Manager

No problems in normal operation

The Windows Boot Manager will work without any problems as long as you don't change the configuration. When you do, it can become problematic when you try to install a new additional operating system or remove one that is not needed. Doing so may accidentally change the boot configuration in such a way that some or all of your existing operating systems are no longer shown in the boot menu, making it impossible to load them.

This happened to one of our readers who had Windows 8 on his system but decided to install Windows XP alongside it on an empty partition, in order to use older programs. It

came as a great shock to him to see only Windows XP in the Windows Boot Manager menu, with Windows 8 missing completely.

When you install multiple different versions of Windows, the golden rule is to install the oldest version first, and then work through the installations in the order that they were released by Microsoft. So, for example, you'd install Windows XP, Windows Vista then Windows 7. The installation routines of newer Windows versions are able to detect installations of older versions and set up the boot menu accordingly, but this doesn't work the other way around.

If operating systems are missing from the Windows Boot Manager menu, or cannot be launched, you can use the boot configuration tool BcdEdit to repair the problem.




The golden rule: install Windows versions in order of age

BcdEdit repairs almost any boot problem

Use BcdEdit to Edit Your Boot Configuration Data

BcdEdit comes as standard on Windows 8, Windows 7 and Vista. It is a command line program that you run using the Command Prompt.

Using the BcdEdit tool, you can configure and change the boot configuration data. All of the parameters necessary to start any version of Windows installed on your system are accessible with this tool. Using BcdEdit you can therefore add, remove or modify entries in the boot configuration menu.

To launch BcdEdit, press  +  to open the Run dialogue, then type CMD and click OK. At the Command Prompt, then type bcdedit followed by  to launch the tool.

You may see the following error message:

The boot configuration data store could not be opened. Access is denied






Configure the Boot Configuration Data

Launch BcdEdit



Run with
Administrator
privileges

If this happens, you need to run the command prompt with Administrator rights. On Windows 8, press  +  and click on **Command Prompt (Admin)**. In Windows 7/Vista, click  > **All Programs** > **Accessories**, right-click on **Command Prompt** and choose **Run as administrator**.



Start multiple
systems from
one menu

Manage Multi-boot Systems with BcdEdit

Windows XP and older Windows versions use a different boot system to Windows 8/7/Vista but, fortunately, the BcdEdit tool is able to cope with older Windows versions too, meaning that you can use it to apply changes to entries for Windows XP and older in your boot menu.

The boot procedure
in detail

When you launch Windows 8, Windows 7 or Vista, the BIOS loads the Master Boot Record (MBR) and then the boot sector of the hard drive. The boot code loads the new Windows Startup Manager program Windows Boot Manager or (Bootmgr) or Windows Boot Manager. The Bootmgr program analyses the binary coded file DEFAULT.BCD or a corresponding Boot Configuration Data (BCD) storage file to find the list of installed operating systems, then uses this information to display the boot menu.

If you have an older version of Windows installed alongside Windows 7 in a dual boot configuration, the Windows Startup Manager program passes control over to the Ntldr program from the older Windows version (such as Windows XP).

```

Administrator: Command Prompt
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.
C:\Windows\system32>bcdedit

Windows Boot Manager
-----
identifier                (bootmgr)
device                    partition-F:
description                Windows Boot Manager
locale                    en-GB
inherit                    <globalsettings>
integrityservices         Enable
default                    <current>
resumeobject              <865e5376-d7c4-11e1-8c91-806e6f6e6963>
displayorder              <cb56c236-29cd-11e2-b634-d46a54009da3>
                           <0425a9a7-4e98-11e1-ad3a-a3c7af436e94>
                           <current>
toolsdisplayorder        <current>
timeout                   30

Windows Boot Loader
-----
identifier                <cb56c236-29cd-11e2-b634-d46a54009da3>
device                    partition-N:
path                      \WINDOWS\system32\winload.exe
description                Windows 8
locale                    en-GB
inherit                    <bootloadersettings>
recoverysequence         <cb56c237-29cd-11e2-b634-d46a54009da3>
integrityservices         Enable
recoveryenabled           Yes
custom:17000077          352321653
osdevice                  partition-N:
systemroot                \WINDOWS
resumeobject              <cb56c235-29cd-11e2-b634-d46a54009da3>
nx                        OptIn
custom:250000c2          1

Windows Boot Loader
-----
identifier                <0425a9a7-4e98-11e1-ad3a-a3c7af436e94>
device                    partition-F:
path                      \Windows\system32\winload.exe
description                Windows Vista (TM) Home Premium (recovered)
osdevice                  partition-F:
systemroot                \Windows
resumeobject              <69aee700-297e-11e2-94ba-806e6f6e6963>

Windows Boot Loader
-----
identifier                <current>
device                    partition-C:
path                      \Windows\system32\winload.exe
description                Windows 7
locale                    \en-US
osdevice                  partition-C:
systemroot                \Windows
resumeobject              <865e5376-d7c4-11e1-8c91-806e6f6e6963>

C:\Windows\system32>
    
```

Partition N:
contains
Windows 8

Partition F:
contains
Windows Vista

Partition C:
contains
Windows 7

With BcdEdit you get a summary of all the installed operating systems

If you install an older Windows version on to your computer when, for example, Windows 7 is already installed, the installation routine will overwrite the whole MBR, the boot sector and the startup files. As a result you will no longer be able to launch Windows 7.





What to do after installing XP after Windows 7


Rescue a Windows 8/7/Vista Entry Missing from Your Boot Menu

If you have an existing installation of Windows 8/7/Vista on your PC and then install an older Windows version on to your PC such as Windows XP, you will find that you no longer have an option to boot Windows 8/7/Vista. Fortunately, the operating system is still installed on your system. You just need to reactivate it.

To do so, proceed as follows:



Navigate to the Windows folder

1. Launch the older Windows version and insert your Windows 8/7/Vista installation disk into the DVD drive on your computer.
2. Click on  > All Programs > Accessories > Command Prompt.
3. At the Command Prompt, navigate to the partition that contains your newer Windows operating system (e.g. Windows 7). If, for example, you have it on the C drive, type in the following command: `cd C:\Window1` then press **Enter**.
4. Now type in the following command: `D:\boot\Bootsect.exe -NT60 All` and press **Enter**. Replace D with the drive letter used by the CD/DVD drive containing your Windows installation disc, if it is different.
5. The next command to type is: `C:\Windows\system32\Bcdedit -create {ntldr} -d Name of Windows version` and press **Enter**. You can replace the name of the Windows version with anything you like, e.g. Windows 7.
6. Next type: `C:\Windows\system32\Bcdedit -set{ntldr} device partition=x:` and press **Enter**.

Restore the Boot Manager

Replace x with the drive letter of the hard drive partition containing the original operating system (e.g. Windows 7).

7. Next you must type the following command:
`C:\Windows\system32\Bcdedit -set {ntldr} path \ntldr` and press **Enter**.
8. Finally, type in: `C:\Windows\system32\Bcdedit -displayorder {ntldr} -addlast` and press **Enter**.
9. Restart your computer. You will now see a boot menu which you can use to switch between all of the operating systems installed on your PC.

Restart the system

You can also use BcdEdit to remove entries for older Windows versions that you have removed from your hard drive. If you have Windows XP on the main partition and have installed Windows 7 on another partition, you can remove the Windows XP boot option as follows:

Remove operating system entries

Open a command prompt on the Windows 7 system and type in the following command: `Bcdedit /enum` then press **Enter**.

This command lists the GUIDs (identifiers) of the operating systems installed on your PC. Note the GUID for the Windows XP installation.

Type in the following command: `bcdedit /delete {802d5e32-0784-11da-bd33-000476eba25f}` followed by **Enter**, where the entry in the curly brackets ({}) stands for the GUID of the operating system that you wish to delete from the menu.

Warning: if you do not type in a GUID, the boot option for the current operating system will be deleted.





Change the Sequence of the Entries in the Boot Menu

/Default parameter

If you want to alter the order that operating systems are listed in the boot menu, use BcdEdit with the /Default parameter. You'll also need to find the GUID identifiers for the operating systems installed on your PC, since the GUID specifically identifies each operating system installation.

Type in the following command to set the default operating system that your PC will boot if you do not select a different menu option. This operating system will be selected by default on the menu:

Set the default selection

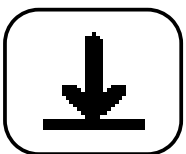
```
bcdedit /default {GUID}
```

Example: `bcdedit /default {466f5a88-0af2-4f76-9038-095b170dc21c}`

To change the ordering of the boot sequence in the menu, type in the GUIDs in the desired order:

Customise the boot sequence

```
bcdedit /bootsequence {GUID} {GUID} {GUID} ...
```



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