

Dell™ Systems

IDE Hard Drives — Information Update

IDE 硬盘驱动器 — 信息更新

Disques durs IDE — Mise à jour des informations

IDE-Festplatten — Aktuelle Informationen

IDE ハードディスクドライブの — アップデート情報

IDE 하드 드라이브 — 정보 업데이트

Unidades de disco duro IDE — Actualización de información



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Notes, Notices, and Cautions



NOTE: A NOTE indicates important information that helps you make better use of your computer.



NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

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This document provides the following information on using IDE hard drives in your system:

- Configuring systems running the Red Hat Linux 7.x (or later) operating system
- Removing the IDE hard-drive retention bracket
- Setting the BIOS to improve IDE hard-drive performance

Configuring Systems Running Linux 7.x or Later

To accommodate the high-density design of your system, which supports either internal SCSI hard drives or IDE hard drives, the IDE hard drives are configured as master and slave devices on the secondary IDE channel. Because Linux installation scripts typically search for IDE hard drives on the primary IDE channel, using the device driver names `/dev/hda` and `/dev/hdb`, you may encounter error messages such as the following:

```
Unable to open /dev/hda
FATAL ERROR: Cannot open disk drive
Press any key to exit cfdisk

or

/dev/hda: No such device

or

sfdisk: cannot open /dev/hda read-write
```

You can resolve any issues with the drive location by modifying the installation scripts to point to the IDE hard drives at `/dev/hdc` and `/dev/hdd` or by reinstalling the Linux operating system using the Red Hat Linux CD or the *Dell OpenManage Server Assistant* CD.

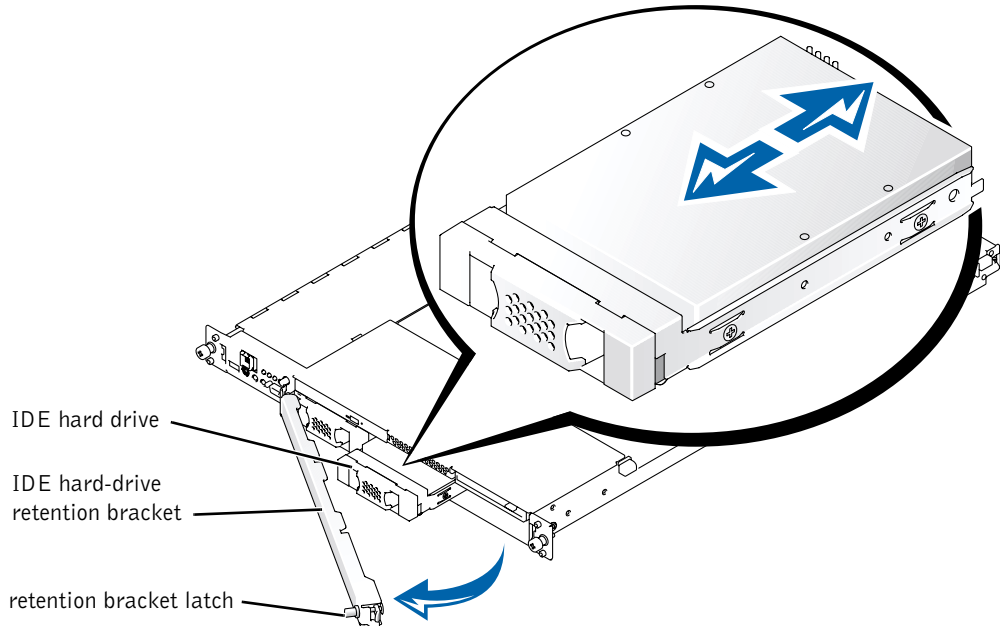
Removing the IDE Hard-Drive Retention Bracket

The IDE hard-drive retention bracket mounts on the front of the system to secure the IDE hard drive(s) in the system. Figure 1-1 shows the location of the bracket.

The left end of the retention bracket fits into the slot in the system's front panel. The right end of the bracket is secured to the system with a latch. Because the left side of the bracket is not attached to the system, use caution when removing the bracket.

CAUTION: The retention bracket and the IDE hard drives may drop out of the system and cause bodily injury if the bracket is removed incorrectly. Use caution when removing the bracket on systems installed in the top portion of a rack.

Figure 1-1. Removing the IDE Hard-Drive Retention Bracket



CAUTION: Before performing this procedure, you must turn off the system and disconnect it from its power source. Only trained service technicians are authorized to remove the system cover and access any of the components inside the system. Read and follow all safety precautions in your *System Information* document.

CAUTION: Your system may have more than one power supply cable. To reduce the risk of electrical shock, you must disconnect all power supply cables before servicing the system. For more information, see "Safety First—For You and Your Computer" in your *Installation and Troubleshooting Guide*.

To remove the drive retention bracket from the system, perform the following steps:

- 1 Grasp the left side of the bracket to hold the bracket and drives in place.
- 2 Turn the retention bracket latch counterclockwise.
- 3 While holding the left side of the bracket, slowly pull the right side of the bracket away from the system (see Figure 1-1).


- 4 Remove the left end of the bracket from the system and set the bracket aside.


See your *Installation and Troubleshooting Guide* for information on removing and installing IDE hard drives.

Setting the BIOS to Improve IDE Hard Drive Performance


Your system's IDE interface includes support for several different drive access modes, including Ultra Direct Memory Access (UDMA) modes 2 (ATA-33), 4 (ATA-66), and 5 (ATA-100). If your system is running one of the following operating systems, you can increase the performance of the system's optional IDE hard drives by setting the BIOS to support UDMA mode 5 (ATA-100):

- Microsoft® Windows® 2000 Server (SP2 or later)
- Microsoft Windows NT® 4.0 Server (SP5 or later)
- Novell® NetWare® 5.1 (SP2a or later)
- Red Hat Linux 7.1 (with either the 2.4.5-ac12 or 2.4.3-12.i686.rpm kernel or later installed)

 **NOTE:** Microsoft Windows NT 4.0 supports UDMA only after running the **dmacheck.exe** utility. This utility is located in the `\support\utils\i386` directory on the *Microsoft Windows NT 4.0 Service Pack 6a* CD.

 **NOTE:** See your operating system documentation for information about installing the required service packs, drivers, or kernels. See also any applicable "readme" files on the *Dell OpenManage Server Assistant* CD for the latest product information.

To set your system BIOS to support UDMA mode 5 (ATA-100), perform the following steps.

 **NOTE:** If your system was shipped without an operating system installed, you must install your operating system and the most recent service packs, drivers, or kernels before resetting the BIOS to support UDMA mode 5. See your operating system documentation for installation instructions.

- 1 If your system uses the Windows NT 4.0 operating system, run the **dmacheck.exe** utility and enable the UDMA mode on the secondary IDE channel only.

This utility is located in the `\support\utils\i386` directory on the *Microsoft Windows NT 4.0 Service Pack 6a* CD.

2 Enter the System Setup program:

- a** Turn on your system.

If your system is already on, shut it down, and then turn it on again.

- b** Press <F2> immediately after you see the following message:

<F2> = System Setup

If you wait too long and your operating system begins to load into memory, allow the system to complete the load operation, and then shut down the system and try again.



NOTE: To ensure an orderly system shutdown, see the documentation that accompanied your operating system.



NOTE: For help using the System Setup program, press <F1>.

3 Navigate to the **Maximum UDMA Mode** field on the main **System Setup** screen.

Use the <Shift> or <Tab> key to move to the next field and the up-arrow key to move to a previous field.

- 4** Using the left- or right-arrow key, select **ATA-100** (UDMA mode 5) as the UDMA mode for the secondary IDE channel.
- 5** Press <Esc> to exit the System Setup program and reboot the system.