Bull D20 I/O Drawer

Installation Guide

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Installation Guide

Hardware

May 2003

Suggestions and criticisms concerning the form, content, and presentation of this book are invited. A form is provided at the end of this book for this purpose.

To order additional copies of this book or other Bull Technical Publications, you are invited to use the Ordering Form also provided at the end of this book.

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Contents

Safety Notices

A *danger* notice indicates the presence of a hazard that has the potential of causing death or serious personal injury. Danger notices appear on the following pages:

- vi
- 3
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A *caution* notice indicates the presence of a hazard that has the potential of causing moderate or minor personal injury. Caution notices appear on the following pages:

- vi
- vii
- 3
- 14
- 19
- 23

Note: For a translation of these notices, see *System Unit Safety Information*, order number SA23-2652.

Rack Safety Instructions

- Do not install this unit in a rack where the internal rack ambient temperatures will exceed 40 degrees C.
- Do not install this unit in a rack where the air flow is compromised. Any side, front or back of the unit used for air flow through the unit must not be in direct contact with the rack.
- Care should be taken to ensure that a hazardous condition is not created due to uneven mechanical loading when installing this unit in a rack. If the rack has a stabilizer it must be firmly attached before installing or removing this unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to the rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement for the supply circuit.
- An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

Electrical Safety

Observe the following safety instructions any time you are connecting or disconnecting devices attached to the workstation.

In the system you are about to setup or service:

- The ac power interface connector is considered the main power disconnect device.
- This system has redundant power supply capabilities, meaning that it has the ability to have two power supplies running simultaneously in the same system unit. When instructed to disconnect the power source, ensure that all power cables have been unplugged.

DANGER

> **An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.**
>
> **Before installing or removing signal cables, ensure that the power cables for the system unit and all attached devices are unplugged.**
>
> **When adding or removing any additional devices to or from the system, ensure that the power cables for those devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.**
>
> **Use one hand, when possible, to connect or disconnect signal cables to prevent a possible shock from touching two surfaces with different electrical potentials.**
>
> **During an electrical storm, do not connect cables for display stations, printers, telephones, or station protectors for communications lines.**
> D05

CAUTION:
This product is equipped with a three-wire power cable and plug for the user's safety. Use this power cable with a properly grounded electrical outlet to avoid electrical shock.
C01

DANGER

> **To prevent electrical shock hazard, disconnect all power cables from the electrical outlet before relocating the system.**
> D01

Laser Safety Information

CAUTION:
This product may contain a CD-ROM, DVD-ROM, or laser module on a PCI card, which are class 1 laser products.
C30

Laser Compliance

All lasers are certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for class 1 laser products. Outside the U.S., they are certified to be in compliance with the IEC 825 (first edition 1984) as a class 1 laser product. Consult the label on each part for laser certification numbers and approval information.

CAUTION:
All laser modules are designed so that there is never any human access to laser radiation above a class 1 level during normal operation, user maintenance, or prescribed service conditions. Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. Only trained service personnel should perform the inspection or repair of optical fiber cable assemblies and receptacles.
C25, C26

Data Integrity and Verification

These computer systems contain mechanisms designed to reduce the possibility of undetected data corruption or loss. This risk, however, cannot be eliminated. Users who experience unplanned outages, system failures, power fluctuations or outages, or component failures must verify the accuracy of operations performed and data saved or transmitted by the system at or near the time of the outage or failure. In addition, users must establish procedures to ensure that there is independent data verification before relying on such data in sensitive or critical operations. Users should periodically check our support websites for updated information and fixes applicable to the system and related software.

About This Book

This book provides information about the D20 I/O drawer, specifically how to set up and cable the I/O expansion drawer, install and remove options, and verify system operations.

ISO 9000

ISO 9000 registered quality systems were used in the development and manufacturing of this product.

Highlighting

The following highlighting conventions are used in this book:

Bold	Identifies commands, subroutines, keywords, files, structures, directories, and other items whose names are predefined by the system. Also identifies graphical objects such as buttons, labels, and icons that the user selects.
Italics	Identifies parameters whose actual names or values are to be supplied by the user.
`Monospace`	Identifies examples of specific data values, examples of text similar to what you might see displayed, examples of portions of program code similar to what you might write as a programmer, messages from the system, or information you should actually type.

References to AIX Operating System

Note: This document may contain references to the AIX operating system. If you are using another operating system, consult the appropriate documentation for that operating system.

This document may describe hardware features and functions. While the hardware supports them, the realization of these features and functions depends upon support from the operating system. AIX provides this support. If you are using another operating system, consult the appropriate documentation for that operating system regarding support for those features and functions.

Related Publications

The following publications provide additional information about your system:

- The *Site Preparation Guide for Rack Systsems*, order number 86 A1 30PX, contains information to help you plan your installation.
- The *System Unit Safety Information*, order number 86 X1 11WD, contains translations of safety information used throughout this book.

Chapter 1. Setting Up the D20 I/O Drawer

Note: This document may contain references to the AIX operating system. If you are using another operating system, consult the appropriate documentation for that operating system.

This document may describe hardware features and functions. While the hardware supports them, the implementation of these features and functions depends upon support from the operating system. AIX provides this support. If you are using another operating system, consult the appropriate documentation for that operating system regarding support for those features and functions.

To set up your D20 I/O drawer, follow the procedures in this chapter.

Step 1. Check Your Inventory

☐ Books, CD-ROM and Other Media

☐ ″About Your Machine″ Document

☐ Power Cables (1 standard, 2 optional)
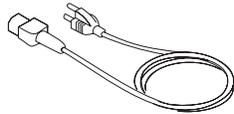
☐ D20 I/O Drawer
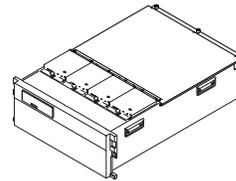
☐ RIO-G Cables (Depending on configuration, quantity 1 or 2)
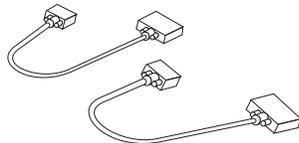
☐ System Power Control Network (SPCN) Cables (Depending on configuration, quantity 1 or 2)
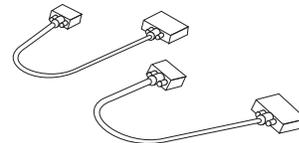
☐ Rack-Mounting Template
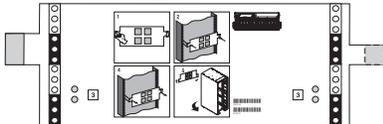
☐ 2 Rail Assemblies
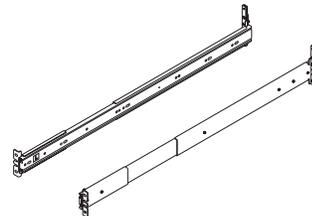
☐ Sealed plastic bag containing the Rack-Mounting Hardware Kit. The Rack-Mounting Hardware Kit contains the following hardware subkits:

Slide Mounting Kit
Latch Mounting Kit
Cable Arm Mounting Kit

☐Slide Mounting Kit Contains:
6 Rail to I/O Drawer Retaining Screws
6 Rail to Rack Retaining Screws
4 I/O Drawer Support Retaining Screws (If not preassembled)
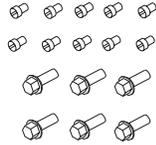
☐Latch Mounting Kit Contains:
2 Front Alignment Brackets
2 Plastic Latch Mounting Brackets
2 Thumbscrews
2 Rail to Rack Retaining Screws
1 Self-Adhesive Dot Strip
Assorted Alignment Pins
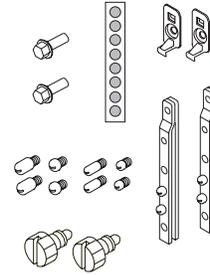
☐Cable Arm Mounting Kit Contains:
2 Thumbscrews
2 Nut Clips
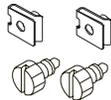
☐ Cable Management Arm
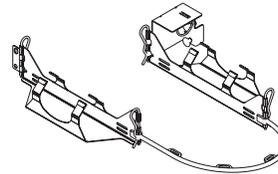
☐2 I/O Drawer Supports (These may have been preassembled at the manufacturer.)
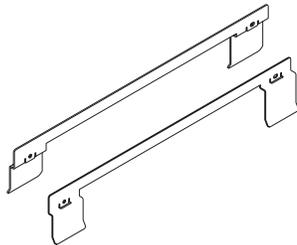
Step 2. Need Help?

If you encounter difficulties while setting up your I/O drawer unit, contact your sales representative for assistance.

Step 3. Read the Safety Notices

Before continuing, read the following safety information. Do not plug any cables into the system, adapters, or electrical outlets until you have reviewed this information. Make sure none of the power cables are connected before continuing to the next step.

In the I/O drawer you are about to set up:
- The ac power-interface connector is considered the main power disconnect device.
- This I/O drawer has redundant power supply capabilities, in that it has the ability to have two power supplies running simultaneously in the same I/O drawer. When instructed to disconnect the power source, ensure that all power cables have been unplugged.

DANGER

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

Before installing or removing signal cables, ensure that the power cables for the system unit and all attached devices are unplugged.

When adding or removing any additional devices to or from the system, ensure that the power cables for those devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.

Use one hand, when possible, to connect or disconnect signal cables to prevent a possible shock from touching two surfaces with different electrical potentials.

During an electrical storm, do not connect cables for display stations, printers, telephones, or station protectors for communications lines.
D05

CAUTION:
This product is equipped with a three-wire power cable and plug for the user's safety. Use this power cable with a properly grounded electrical outlet to avoid electrical shock.
C01

DANGER

To prevent electrical shock hazard, disconnect all power cables from the electrical outlet before relocating the system.
D01

Step 4. Read the Rack Safety Instructions

Before continuing, make sure you review the following instructions for mounting the I/O drawer into the rack. If the I/O drawer was shipped already mounted in a rack, go to Chapter 2, "Installing Options in the D20 I/O Drawer", on page 23.

Rack Safety Instructions

* Do not install this unit in a rack where the ambient temperatures will exceed 35 degrees C.
* Do not install this unit in a rack where the airflow is compromised. Any side, front or back of the unit used for air flow through the unit must not be in indirect contact with the rack.
* Ensure that a hazardous condition is not created due to uneven mechanical loading when installing this unit in a rack. If the rack has a stabilizer it must be firmly attached before installing or removed this unit.
* Consider the connection of the equipment to the supply circuit so that the overloaded circuits do not compromise the supply wiring or over-current protection.
* An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

When installing the D20 I/O drawer, you will need the following items:
* Rack-Mounting Template
* 2 Drawer Rail Assemblies
* Cable Management Arm
* Rack-Mounting Hardware Kit
* Screwdriver

Step 5. Remove the Shipping Brackets

If your D20 I/O drawer was shipped preinstalled in a rack, you may want to remove the shipping brackets from the rear rack EIA rails. The shipping brackets keep the rear of the I/O drawer from moving in a side-to-side motion while being transported. They can, however, remain on the rack without interfering with normal day-to-day operations. To remove them, do the following:

1. Go the the rear of the rack and open the rack's rear door.

2. Remove the two screws that secure each shipping bracket to the rack's EIA rails. See the following illustration.

3. After removing the shipping brackets, reinstall the four retaining screws.
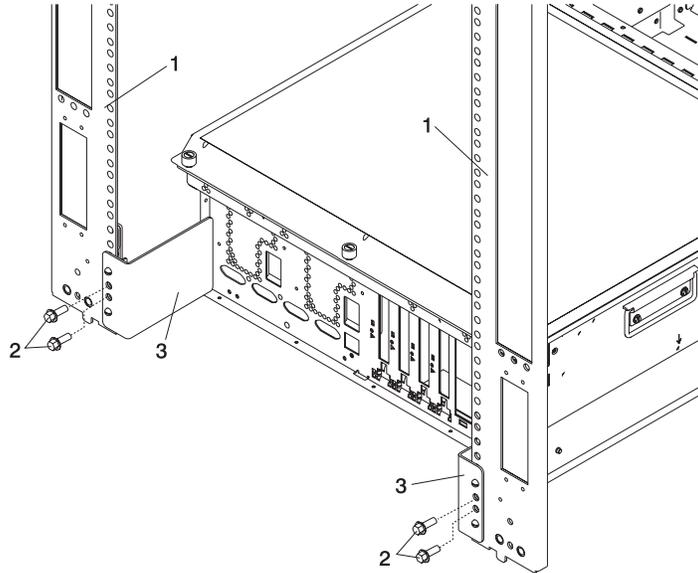
1 Rack EIA Rails
2 Shipping Bracket Retaining Screws and the Rear Rail to Rack Retaining Screws
3 Shipping Brackets

Step 6. Read the D20 I/O Drawer Cabling Precautions

Before installing the D20 I/O drawer into the rack and connecting the RIO-G and power control cables, do the following:

1. Ensure that your system is running the latest level firmware. For information about checking or upgrading the firmware level of your system, refer to the firmware updates section of your system's installation guide

2. After ensuring that your firmware is at the latest level, turn off the power and disconnect the system unit's power cables from the power source.

Step 7. Attach the Mounting Hardware to the Rack Enclosure

Before performing this procedure, read through each step and study the illustrations.

Attention: Mounting the rails is a complex procedure. To install the rack rails correctly, you must read, and then perform each procedure step in the order given. Failure to do so may cause rail failure.

Note: If your rack has doors, remove the doors at this time. For information about removing the rack doors, refer to your rack installation guide.

Locate the hardware-mounting kit, rack-mounting template, and the I/O drawer rails that were shipped with your I/O drawer.
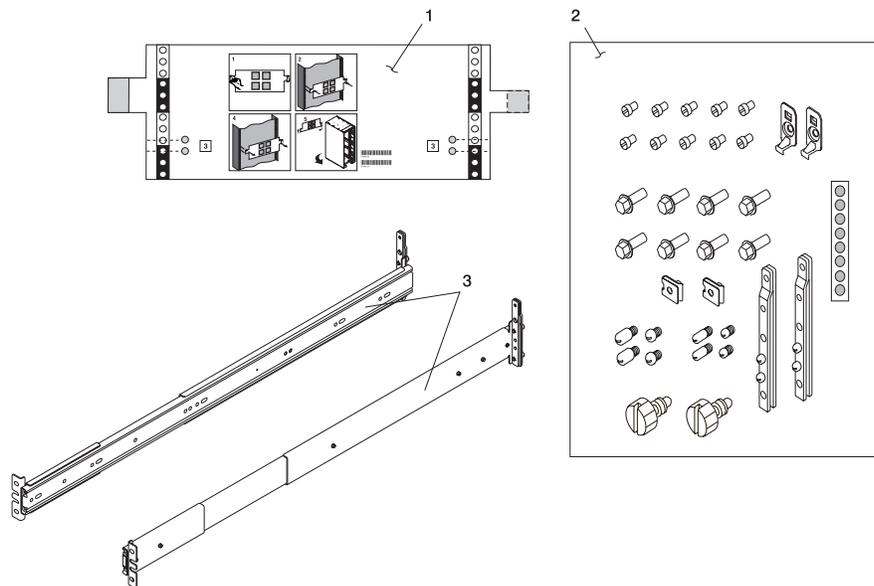
1 Rack-Mounting Template
2 Rack-Mounting Hardware Kit
3 I/O Drawer Rail Assemblies

To mount the rails into the system rack, do the following:

Note: Unless otherwise noted, all instructions assume that you are in front of and facing the system rack.

1. Locate the rack-mounting template. If you do not have a rack-mounting template, go to step 3.

    Notes:

    a. The rack-mounting template has printed illustrations located on the front and rear of the template. Each illustration is designed to aid you in identifying the EIA (Electronics Industries Association) location holes used when planning to populate your rack. *Do not* use the rack-mounting template without reading and understanding the following steps.

    b. Each step must be completed in its entirety. Skipping steps or not following steps in sequence may cause rail failure.

    c. Use the front side of the rack-mounting template when installing the hardware on the front of the rack, and the back side of the rack-mounting template when installing the hardware on the back of the rack. You can distinguish the front of the template from the rear by the step numbers. The steps on the front of the rack-mounting template begin with the number 1.

    d. The D20 I/O drawer requires 4 EIA units of free space.

2. When using the rack-mounting template, be aware of the following:

    • Each black or white unit on the template is equal to 1 EIA unit.

    • Each EIA unit consists of three holes.

    • The EIA units illustrated on the template must be aligned with an EIA units located on the rack.

    • It is not necessary to align like-colored EIA units. For example, a black EIA unit illustrated on the rack-mounting template does not have to be aligned with a black EIA unit located on the rack. A black EIA unit on the rack-mounting template can be aligned with a white EIA unit located on the rack. See the following illustration.
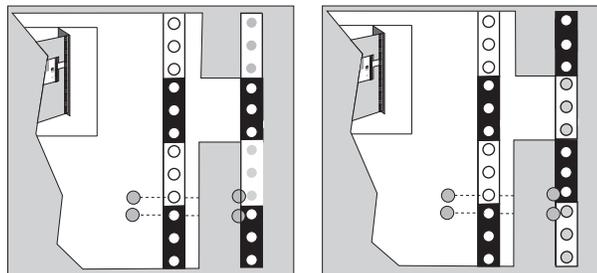
    To use the rack-mounting template, do the following:

    a. Locate and unpack the rack-mounting hardware kit. This kit contains all the hardware necessary to mount the rails to your rack. In the rack-mounting hardware kit, locate and then unpack the latch-mounting kit.

    b. Locate the self-adhesive dot strip, packaged in the latch-mounting kit.

    c. Determine where in the rack to place the drawer. Make note of the EIA location number. Align the black and white strip located on each side of the rack-mounting template with an EIA location on each side of the rack. Note the EIA number located across from the rack-mounting template ears. When you are positioning the rack-mounting template on the rack's rear EIA rails, you will be aligning the rack-mounting template ears across from the same numbers.

    d. Remove the protective coating from each adhesive strip located on the back ears of the rack-mounting template. Lightly press the template into position onto the rack EIA rails. Ensure that the rack-mounting template is level.

e. Note the four dots printed on the front side of the template. Attach a self-adhesive dot directly across from the template's printed dots onto the rack's EIA rail.
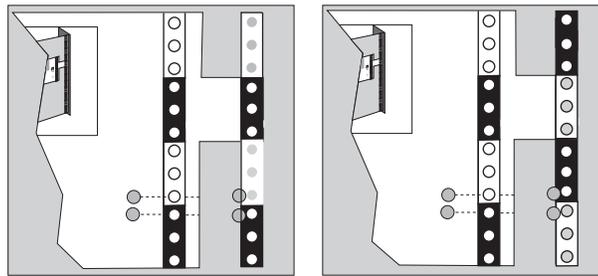
f. Remove the rack-mounting template from the front of the rack. You should now have placed four self-adhesive dots, four pieces of tape, or four marks on your rack's front EIA rails.

g. Go to the rear of the rack.

h. Turn over the template. The first step printed on the template should now start with a number other than 1.

i. Facing the rear of the rack, remove the protective coating from each adhesive strip, and attach the rack-mounting template to the back of the rack. Place the template on the corresponding EIA locations that were noted from the front of the rack.

j. Note the four dots printed on the template. Attach a self-adhesive dot or mark directly across from the template's printed dots onto the rack's EIA rail.

> **Note:** When attaching the self-adhesive dots on the rack's rear EIA rail, fold the dots around the EIA rail, as shown on the template and in the following illustration. If you do not have the self-adhesive dots, wrap a piece of tape around the rail. The self-adhesive dot, or the tape wrapped around the EIA rail, will aid you when aligning the rear rail-alignment pins to the rear rail EIA holes.
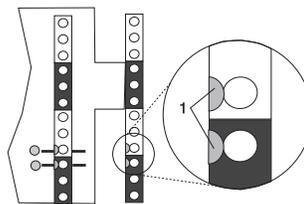
1 Folded Self-Adhesive Dots

k. Notice the nut clips printed on the upper left side of the rack-mounting template. The nut clips are packaged in the cable arm mounting kit. Locate the cable arm mounting kit in the rack-mounting hardware kit.

l. Install the nut clips around the EIA holes indicated by the template. The nut clips will aid you in the securing of the cable management arm to the rack's EIA rail.
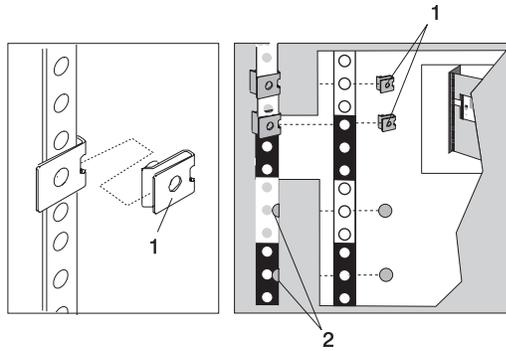
1 Nut Clip and Nut Clip Placement
2 Self-Adhesive Dot Placement

    m. Remove the rack-mounting template, then continue to step 6. You should now have placed four self-adhesive dots, four pieces of tape, or four marks on your rack's rear EIA rails. You should also have placed two nut clips on your rack's rear left EIA rail.

3. If you do not have a rack-mounting template, do the following:

    Note: An EIA unit on the rack consists of a grouping of three holes. Each EIA unit may be separated by either a color or a line. The drawer you are about to install measures 4 EIA units high.

    a. Determine where in the rack to place the I/O drawer, and make note of the EIA location numbers.

       The following illustration shows 1 EIA unit and 4 EIA units. Depending on the rack manufacturer, the EIA units may be separated either by color or by a line. Note that the holes along the rack's EIA rail are not evenly spaced. If your rack has no color or line separation between EIA units, assume that each EIA unit begins where the hole spacing is closest together.
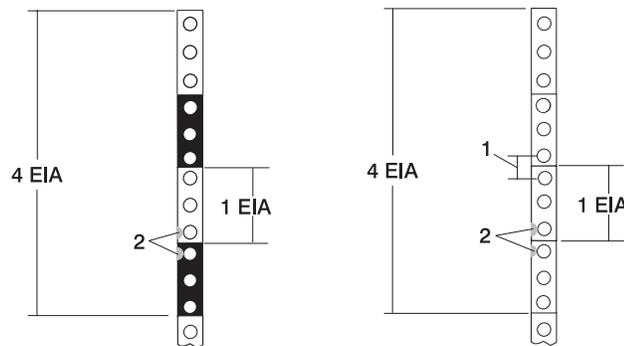
1 EIA Hole Spacing
2 Self-Adhesive Dot Placement

    b. Facing the front of the rack and working from the right side, locate the bottom EIA unit into which the drawer will be installed. Place a supplied self-adhesive dot, piece of tape, or mark next to the top hole of this EIA unit.

    Note: The self-adhesive dots, piece of tape, or mark are used to identify the EIA unit holes located on the rack's EIA rail. Alignment pins located on the rail-alignment brackets are placed through the identified holes when mounting the rails. If you no longer have any of the dots, use some other form of marking tool to aid you in identifying the hole locations (for example, pieces of tape, or a marker).

c. Place another self-adhesive dot or mark next to the bottom hole of the EIA unit directly above.

d. Repeat steps a through c to corresponding holes located on the rack's left-side EIA rail. You should now have placed four self-adhesive dots, four pieces of tape, or four marks on your rack's front EIA rails.

4. Go to the rear of the rack.

5. Standing in front of and facing the rear of the rack, do the following:

a. From the right side of the rack, locate and select the same EIA units that were noted on the front of the rack.

   Note: Marks or self-adhesive dots should wrap around the rear EIA rails. Visibly seeing the dots, tape, or marks when installing the rails, from the front of the rack, will simplify the aligning of the rear-rail alignment pins to the correct rack EIA rail holes.

b. Place a mark or self-adhesive dot in the middle hole of the bottom EIA unit.

c. Place a mark or self-adhesive dot in the middle hole of the EIA unit directly above.

d. Repeat steps b and c to locate the correct EIA holes for the left side.

e. Locate and unpack the rack-mounting hardware kit. This kit contains all the hardware necessary to mount the rails to your rack.

f.   Working on the left side of the rack, do the following:

   1) Locate, and then install a nut clip around the top hole of the third EIA unit from the bottom. The nut clips can be found in the rack-mounting hardware kit. See the following illustration.

   2) Install a second nut clip around the middle hole of the fourth EIA unit from the bottom. See the following illustration.
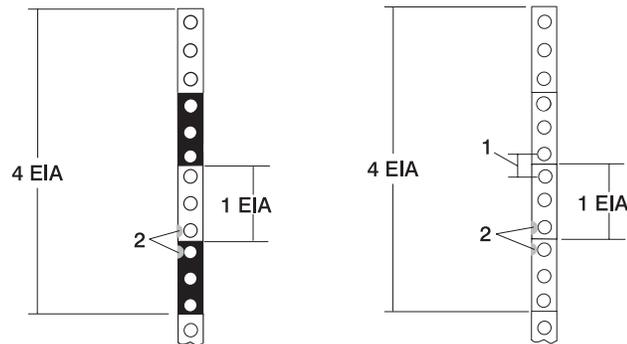
   1 EIA Hole Spacing
   2 Self-Adhesive Dot Placement

   Note: The nut clips will be used to secure the cable-management arm to the rack's EIA rail.

6. Select the two front-alignment brackets.
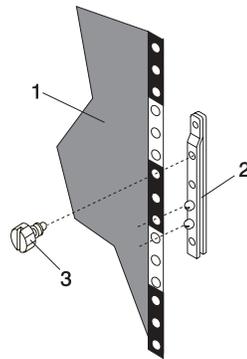
1 System Rack
2 Front-Alignment Bracket
3 Thumbscrew

7. Mount the front-alignment brackets. Place each alignment pin through one of the rack EIA holes identified by the self-adhesive dots, tape, or marker.

   Note: If the preassembled alignment pins, located on the front and rear alignment brackets, do not fit into the rack EIA holes, do the following:
   a. Using a screwdriver, remove the preinstalled alignment pins from the front-alignment brackets.
   b. Locate the correct-size alignment pins that were shipped with the rack-mounting hardware kit.
   c. Install the newly selected alignment pins into the front-alignment brackets. Ensure that the replaced alignment pins are mounted into the correct alignment bracket holes.
8. Secure the front-alignment brackets to the rack's EIA rails with thumbscrews that were supplied in the rack-mounting hardware kit. Ensure that both alignment brackets are aligned on the same EIA unit. See the previous illustration.
9. Unpack both rails.

   Note: The I/O drawer rails are front-to-back and left-to-right side dependent.
10. Separate the left rail from the right rail. Rails are labeled *L* and *R*. When standing in front of and facing the rack, the *L* denotes the left rail, and *R* denotes the right rail.
11. Install the rails into the rack, as follows:

   Note: The installation procedure for the left and right rails is identical.
   a. Select the left rail. Put the rail into the correct orientation by doing the following:
      1) Position the rail so that the preassembled alignment bracket is facing the rear of the rack.

2) The top of the preassembled alignment bracket must be facing up and in the same orientation as the front alignment brackets. See the following illustration.
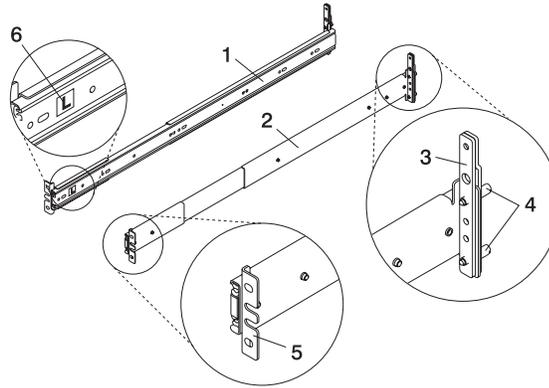
1 Left Rail	**4** Rear Alignment Pins
2 Right Rail	**5** Front Rail-Mounting Flange
3 Rear Alignment Bracket	**6** Left Label (**L**)

3) Rail lengths were preset by the manufacturer. If the preset rail length is incorrect for your rack, loosen but *do not remove*, the three retaining screws that secure the rail-length adjusting plate to the rail.

Note: Loosen the screws only enough to make an adjustment to the rail length. To access these screws, you must extend the inner rails.
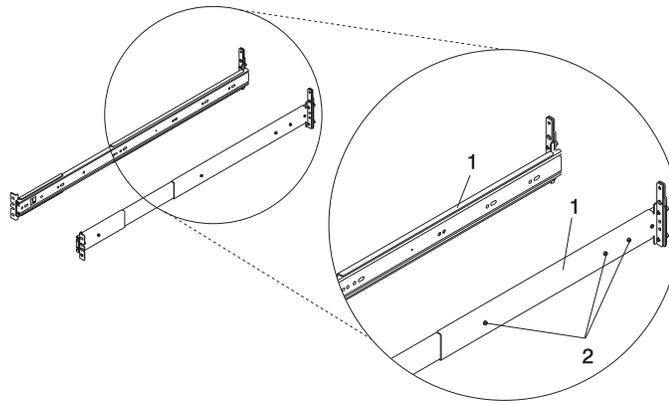
1 Rail Adjustment Plate
2 Retaining Screws for Rail-Length Adjusting Plate

4) If necessary, adjust the rail to the correct length for your rack. After the rail is set to the correct length, tighten all previously loosened adjusting-plate screws.

b. Standing in front of the rack, install the left rail's rear alignment pins into the appropriate holes identified by the self-adhesive dots, tape, or marker that you previously attached to your rack's rear EIA rail.

c. Swing the front rail-retaining flange into the forked section of the front-alignment bracket, making sure that the two middle slots fit around the two front-alignment pins.

> **Note:** *Do not* swing the front rail flange in between the front-alignment bracket and the rack's EIA rail.
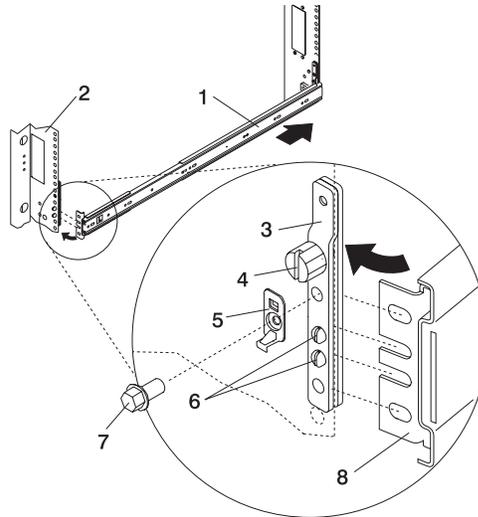
1	Left Rail	**5**	Latch-Mounting Bracket
2	Rack EIA Rail	**6**	Front Alignment Pins
3	Front-Alignment Bracket	**7**	Rail-Retaining Screw
4	Thumbscrew	**8**	Front Rail-Retaining Flange

d. Insert, and then tighten one of the rail to rack-retaining screws and one of the latch-mounting brackets into the threaded screw hole located above the two alignment pins.

e. To install the right rail, repeat steps a through d.

f. Remove the two thumbscrews from both front alignment brackets.

g. Ensure that the rails are level from front to back and from left to right.

> **Notes:**
>
> 1) The front left and right rails should now have the two upper-retaining screws in place.
>
> 2) The front lower rail and four rear-rack retaining screws will be added while performing *Step 8. Install the D20 I/O Drawer into the Rack Enclosure*.

Step 8. Install the D20 I/O Drawer into the Rack Enclosure

Attention: When installing the I/O expansion drawer into a rack, ensure that a hazardous condition is not created due to uneven mechanical loading. If your rack uses a stabilizer bar, it must be firmly attached before installing or removing this I/O drawer.

To mount the D20 I/O drawer into the rack, do the following:

1. If you have not already done so, remove the D20 I/O expansion drawer from the box.
2. Ensure that the I/O drawer supports have been attached to the left and right sides of your I/O drawer. See the following illustration.

   Note: The plastic drawer supports are used to stabilize and hold the I/O drawer in the correctly aligned position when it is mounted onto the rails.
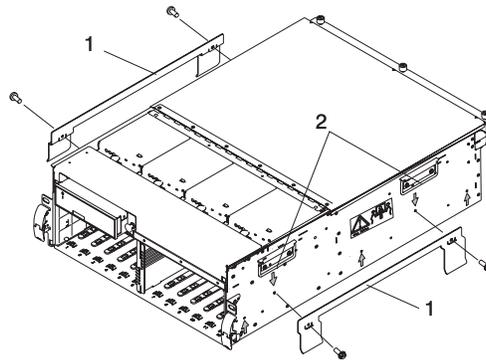
1 Left and Right I/O Drawer Supports
2 Lifting Handles

3. If the I/O drawer supports are not already attached to the sides of the I/O drawer, secure each I/O drawer support with two retaining screws. Attach one of the I/O drawer supports to each side of the I/O drawer as shown in the above illustration.
4. Place the rails into the service position. The rails are placed into the service position by pulling out the two telescoping sections of each rail. Each section of rail makes a clicking sound when fully extended and placed into the service position.
5. You are now ready to mount your D20 I/O drawer. Before continuing to the next step, be sure to read and understand the following caution notices:

   CAUTION:
   The stabilizer must be firmly attached to the bottom front of the rack to prevent the rack from turning over when the drawers are pulled out of the rack. Do not pull out or install any drawer or feature if the stabilizer is not attached to the rack.
   C16

   CAUTION:
   This unit weighs between 32 kg (70.5 pounds) and 55 kg (121.2 pounds). Three persons are required to safely move it. Using less than three persons to move it can result in injury.
   C05

6. Using three persons, grasp the two handles located on each side of the I/O drawer.
7. Lift the I/O drawer and position it on the extended rails.
8. Align the threaded screw holes located on the I/O drawer to the rail clearance holes.

9. Beginning with the middle screw hole on each side of the I/O drawer, insert and then tighten the three retaining screws through each rail, as shown in the following illustration.
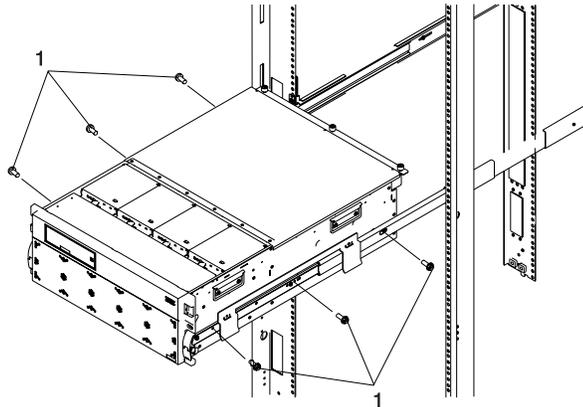
1 Rail to Drawer Retaining Screws (Qty. 6)

10. Remove the drawer supports from each side of the I/O drawer.

    Note: In case of future I/O drawer removal, you may want to store the drawer supports.

11. Simultaneously release the safety latches, and push the I/O drawer into the rack.

    Note: To unlock the rails, lift the left safety release latch up and push the right safety release latch down.
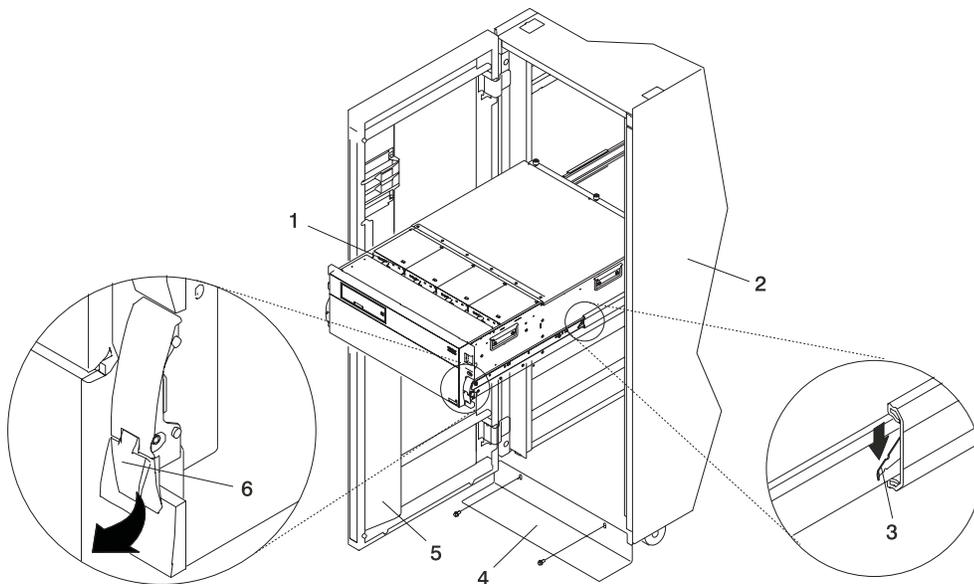
1 D20 I/O Drawer	**4** Stabilizing Bar
2 19 Inch Rack	**5** Front Rack Door
3 Extension Rail Safety Release Latch	**6** I/O Drawer Release Latch

12. Slide the I/O drawer in and out of the rack one or two times. This action allows the I/O drawer to align the rails to itself.

    Note: After the I/O drawer rails are installed, do not extend them past their safety latches. The safety-release latches stop the rails from overextending and separating.

13. With the D20 I/O drawer fully retracted in the rack, go to the rear of the rack and install two retaining screws between each alignment pin. Tighten all four screws at this time.

14. Go to the front of the rack.

15. Pull the D20 I/O drawer approximately halfway out of the rack, and install the two lower front rail-retaining screws as shown in the following illustration.
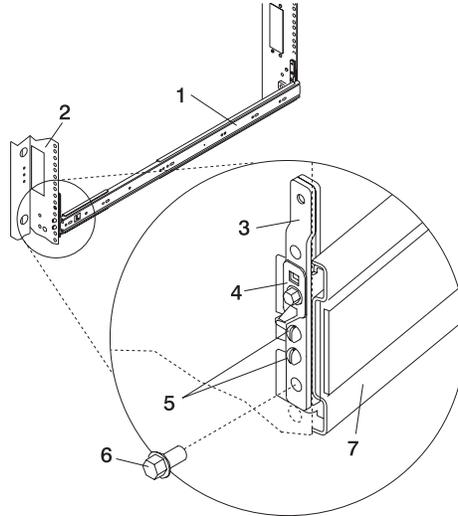
1	Left Rail	**5**	Front-Alignment Pins
2	Rack EIA Rail	**6**	Lower Front Rail-Retaining Screw
3	Front-Alignment Bracket	**7**	Left Rail
4	Latch-Mounting Bracket		

16. If you are planning to move the rack a short distance after installing the drawer (for example, across the room), use the two supplied thumbscrews to secure the I/O drawer to the rack enclosure. If you are planning to move the rack any greater distance than across the room, contact your service representative.
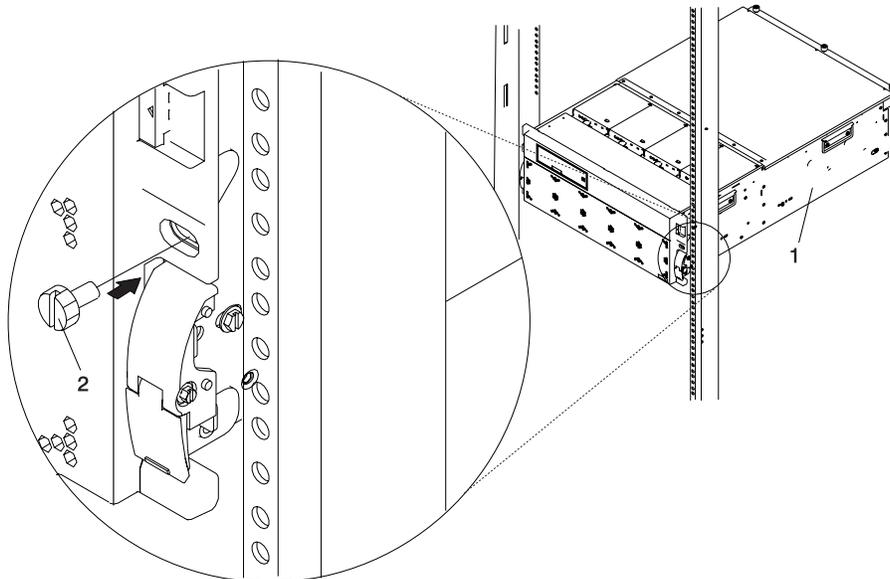
1 D20 I/O Drawer
2 Thumbscrew

Step 9. Install the Cable Management Arm

To install the cable management arm, do the following:

1. Locate the two nut clips that you attached to the back of the rack.

2. Insert two thumbscrews through each nut clip, securing the cable carrier-support bracket to the back of the rack.

3. Place the two snap buttons, located on the cable management arm, into the unlocked (pulled out) position.

4. Align the cable management arm with the bracket assembled on the back of the I/O drawer chassis. Insert the two snap buttons into the bracket holes.

5. Push in on the head of the snap buttons, securing them to the bracket located on the chassis. See the following illustration.
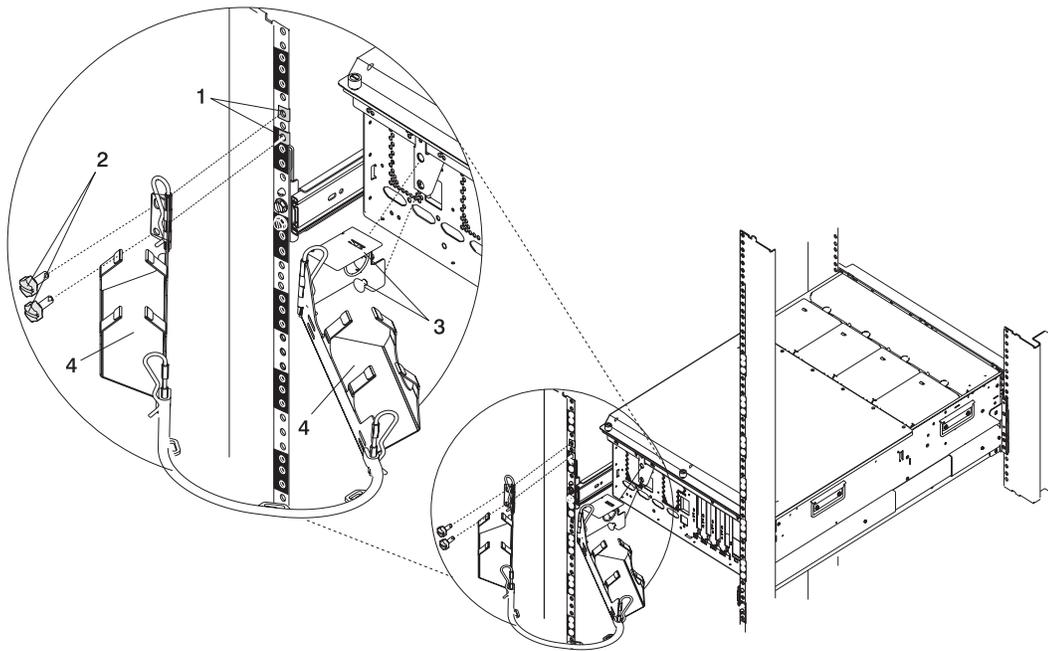
1	Nut Clips	**3**	Snap Buttons (Qty. 2)
2	Thumbscrews (Qty. 2)	**4**	Cable Management Arm

Step 10. Are All of the Internal Options Installed?

These instructions are for I/O drawers that have internal options (such as adapters, disk drives, or memory upgrades) already installed.

If you have internal options that are not installed, install them now. Refer to Chapter 2, "Installing Options in the D20 I/O Drawer", on page 23, and then return here.

Step 11. Verify the System and System Firmware Levels

Prior to attaching the RIO-G and system power control cables, review the following and then perform the necessary actions indicated:

1. If the system unit to which you are connecting the D20 I/O drawer has its RIO connectors covered with a metal plate or sealed from easy access, do not attempt to attach any cables between the system unit and the D20 I/O drawer. A feature upgrade may be necessary; contact your service representative.

2. Ensure that your system is running the latest level firmware. For information about checking or upgrading the firmware level on your system, refer to the firmware updates section of your system's installation guide

3. After ensuring that your firmware is at the latest level, turn off the power and disconnect the system's power cables from the power source.

Step 12. Connect the RIO-G and SPCN Cables to the D20 I/O Drawer and to Your System

For information on cabling the D20 I/O drawer to your system, refer to your system's installation guide.

Step 13. Connect the Adapter Cables

Note: Before doing this step, read and understand "Step 3. Read the Safety Notices" on page 3.

You can install up to seven PCI adapters into each I/O drawer. When adding or replacing PCI adapters, note the following:

- If you are using any optional adapters (such as token ring or 8-port EIA-232), connect the cables to the appropriate adapter connectors in the PCI slots of your machine.
- For the locations of installed adapters, consult the ″About Your Machine″ document.
- Refer to the *PCI Adapter Placement Reference*, order number SA23-2504, for a list of PCI adapters available for your system.
- Before installing any PCI adapter, refer to *PCI Adapter Placement Reference*, order number SA23-2504, to ensure that there are no slot restrictions placed on that the adapter by your system.

The following illustration shows the possible PCI adapter slots and connector locations on the back of the D20 I/O drawer.
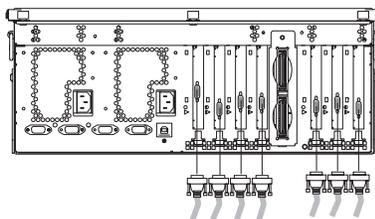
Step 14. Are You Using the Rack Indicator Feature?

The rack indicator feature signals when a drawer installed in a rack has a failure. If you are unsure whether you are using the rack indicator feature, ask your system administrator.

Connect the rack indicator cable as shown in the following illustration.
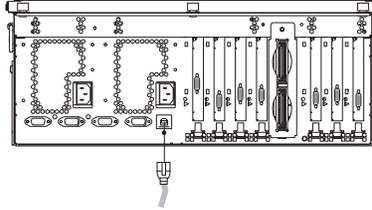
Step 15. Connect the Power Cables to the I/O Drawer

Plug the power cables into the D20 I/O drawer.

Notes:

1. This I/O drawer could be equipped with two power supplies. Each power supply needs its own power cable.
2. If your I/O drawer is equipped with one power supply, connect the power cable to the power receptacle. A second power receptacle is available when a second (redundant) power supply has been added to the I/O drawer. See the following illustration.
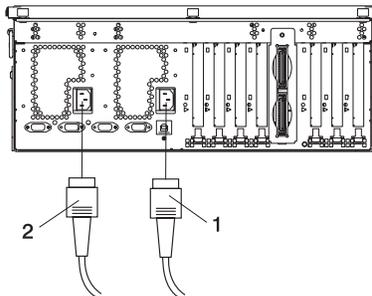
1 Power Supply 1 Cable
2 Power Supply 2 Cable

CAUTION:
This product is equipped with a three-wire power cable and plug for the user's safety. Use this power cable with a properly grounded electrical outlet to avoid electrical shock.
C01

CAUTION:
This unit weighs between 32 kg (70.5 pounds) and 55 kg (121.2 pounds). Three persons are required to safely move it. Using less than three persons to move it can result in injury.
C05

Step 16. Attach the External Signal and Power Cables to the I/O Drawer Cable Management Arm

To attach the external cables to the cable management arm, do the following:

1. Put the I/O drawer into the service position. Refer to "Placing Your D20 I/O Drawer into the Service Position" on page 26.

   Note: The rails lock in the fully extended position with a click.
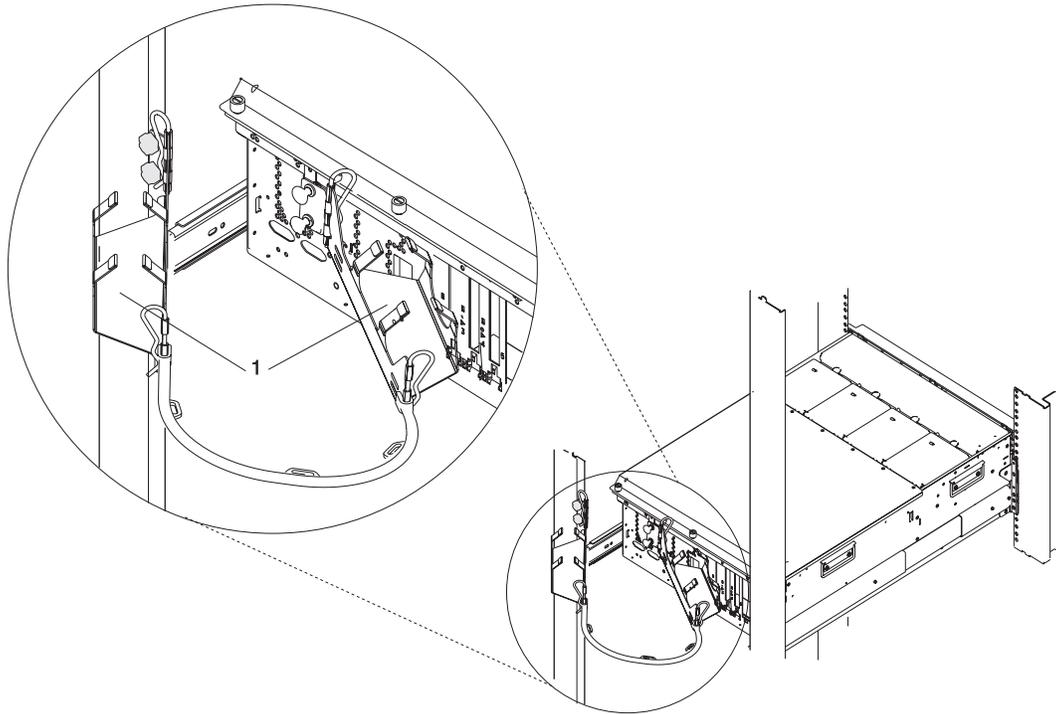
1 Cable-Management Arm Trays

2. Loosely place the cables into the two cable-management arm trays.

   Note: Power cables should be routed through the ring located next to the cable-management arm snap buttons.

3. Slide the drawer in and out of the rack a few times. Ensure that the cables and cable management arm move freely, without creating kinks in the cables.

4. Use cable ties to secure the cables to the cable management arm.

Step 17. Connect the Power Cables to Electrical Outlets

Connect the D20 I/O drawer power cables from the power supplies to the power source (for example, an electrical outlet or power distribution panel).

When connected to the power source, the green LED located on the D20 I/O drawer operator panel begins to blink.

When the power-on sequence is complete, the power LED on the operator panel stops blinking and remains on.

The following illustration shows the operator panel and the locations of the power and attention LEDs.
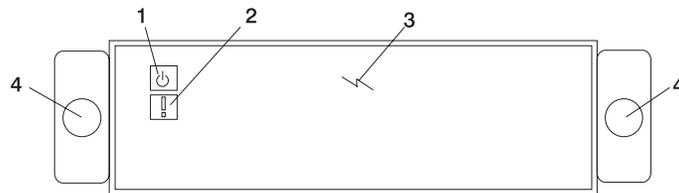
1 Power LED
2 Attention LED
3 Operator Panel
4 Snap Buttons

If your system does not stop in standby mode, check all cables for good connection. If you cannot find a problem, call your support center for assistance.

Step 18. Complete the I/O Drawer Installation

To complete the installation of the your I/O drawer, go to your system's installation guide. Refer to the chapter that contains the procedures for setting up your system. After locating the system setup procedures, do the following:

- Start Your System - The system is completely cabled and can be powered on.
- Accessing Documentation - Read and understand how to access system documentation.
- Run System Verification

Chapter 2. Installing Options in the D20 I/O Drawer

This chapter provides instructions to help you add options to your I/O drawer that are not covered in your system installation guide.

Note: Most of the options that you can install are discussed in your system installation guide, for example, hot-plug PCI adapter installation and disk drive installation.

Safety Considerations

Observe the following safety precautions anytime you work with this system unit.

In the system you are about to setup or service:
- The ac power interface connector is considered the main power disconnect device.
- This system and your I/O drawer have independent redundant power supply capabilities, meaning that each unit may be configured to have two power supplies running simultaneously in the same system unit. When instructed to disconnect the power source, ensure that all power cables that run to each servicing I/O drawer has been disconnected from the power distribution panel.

Read the following safety notices, before performing any of the following procedures.

DANGER

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

Before installing or removing signal cables, ensure that the power cables for the system unit and all attached devices are unplugged.

When adding or removing any additional devices to or from the system, ensure that the power cables for those devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.

Use one hand, when possible, to connect or disconnect signal cables to prevent a possible shock from touching two surfaces with different electrical potentials.

During an electrical storm, do not connect cables for display stations, printers, telephones, or station protectors for communications lines.
`D05`

CAUTION:
This product is equipped with a three-wire power cable and plug for the user's safety. Use this power cable with a properly grounded electrical outlet to avoid electrical shock.
`C01`

CAUTION:
This unit has more than one power supply cord. To reduce the risk of electrical shock, disconnect two power supply cords before servicing.
`C21`

Handling Static-Sensitive Devices

Attention: Electronic boards and disk drives are sensitive to static electricity discharge. These devices are wrapped in antistatic bags to prevent this damage.

Take the following precautions:
* If you have an antistatic wrist strap available, use it while handling the device.
* Do not remove the device from the antistatic bag until you are ready to install the device in the system.
* With the device still in its antistatic bag, touch it to a metal frame of the system.
* Grasp cards and boards by the edges. Hold drives by the frame. Avoid touching the solder joints or pins.
* If you need to lay the device down while it is out of the antistatic bag, lay it on the antistatic bag. Before picking it up again, touch the antistatic bag and the metal frame of the system at the same time.
* Handle the devices carefully to prevent permanent damage.

Options and Task List

Option/Task	Option/Task Name and Page Location
Adapters	"PCI Adapters" on page 30
Bezel, Front	"Front Bezel" on page 29
Cover	"Service Access Cover" on page 28
Disk Drives	"Hot-Plug Disk Drives" on page 30
Operating Position	"Returning the D20 I/O Drawer to the Operating Position" on page 27
Service Position	"Placing Your D20 I/O Drawer into the Service Position" on page 26

Powering the System On and Off

This section provides procedures for powering on and powering off the system.

If you have an HMC attached to your system, use "Using the Hardware Management Console to Power On and Off the System".

If you do not have an HMC attached to your system, use "Operating the System Without an HMC Attached" on page 25.

Using the Hardware Management Console to Power On and Off the System

The system can be powered on after all of the following steps are completed:
* All I/O drawer cables are connected
* Base system cables are connected
* All PCI cables to supported subsystems are connected
* The hardware management console (HMC) is connected, if required
* Power is connected to the system

After the required cables are installed, and the power cables are connected, the HMC user interface provides a power-on function to turn on the power to the system. The power button on the operator panel can be pushed to initialize the system but the preferred method is to use the HMC if booting logical partitions. Progress indicators, also referred to as *checkpoints*, are visible on the operator panel display as the system power is turned on. The power LED on the base system stops blinking and stays on, indicating the system power is on.

The base system and I/O subsystems are powered on through the system power control network (SPCN). When power is applied, the power LEDs on the base system go from blinking to on continuously, and the power LEDs on the I/O subsystem(s) come on and stay on. This indicates that power levels are satisfactory in the subsystems.

Powering the System Off

The HMC user interface provides a power-off function to turn off the power to the system.

Also, if the system is operating in a full system partition under AIX, typing the **shutdown** command causes the system to shut down and power off. The **-F** flag shuts down the system without warning system users. Check with the system administrator before using this command. If you cannot use this method, you can power off the system by pressing the power button on the media subsystem operator panel.

Attention: Using the power button on the operator panel to power off the system can cause unpredictable results in the data files, and the next IPL will take longer to complete.

Operating the System Without an HMC Attached

Starting the System

1. Set the power switches of the attached devices to On.

   Note: When the system is plugged in but not powered on, the power LED flashes slowly.
2. If the LED is not flashing and OK is not displayed, ensure that the power cord, located at the back of the system unit, is plugged into a grounded electrical outlet.
3. If this does not solve the problem, contact your service representative.
4. Press the Power-On button.

   When you press the Power-On button, the power LED comes on, and the system starts a POST (power-on self-test).

   During POST, progress codes display in the operator panel display.
5. If the power LED does not come on and there is no indication of power when you press the Power-On button, contact your service representative.

Stopping the System Unit

Attention: When you use the shutdown procedure for your system, follow the correct shutdown procedure before you stop the system. Failure to do so can result in loss of data. The system is powered down by the shutdown procedure.

1. At the command line, type `shutdown` to stop the operating system.
2. After you shut down the operating system, set the power switches of attached devices to Off.
3. If you will be servicing the system, unplug the system-unit power cable from the electrical outlet.

Placing Your D20 I/O Drawer into the Service Position

Attention: When placing your D20 I/O drawer into the service position, it is essential that all stability plates are firmly in position to prevent the rack from toppling. Ensure that only one system drawer is in the service position at a time.

Before doing any service actions inside your D20 I/O drawer, put the D20 I/O drawer into the service position. To place the drawer into the service position, do the following:

1. Open the front rack door.
2. If your D20 I/O drawer is equipped with two blue thumbscrews securing it to the rack, remove the thumbscrews at this time. The screws are located on the bezel, just above each I/O drawer release latch.
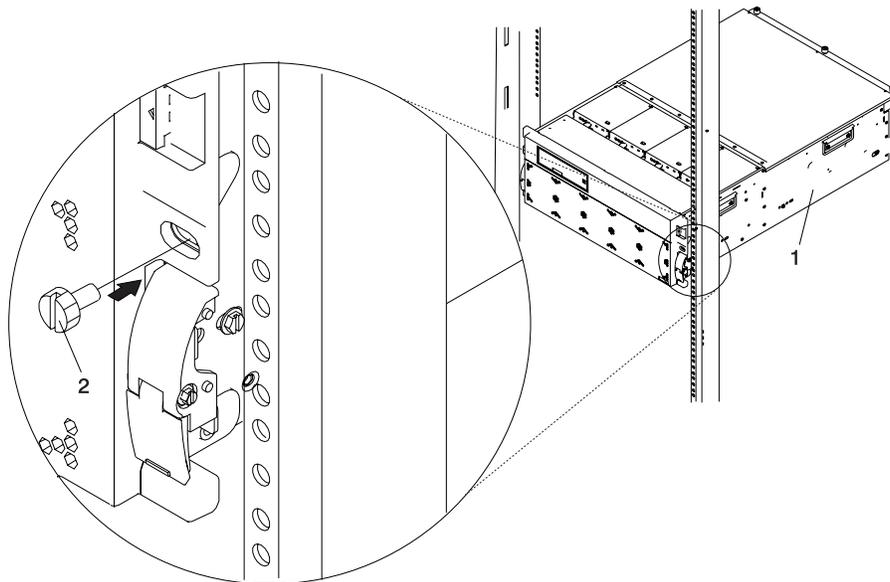
1 Front Bezel
2 Transport Retaining Screw for System Drawer

3. Release the I/O drawer release latches located on the left and right side.
4. Pull the system drawer out from the rack until the rails are fully extended.

Note: When the system rails are fully extended, safety latches on the slide rails lock into place. This prevents the system from being accidentally pulled out too far and dropped. The following illustration shows a system drawer in the service position.
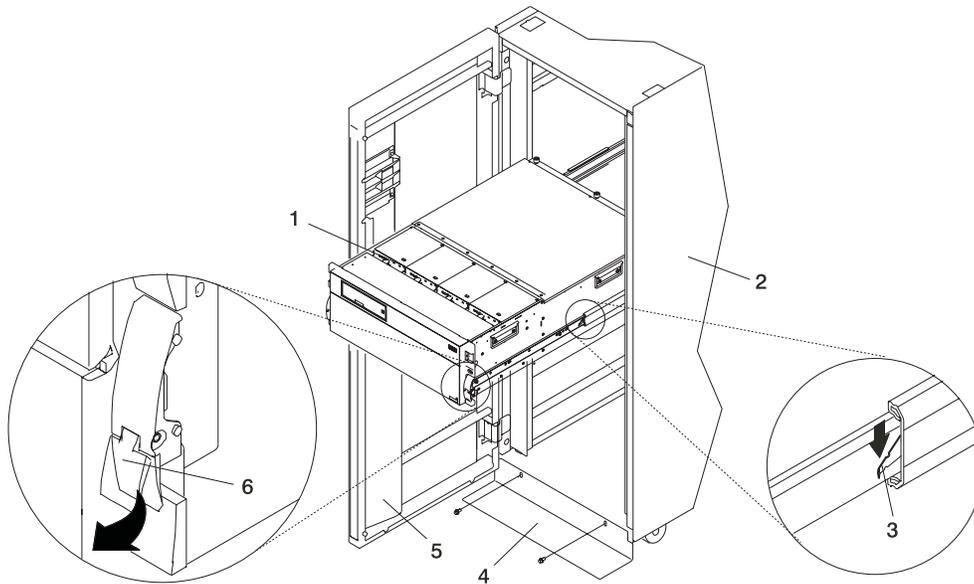
1	D20 I/O Drawer	4	Stabilizing Bar
2	19 Inch Rack	5	Front Rack Door
3	Extension Rail Safety Release Latch	6	System Drawer Release Latch

After completing the service actions, return the D20 I/O drawer to the operating position.

Returning the D20 I/O Drawer to the Operating Position

To return your D20 I/O drawer to the operating position, do the following:

1. Release the rail release latches located on each rail. See the illustration on page 27 for the location of the release latches.

   Note: To release the left rail, pull the release latch up. To release the right rail, push the right latch down.

2. Release latches must be in the open position. See the illustration on page 27 for the location of the I/O drawer release latches.

3. Push the system drawer straight back into the rack until both release latches on the I/O drawer have locked into position.

4. If you removed two thumbscrews from the front bezel, replace them at this time.

5. Close the front rack door.

Service Access Cover

Before performing the following procedure, read the "Safety Notices" on page v.

To open the service access cover, do the following:

1. Open the front rack door and place the D20 I/O drawer into the service position as described in "Placing Your D20 I/O Drawer into the Service Position" on page 26.

2. Loosen the three captive thumbscrews located on the rear of the cover. See the following illustration for thumbscrew locations.

   Note: The service access cover pivots on a hinge located directly behind the four cooling fans.

3. To open the service access cover, lift the cover up from the back edge. The hinges will prevent the cover from swinging more than 110 degrees into the open position.

   Note: When you open the service access cover, ensure that you have enough height clearance.

4. After service is complete, close and secure the cover with the three thumbscrews located on the back flange.

Attention: For proper cooling and airflow, replace the cover before turning on the system. Operating the system for extended periods of time (over 30 minutes) with the cover removed might damage the system components.
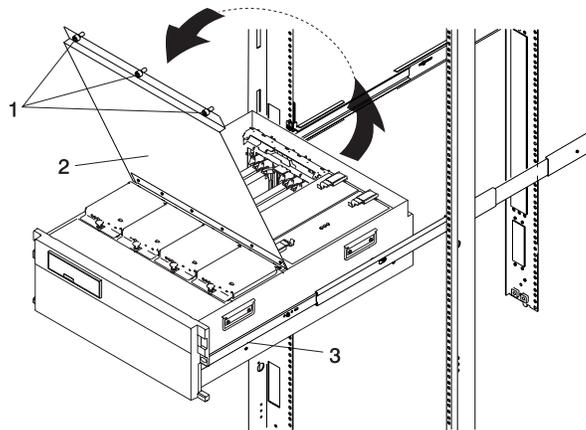
1 Thumbscrews
**2** Service Access Cover
3 D20 I/O Drawer

Front Bezel

Before performing the following procedure, read the "Safety Notices" on page v.

Removal

To remove the front bezel, do the following:

1. Open the front rack door. If necessary, place the D20 I/O drawer into the service position as described in "Placing Your D20 I/O Drawer into the Service Position" on page 26.
2. Simultaneously press in both bezel-release tabs. See the following illustration for bezel-release tab locations.
3. Pivoting the bezel from the bottom, swing the top of the bezel out.
4. Pull the bottom of the bezel up, and then away from the system chassis. This action releases the two tabs located on the bottom of the bezel.
5. Put the bezel in a safe place.
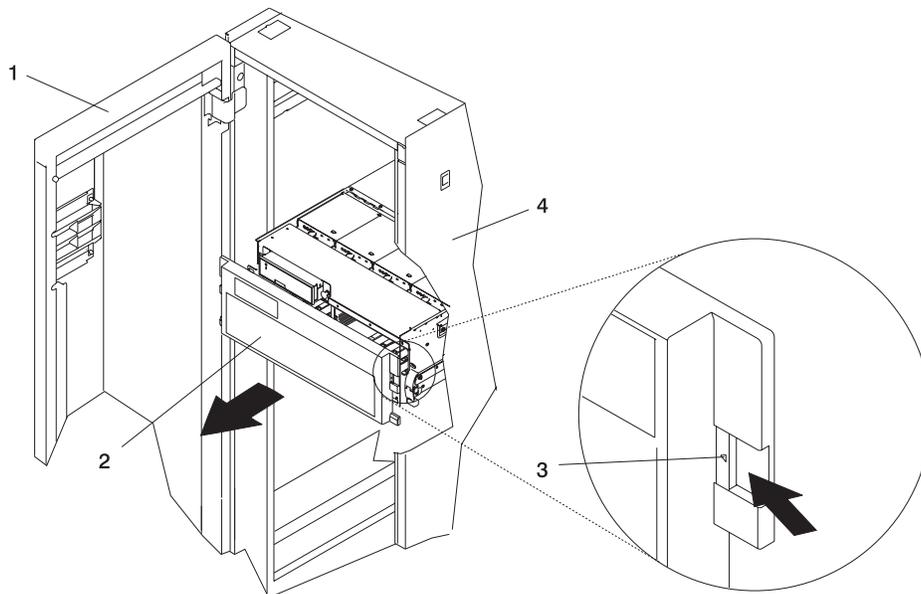
1 Rack Door

2 Bezel

3 Bezel-Release Tab (Located on each side of bezel)

4 19-Inch Rack

Replacement

To replace the front bezel, do the following:

1. Open the front rack door. If necessary, put the D20 I/O drawer into the service position as described in "Placing Your D20 I/O Drawer into the Service Position" on page 26.

2. Insert the two tabs located on the bottom edge of the bezel into their locking slots, located on the chassis.

3. Pivot the bezel up toward the top of the chassis.

4. Align the release tabs to the matching slots located on the front of the I/O drawer.

5. Gently push the tabs into the slots until the bezel seats against the front of the I/O drawer.

6. If the I/O drawer is in the service position, put the I/O drawer back in the operating position as described in "Returning the D20 I/O Drawer to the Operating Position" on page 27.

7. Close the rack door.

PCI Adapters

Before removing or installing a hot-plug PCI adapter, refer to your system installation guide for detailed instructions.

Hot-Plug Disk Drives

Before removing or installing a hot-plug disk drive, refer to your system installation guide for detailed instructions.

LEDs

For LED definitions, refer to your system installation guide.

Appendix A. Communications Statements

This appendix contains EMC and safety regulatory statements for the D20. Statements for other products intended for use with this product appears in their accompanying documentation.

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Neither the provider nor the manufacturer is responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

European Union (EU) Statement

This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. The manufacturer cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of option cards supplied by third parties. Consult with your dealer or sales representative for details on your specific hardware.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

Attention: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

International Electrotechnical Commission (IEC) Statement

This product has been designed and built to comply with IEC Standard 950.

United Kingdom Telecommunications Safety Requirements

This equipment is manufactured to the International Safety Standard EN60950 and as such is approved in the UK under the General Approval Number NS/G/1234/J/100003 for indirect connection to the public telecommunication network.

The network adapter interfaces housed within this equipment are approved separately, each one having its own independent approval number. These interface adapters, supplied by the manufacturer, do not use or contain excessive voltages. An excessive voltage is one which exceeds 70.7 V peak ac or 120 V dc. They

interface with this equipment using Safe Extra Low Voltages only. In order to maintain the separate (independent) approval of the manufacturer's adapters, it is essential that other optional cards, not supplied by the manufacturer, do not use main voltages or any other excessive voltages. Seek advice from a competent engineer before installing other adapters not supplied by the manufacturer.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Industry Canada Class A Emission Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.

VCCI Statement

この装置は、クラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。　　　　　　ＶＣＣＩ－Ａ

The following is a summary of the VCCI Japanese statement in the box above.

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

Electromagnetic Interference (EMI) Statement - Taiwan

警告使用者：
這是甲類的資訊產品，在
居住的環境中使用時，可
能會造成射頻干擾，在這
種情況下，使用者會被要
求採取某些適當的對策。

The following is a summary of the EMI Taiwan statement above.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user will be required to take adequate measures.

Radio Protection for Germany

Dieses Gerät ist berechtigt in Übereinstimmung mit Dem deutschen EMVG vom 9.Nov.92 das EG–Konformitätszeichen zu führen.

Der Aussteller der Konformitätserklärung ist die IBM Germany.

Dieses Gerät erfüllt die Bedingungen der EN 55022 Klasse A. Für diese von Geräten gilt folgende Bestimmung nach dem EMVG:

Geräte dürfen an Orten, für die sie nicht ausreichend entstört sind, nur mit besonderer Genehmigung des Bundesministers für Post und Telekommunikation oder des Bundesamtes für Post und Telekommunikation betrieben werden. Die Genehmigung wird erteilt, wenn keine elektromagnetischen Störungen zu erwarten sind.

(Auszug aus dem EMVG vom 9.Nov.92, Para.3, Abs.4)

<u>Hinweis</u>

Dieses Genehmigungsverfahren ist von der Deutschen Bundespost noch nicht veröffentlicht worden.

Appendix B. Environmental Notices

Product Recycling and Disposal

Components of the system unit, such as structural parts and circuit boards, can be recycled where recycling facilities exist. Companies are available to disassemble, reutilize, recycle, or dispose of electronic products. Contact your account representative for more information. This system unit contains parts such as circuit boards, cables, electromagnetic compatibility gaskets and connectors which may contain lead and copper/beryllium alloys that require special handling and disposal at end of life. Before this unit is disposed, these materials must be removed and recycled or discarded according to applicable regulations. This book contains specific information on each battery type where applicable.

This product may contain a sealed lead acid, nickel cadmium, nickel metal hydride, lithium, or lithium ion battery. Consult your user manual or service manual for specific battery information. The battery must be recycled or disposed of properly. Recycling facilities may not be available in your area. For information on disposal of batteries, contact your local waste disposal facility.

Appendix C. Notices

This information was developed for products and services offered in the U.S.A.

The manufacturer may not offer the products, services, or features discussed in this document in other countries. Consult the manufacturer's representative for information on the products and services currently available in your area. Any reference to the manufacturer's product, program, or service is not intended to state or imply that only that product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any intellectual property right of the manufacturer may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any product, program, or service.

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Appendix D. System Records

Use this appendix to keep a record of the system's identification information.

Identification Numbers

Record and retain the following information:

Product Name	D20
Serial Number	

The system unit's identification numbers are located on the front of the machine, as shown in the following illustration:
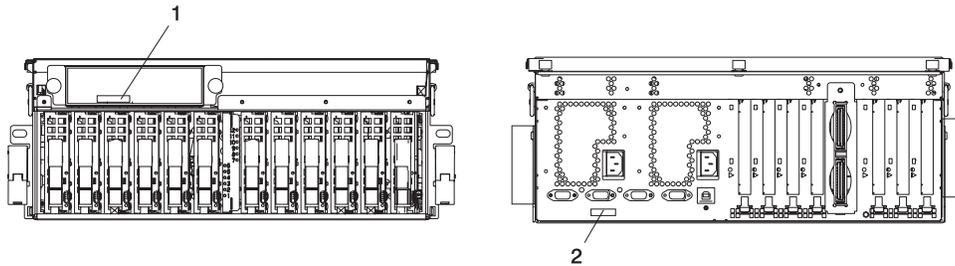

1 Front Serial Number Location
2 Rear Serial Number Location

Device Records

Use the following tables to keep a record of the PCI adapters and hot-plug disk drives installed in your D20. This information can be helpful when you install additional adapters or disk drives or if your system needs service.

Options
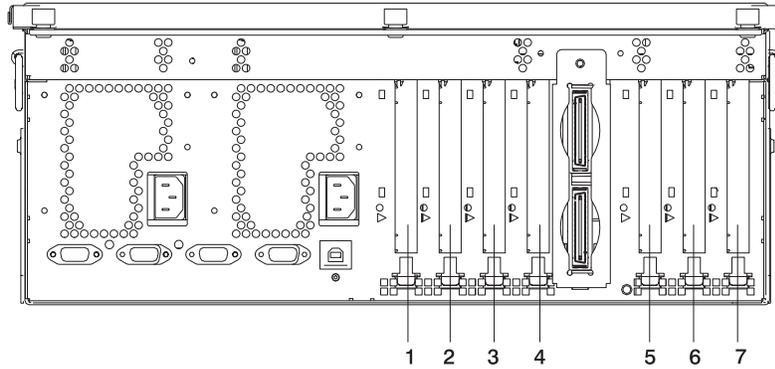
1 PCI-X Expansion Slot 1
2 PCI-X Expansion Slot 2
3 PCI-X Expansion Slot 3
4 PCI-X Expansion Slot 4

5 PCI-X Expansion Slot 5
6 PCI-X Expansion Slot 6
7 PCI-X Expansion Slot 7

Location	Option Description
PCI-X Slot 1	_____
PCI-X Slot 2	_____
PCI-X Slot 3	_____
PCI-X Slot 4	_____
PCI-X Slot 5	_____
PCI-X Slot 6	_____
PCI-X Slot 7	_____

SCSI IDs and Bay Locations

SCSI ID *n* DB1   SCSI ID *n* DB2
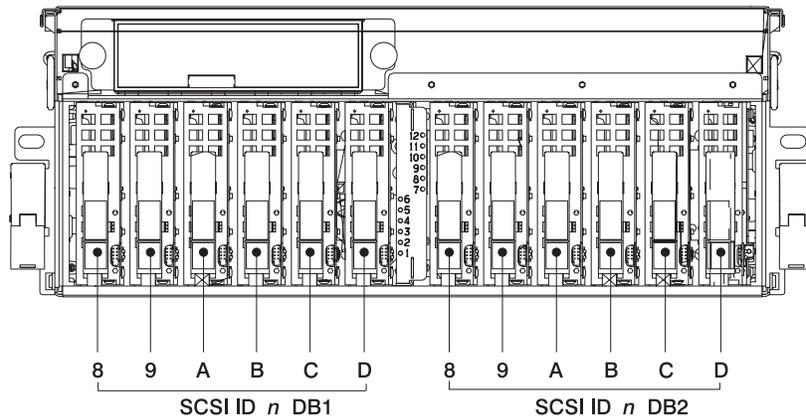
Index	Bay Location	Drive Name	SCSI ID
8 DB1	D01	Hot-Plug Disk Drive	8 - DB1
9 DB1	D02	Hot-Plug Disk Drive	9 - DB1
A DB1	D03	Hot-Plug Disk Drive	A - DB1
B DB1	D04	Hot-Plug Disk Drive	B - DB1
C DB1	D05	Hot-Plug Disk Drive	C - DB1
D DB1	D06	Hot-Plug Disk Drive	D - DB1
8 DB2	D07	Hot-Plug Disk Drive	8 - DB2
9 DB2	D08	Hot-Plug Disk Drive	9 - DB2
A DB2	D09	Hot-Plug Disk Drive	A - DB2
B DB2	D10	Hot-Plug Disk Drive	B - DB2
C DB2	D11	Hot-Plug Disk Drive	C - DB2
D DB2	D12	Hot-Plug Disk Drive	D - DB2

If you install a disk drive into your system, record the definition in the drive description field in the following table.

Drive	Location	SCSI ID	Drive Description
Hot-Plug Disk Drive	Disk Bay D01	SCSI ID - 8 DB1	_____
Hot-Plug Disk Drive	Disk Bay D02	SCSI ID - 9 DB1	_____
Hot-Plug Disk Drive	Disk Bay D03	SCSI ID - A DB1	_____
Hot-Plug Disk Drive	Disk Bay D04	SCSI ID - B DB1	_____
Hot-Plug Disk Drive	Disk Bay D05	SCSI ID - C DB1	_____
Hot-Plug Disk Drive	Disk Bay D06	SCSI ID - D DB1	_____
Hot-Plug Disk Drive	Disk Bay D07	SCSI ID - 8 DB2	_____
Hot-Plug Disk Drive	Disk Bay D08	SCSI ID - 9 DB2	_____
Hot-Plug Disk Drive	Disk Bay D09	SCSI ID - A DB2	_____
Hot-Plug Disk Drive	Disk Bay D10	SCSI ID - B DB2	_____
Hot-Plug Disk Drive	Disk Bay D11	SCSI ID - C DB2	_____
Hot-Plug Disk Drive	Disk Bay D12	SCSI ID - D DB2	_____

Appendix E. D20 I/O Drawer Removal from Rack

Before performing these procedures, read "Safety Notices" on page v.

CAUTION:
This unit weighs between 32 kg (70.5 pounds) and 55 kg (121.2 pounds). Three persons are required to safely move it. Using fewer than three persons to move it can result in injury.

CAUTION:
- **Removing the system drawer requires three people.**
- *Do not* **place more than one drawer in the service position at one time.**
- **Ensure that the system cables are not tangled and will not bind when placing the system drawer into the service or operating positions.**

I/O Drawer Removal

To remove the I/O drawer from the rack, do the following:

1. If you have not already done so, shut down the system as described in "Powering the System On and Off" on page 24.
2. Open the front and rear rack doors.
3. Disconnect all cables from the rear of the I/O drawer drawer.
4. Disconnect the cable-management arm by pulling out the two captive snap buttons from the rear of the system drawer. Disconnect the bracket attached to the EIA rail by removing the two thumbscrews.
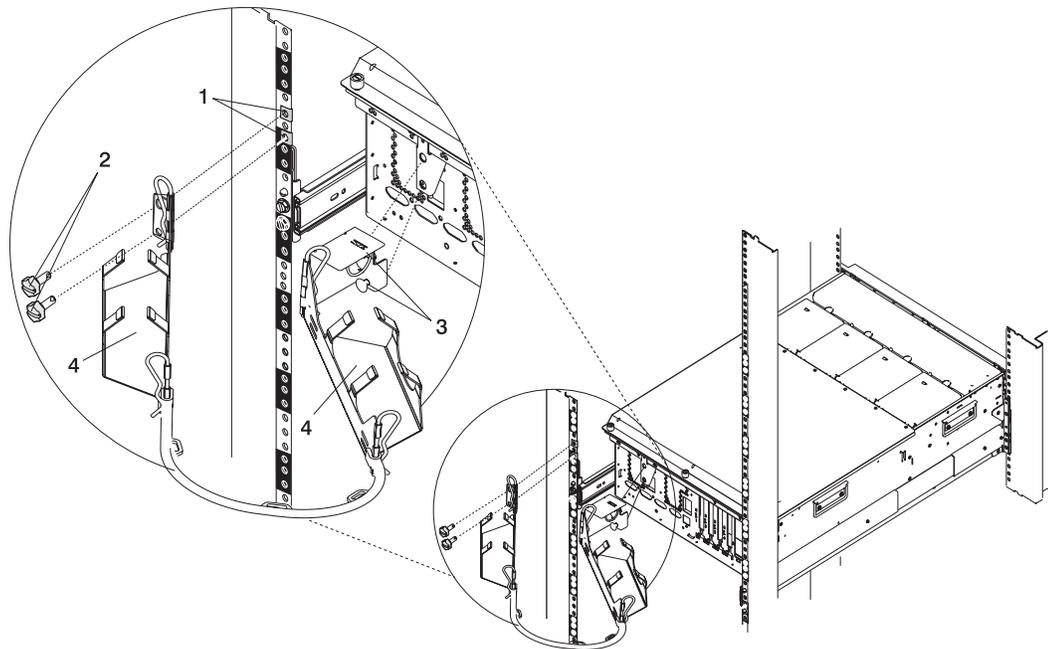

1	Nut Clips	**3**	Snap Buttons
2	Thumbscrews	**4**	Cable Management Arm

5. Put the I/O drawer into the service position. If necessary, refer to "Placing Your D20 I/O Drawer into the Service Position" on page 26.
6. Using four retaining screws, attach the two I/O drawer supports. If you no longer have the I/O drawer supports, contact your service representative.
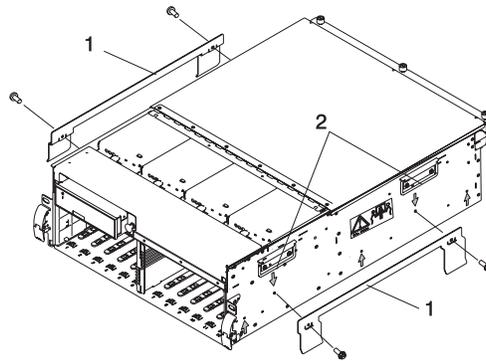
1 Left and Right I/O Drawer Supports
2 Lifting Handles

7. Remove the six retaining screws that secure the rails to the I/O drawer chassis.
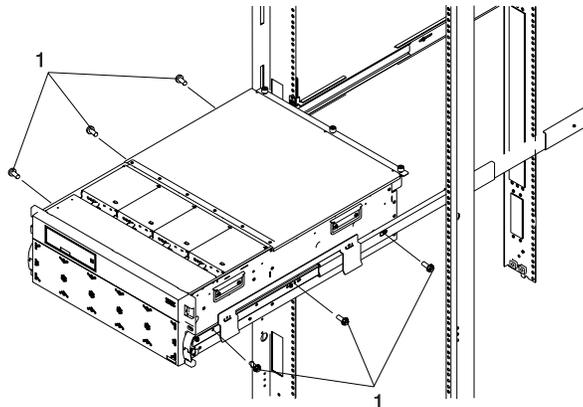
1 Rail to Drawer Retaining Screws

8. Using three persons, grasp the system drawer handles located on each side of the system.
9. Lift the drawer up, so that the I/O drawer supports clear the rails.
10. Place the I/O drawer in a safe place.
11. Push the extended rails carefully back into the rack.
12. Close the front and rear rack doors.

Index

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PLACE BAR CODE IN LOWER
LEFT CORNER

Bull

Utiliser les marques de découpe pour obtenir les étiquettes.
Use the cut marks to get the labels.

D20 I/O Drawer

Installation Guide

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