

*Knowledge Base***HOW TO: Use Ntdebug.chk to Identify Hardware Problems in Windows 2000**

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The information in this article applies to:

- Microsoft Windows 2000 Server
 - Microsoft Windows 2000 Advanced Server
 - Microsoft Windows 2000 Professional
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SUMMARY

This step-by-step article describes how to use the debug version of Ntdebug.com (Ntdebug.chk) to help you to identify hardware problems that may prevent your computer from starting.

If you are experiencing problems starting your computer because of a hardware problem, you can use Ntdebug.chk to determine the hardware component that may be causing the problem. Ntdebug.chk is located in the Debug.cab file from the Windows 2000 Resource Kit companion compact disc (CD). Open the Debug.cab file, and then extract the Ntdebug.chk file.

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This section describes two methods that you can use to identify hardware problems.

Method 1: Use Ntdebug.chk to Start the Computer from the Windows 2000 Setup Boot Disks

1. Create a duplicate copy of Setup disk 1 from the Windows 2000 Setup boot disks. For additional information about how to create startup disks for Windows 2000, click the article number below to view the article in the Microsoft Knowledge Base:
 - [197063](#) How to Create Setup Boot Disks for Windows 2000
2. Rename the Ntdebug.com file on the copy of the Windows 2000 Setup boot disk that you created in step 1 to "Ntdebug.bak."
3. Extract the Ntdebug.chk file from the Debug.cab file on the Windows 2000 Resource Kit CD to the Windows 2000 Setup boot disk.
4. Rename the Ntdebug.chk file on the copy of the Windows 2000 Setup boot disk to "Ntdebug.com."
5. Insert the copy of the Windows 2000 Setup disk that you created in step 1 in drive A, and then restart the computer.

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Method 2: Use Ntddetect.chk to Start the Computer from the Hard Disk

If you do not want to use the Windows 2000 Setup boot disk, use the following procedure to replace the Ntddetect.com in the root folder of your system partition.

NOTE: Depending on the current state of your computer, you may have to start the computer in safe mode or use the Windows Recovery Console to perform the procedure that is described in this section.

You can use the Recovery Console to help recover a Windows-based computer that either does not start properly or does not start at all. If safe mode and other startup procedures do not work, you may want to use the Recovery Console. Microsoft recommends this method only if you are an advanced user who can use basic commands to identify and locate problem drivers and files. Additionally, you must be an administrator to use the Recovery Console. For additional information about how to use the Recovery Console, click the article number below to view the article in the Microsoft Knowledge Base:

[318752](#) HOW TO: Install and Use the Recovery Console in Windows 2000

For additional information about how to start Windows in safe mode, click the article number below to view the article in the Microsoft Knowledge Base:

[281770](#) How to Perform Clean-Boot Troubleshooting for Windows 2000

To use Ntddetect.chk to start the computer from the hard disk:

1. Rename Ntddetect.com to "Ntddetect.bak" in the root folder of your system partition.
2. Extract the Ntddetect.chk file from Debug.cab file in the Windows 2000 Resource Kit CD-ROM to the root of your system partition.
3. Rename Ntddetect.chk to "Ntddetect.com" in the root folder of your system partition, and then restart the computer.

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How to View the Results

If you run the debug version of Ntddetect.com, hardware information is displayed when it is detected. To move to the next window, press any key. Continue until Setup stops responding (hangs). Review the contents of the window that is displayed when Setup stops responding to determine the hardware component that may be causing the problem.

The following is text is an example of the contents that may be displayed:

```
Detecting System Component . . .
Reading BIOS date . . .
Done reading BIOS date (1/20/2002)
Detecting Bus/Adapter Component . . .
Collecting Disk Geometry . . .
Detecting Keyboard Component . . .
```

After Ntddetect.com displays information about the components, press ENTER for Ntddetect.chk to continue. Ntddetect.chk displays information about the current nodes for the controllers and peripherals. You must press ENTER after you view each window.

NOTE: After you finish using Ntddetect.chk, Microsoft recommends that you rename Ntddetect.com to "Ntddetect.chk," and then rename Ntddetect.bak to "Ntddetect.com."

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Troubleshooting

The **Hidden**, **System**, and **Read Only** attributes are configured on Ntddetect.com when you install Windows 2000. You must clear these attributes to make the file visible. Use either My Computer, Microsoft Windows Explorer, or the command prompt to change these attributes.

How to Use Either My Computer or Windows Explorer to Change File Attributes

1. Open My Computer or start Windows Explorer.
2. Click **Folder Options** on the **Tools** menu.
3. Click the **View** tab, click **Show hidden files and folders** in the **Hidden files and folders** section.
4. Click to clear the **Hide protected operating system files (Recommended)** check box, click **Yes**, and then click **OK**.

5. Click the **Ntdetect.com** file that is located in the root of the C drive.
6. Click **Properties** on the **File** menu.
7. Click to clear the **Read Only** check box and the **Hidden** check box in the **Attributes** box of the **General** tab, and then click **OK**.

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How to Use Either the Command Prompt or the Recovery Console to Change File Attributes

To use either the command prompt or the Recovery Console to change the file attributes, type `attrib -s -h -r ntdetect.com`, and then press ENTER.

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