

Replace a disk drive with the AIX system or logical partition powered on

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You might need to replace a Small Computer System Interface (SCSI) disk drive in a system or expansion unit while the AIX® operating system or logical partition that controls the disk drive location is powered on. Use the procedure in this section to perform this task.

Attention: The powered-on procedure is a complex set of steps that must be performed exactly to avoid potential data loss or system damage. You might also consider the powered-off procedure, which is a simpler task that involves less risk of data loss or system damage. If the system or logical partition that controls the disk drive you are replacing is at the AIX command line, you can use this powered-on procedure. If the disk drive that you are replacing is in the root volume group (rootvg) and it is not protected by either Redundant Array of Independent Disks (RAID) or mirroring, or to use the powered-off procedure, go to [Replace a disk drive with the system or logical partition powered off](#).

Note: Some of the figures in these procedures might not look exactly like the system or expansion unit that you have. However, the steps to perform the task are the same.

Parent topic:

→ [Replace a disk drive](#)

Related information

→ [General AIX diagnostic information](#)

Prepare the system

1. Perform prerequisite tasks as described in [Before you begin](#).
2. Prepare to remove the disk drive from the system or expansion unit as described in [Prepare to remove a disk drive from a system or expansion unit controlled by AIX](#).
3. Remove the system unit door, expansion unit door, or the rack door. For instructions, select the appropriate procedure from the following list:
 - [Remove the door from the model 285, 52x, 55x, or OpenPower 720](#)
 - [Expansion unit cover or door](#)
4. Remove the front cover. For instructions on removing the cover, select the appropriate procedure from the following list:
 - [Remove the front cover from the model 285, 52x, 55x, OpenPower 720, or the 0595 expansion unit](#)
 - [Remove the front cover from the model 9116-561 or 570](#)
 - [Remove the front cover from the model 51x or 710](#)
 - [Remove the front cover from the 7311-D20 expansion unit](#)
 - [Install the front cover on the 7311-D11, 5791, or 5794 expansion unit](#)
 - If you have a front cover from any other models, remove the front cover.

To replace a Just a Bunch of Disks (JBOD) disk drive attached to any SCSI or SCSI RAID adapter, see the procedure in [Replace a SCSI disk drive](#).

Remove the disk drive

1. Log in as root user or use the customer engineer (CE) login.
For information on CE Login, go to [General AIX diagnostic information](#).
 2. At the command line, type `diag` and press Enter.
 3. Press Enter to continue.
 4. On the Function Selection display, select **Task Selection**.
 5. Select **Hot Plug Task**.
 6. Select **SCSI and SCSI RAID Hot Plug Manager** or **RAID Hot Plug Devices**, depending upon the adapter that your drive is attached to.
- Tip:** One or both of these options may be available, depending upon the configuration of your system. If the drive you want to replace is not listed when you follow the steps for the SCSI and SCSI RAID Hot Plug Manager, go to the RAID Hot Plug Devices procedure.

 - If you have a RAID disk drive attached to a 2498 PCI SCSI RAID adapter, continue with step 7.
 - If you have a JBOD disk drive attached to any SCSI or SCSI RAID adapter, go to [Replace a SCSI disk drive](#).
 - If you have RAID drives attached to any other adapter, go to the *PCI-X SCSI RAID Controller Reference Guide for AIX*. This guide is available from the [SCSI PCI Adapters](#) Web page at http://publib.boulder.ibm.com/infocenter/pseries/v5r3/index.jsp?topic=/com.ibm.pseries.doc/hardware_docs/scsipciadapters.htm.
7. Select **RAID Hot Plug Devices**.
 8. On the Resource Selection List, select the adapter that is connected to the array that contains the disk drive you want to replace. Press Enter.
 9. Select **Commit**.
 10. On the Identify and Remove Resources menu, select **Remove**. Press Enter.
A list of the disk drives that you can remove is shown. If the disk drive you want to remove does not appear on the list, ask your system administrator to put the disk drive in the Failed state before continuing with this procedure. For information, see *AIX System Management Guide: Operating System and Devices*. This guide is available at the [System p® and AIX Information Center](#) (<http://publib.boulder.ibm.com/infocenter/pseries/v5r3/index.jsp>).

11. Select the drive that you want to remove and press Enter. The concurrent maintenance light for the slot will flash rapidly.

Attention: If the light does not flash rapidly, do not remove the disk drive.

To view the locations of the concurrent maintenance lights, select the appropriate model from the following list:

- [Disk-drive concurrent maintenance lights for model 505](#)
- [Disk-drive concurrent maintenance lights for models 285, 52x, 55x, and 720](#)
- [Disk-drive concurrent maintenance lights for models 51x and 710](#)
- [Disk-drive concurrent maintenance lights for models 9116-561 or 570](#)
- [Disk-drive concurrent maintenance lights for model 575](#)
- [Disk-drive concurrent maintenance lights for model 7311-D20](#)
- [Disk-drive concurrent maintenance lights for models 5786, 5787, 7031-D24 or 7031-T24 SCSI disk-drive enclosure](#)

12. Unlock the disk drive handle by squeezing it and pulling it out toward you as shown in [Figure 1](#) and [Figure 2](#).

Figure 1. Removing a disk drive from a model 51x or 710

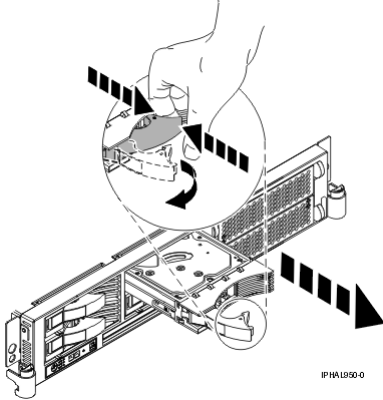
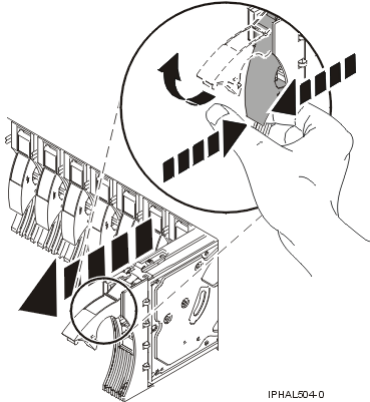


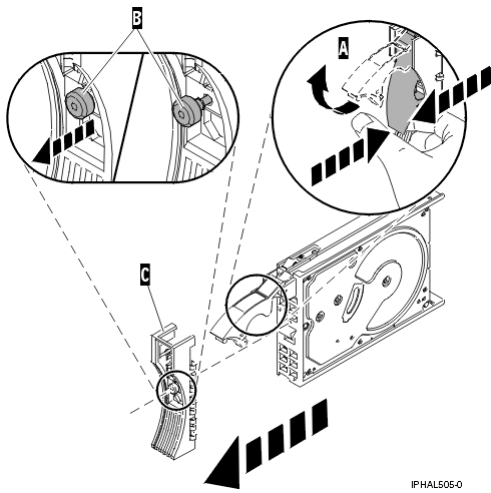
Figure 2. Removing a disk drive from a model 285, 52x, 55x, 9116-561, 570, 720, or 7311-D20



Video of removing a disk drive from a system unit.

13. Support the bottom of the disk drive as you slide it out of the system or expansion unit. Do not hold the disk drive by the handle. The concurrent maintenance light for the slot turns off when you remove the disk drive.
14. If your new disk drive does not have a bezel preinstalled, then perform the following step. Loosen and pull out on the thumbscrew **B** to release the bezel **C** from the disk drive, as shown in the following figure.

Figure 3. Removing a disk-drive bezel



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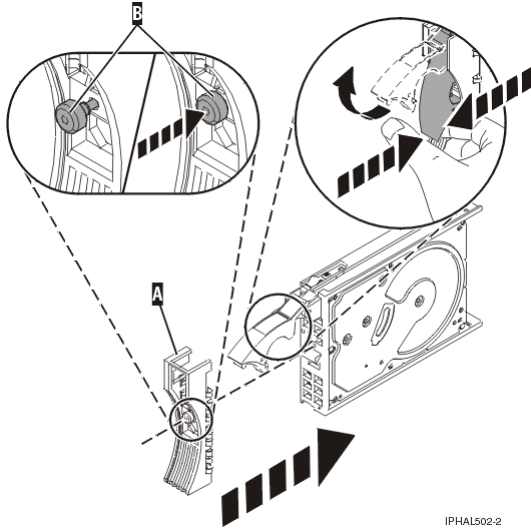
Replace the disk drive

1. Find the package that contains the new disk drive.

! Attention: Disk drives are fragile. Handle with care.

2. Remove the disk drive from its protective package.
3. Unlock the handle of the replacement disk drive by squeezing and pulling it out toward you. If the handle is not all the way out, the disk drive cannot slide into the system.
4. If your new disk drive does not have a bezel preinstalled, then perform the following step.
Attach the disk-drive bezel **A** to the replacement disk drive, as shown in the following figure.
5. If your new disk drive does not have a bezel preinstalled, then perform the following step.
Press in and then tighten the thumbscrew **B** to secure the bezel to the disk drive.

Figure 4. Installing a disk-drive bezel



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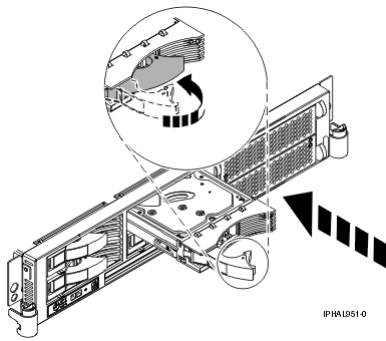
Video of installing a disk-drive bezel.

6. Install the disk drive as shown in [Figure 5](#) or [Figure 6](#).
 - a. Support the bottom of the disk drive as you align it with the guide rails in the system unit. Do not hold the disk drive by the handle.
 - b. Slide the disk drive into the system until it stops.

! Important: Ensure that when installing a disk drive, that the drive is fully seated and all the way into the system.

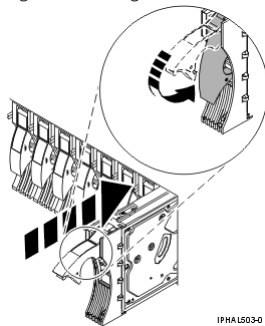
- c. Push the disk drive handle in until it locks.

Figure 5. Installing a disk drive in a model 51x or 710



Video of installing a disk drive in the system unit.

Figure 6. Installing a disk drive in a model 285, 52x, 55x, 9116-561, 570, 720, or 7311-D20



Video of installing the disk drive in the system unit.

7. Press Enter. The disk drive slot exits the Remove state and enters the Normal state.
8. Exit to the RAID Hot-Plug Devices menu. Press F3 to return.
9. Exit to the Task selection display.
10. Select **Log Repair Action**.
11. Select the disk drive that you replaced and then press Enter.
12. Select **Commit** after you have made your selection and then press Enter.
13. Exit to the command line.

Complete the procedure

1. Replace the front cover. For instructions on replacing the cover, select the appropriate procedure from the following:
 - [Install the front cover on the model 285, 52x, 55x, OpenPower 720, or the 0595 expansion unit](#)
 - [Install the front cover on the model 9116-561 or 570](#)
 - [Install the front cover on the model 51x or 710](#)
 - [Install the front cover on the 7311-D20 expansion unit](#)
 - [Install the front cover on the 7311-D11, 5791, or 5794 expansion unit](#)
 - If you have a front cover from any other models, install the front cover.
2. Install or close the front door of the system, expansion unit or rack. For instructions on installing the system unit door, see [Install or replace the door on the model 285, 52x, 55x, or OpenPower 720](#).
3. To prepare the disk drive for use, go to [Rebuild data on a replacement disk drive using AIX](#).

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