

Lenovo System x3750 M4 Rack Installation Instructions

Machine Type: 8753

Third Edition (August 2023)

© Copyright Lenovo 2015, 2023.

LIMITED AND RESTRICTED RIGHTS NOTICE: If data or software is delivered pursuant a General Services Administration (GSA) contract, use, reproduction, or disclosure is subject to restrictions set forth in Contract No. GS-35F-05925.

Contents

| | | | |
|--|-------------|---|-----------|
| Contents | i | Connecting and routing the cables | 11 |
| Safety information | .iii | Securing the cables with the hook-and-loop fasteners | 12 |
| Chapter 1. Rack kit parts inventory | 1 | Securing the cable management arm and the server in the rack for shipping | 12 |
| Chapter 2. Rack installation. | 3 | Installing the front screws | 13 |
| Identifying the rack space for the server | 3 | Chapter 3. Removing the server from the rack | 15 |
| Installing the rails in the rack | 3 | Unlatching and rotating the front of the server | 15 |
| Opening the front slide rail latches. | 3 | Lifting the server off the slide rails | 15 |
| Opening the rear slide rail hooks | 4 | Removing the cable management arm | 16 |
| Installing the rear end of the slide rails into the rack cabinet | 4 | Disconnecting the cable management arm stop bracket from the slide rail | 16 |
| Aligning the front of the slide rails to the rack cabinet | 5 | Disconnecting the cable management support bar from the cable management arm stop bracket | 17 |
| Installing the front end of the slide rails into the rack cabinet | 5 | Removing the cable management support bar from the slides rails | 17 |
| Installing the server on the slide rails. | 6 | Removing the slide rails from the front of the rack | 18 |
| Sliding the server into the rack cabinet | 7 | Removing the slide rails from the rear of the rack | 18 |
| Installing the cable management support bar | 8 | Chapter 4. Changing the cable management arm for installation on the right side of the rack. | 21 |
| Connecting the cable management support bar to the cable management arm stop bracket | 9 | Installing the cable management arm on the right side of the rack | 21 |
| Connecting the cable management arm stop bracket to the slide rail | 9 | | |
| Installing the cable management arm | 10 | | |
| Opening and closing the cable management arm stop bracket | 10 | | |

Safety information

The topic provides safety guidelines that you need to read before you install the server in a rack cabinet.

Review the documentation that comes with the rack cabinet for safety and cabling information. Before you install the server in a rack cabinet, review the following guidelines:

Notes:

- Use the M6 screws that come with slide rails to install the server in a rack cabinet if you plan to transport the rack cabinet to another location with the server installed or the rack is in a vibration-prone area.
- You can install the cable management arm on either side of the rack. These instructions are shown with the cable management arm mounted on the left side. The installation instructions in this document can be reversed if you are installing the cable management arm on the other side of the rack.
- Two or more people are required to install devices 2U or larger in a rack cabinet.
- See the server documentation for the maximum room air temperature.
- Do not block any air vents; usually 15 cm (6 in.) of space provides proper airflow.
- Do not leave open spaces above or below an installed server in your rack cabinet. To help prevent damage to server components, always install a blank filler panel to cover the open space and to help ensure proper air circulation.
- Install the server only in a rack cabinet with perforated doors.
- Plan the device installation starting from the bottom of the rack cabinet.
- Install the heaviest device in the bottom of the rack cabinet.
- Do not extend more than one device out of the rack cabinet at the same time.
- Remove the rack doors and side panels to provide easier access during installation.
- Connect the server to a properly grounded outlet.
- Do not overload the power outlet when you install multiple devices in the rack cabinet.
- Install the server in a rack that meets the following requirements:
 - Minimum depth of 70 mm (2.76 in.) between the front mounting flange and inside of the front door.
 - Minimum depth of 157 mm (6.18 in.) between the rear mounting flange and inside of the rear door.
 - Minimum depth of 718 mm (28.27 in.) and maximum depth of 762 mm (30 in.) between the front and rear mounting flanges to support the use of the cable management arm.

Note: The maximum distance between the front and the rear EIA rails of the rack is 810 mm (31.9 in.).

Statement 4



CAUTION: Use safe practices when lifting.



≥ 18 kg (39.7 lb)



≥ 32 kg (70.5 lb)



≥ 55 kg (121.2 lb)

Statement 26



CAUTION:
Do not place any object on top of rack-mounted devices.



Statement 37



 **DANGER**

When you populate a rack cabinet, adhere to the following guidelines:

- Always lower the leveling pads on the rack cabinet.
- Always install the stabilizer brackets on the rack cabinet.
- Always install the heaviest devices in the bottom of the rack cabinet.
- Do not extend multiple devices from the rack cabinet simultaneously, unless the rack-mounting instructions direct you to do so. Multiple devices extended into the service position can cause your rack cabinet to tip.
- If you are not using the IBM 9308 rack cabinet, securely anchor the rack cabinet to ensure its stability.

Chapter 1. Rack kit parts inventory

This information provides the list of items in the slide rail box kit and cable management arm box kit.

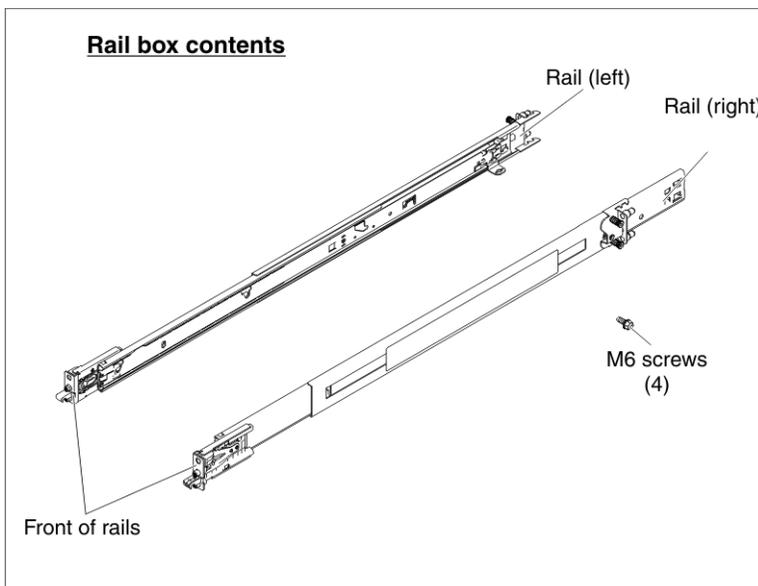
The server comes with all of the hardware that is necessary for you to install the server in the rack cabinet. The following illustrations display the items that you need to install the server in the rack cabinet. If any items are missing or damaged, contact your place of purchase.

Notes:

- You will need both the slide rail box kit and the cable management arm box kit for this installation.
- The hook-and-loop fasteners are located on the cable management arm.

The slide rail box kit includes the following hardware. This kit ships with the server.

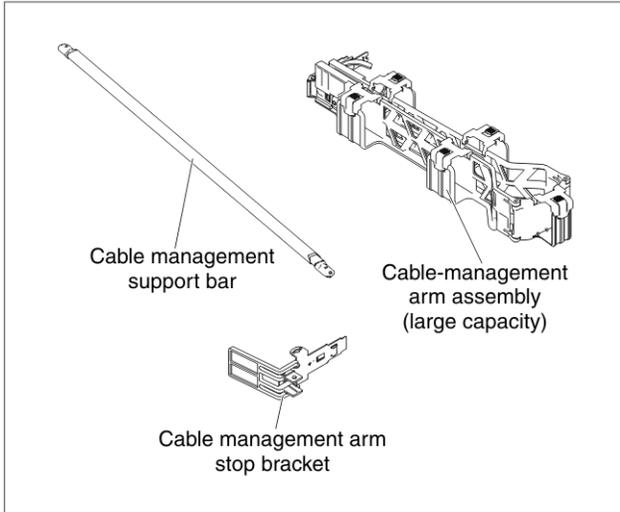
- One right server support rail
- One left server support rail
- Four M6 hex head screws



The cable management arm box kit includes the following hardware. This kit ships with the server.

- One cable management support bar
- One cable management arm assembly
- One cable management arm stop bracket

Cable Management Arm box contents



Chapter 2. Rack installation

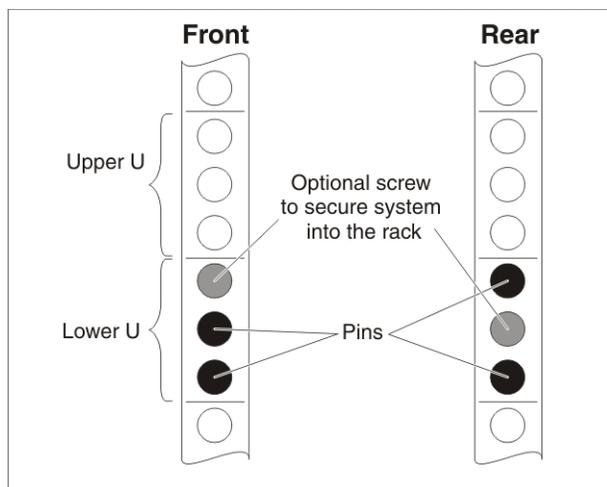
This section provides instructions for installing the server securely in a rack cabinet.

Identifying the rack space for the server

This topic provides information on identifying the space needed to install the server in the rack cabinet.

When you install the 2U server, be sure to choose the appropriate rack space to install the server in the rack as indicated below:

1. Install the slide rails in the bottom U of the 2U area in the rack.
2. Select an available 2U space in your rack to install your server.



Installing the rails in the rack

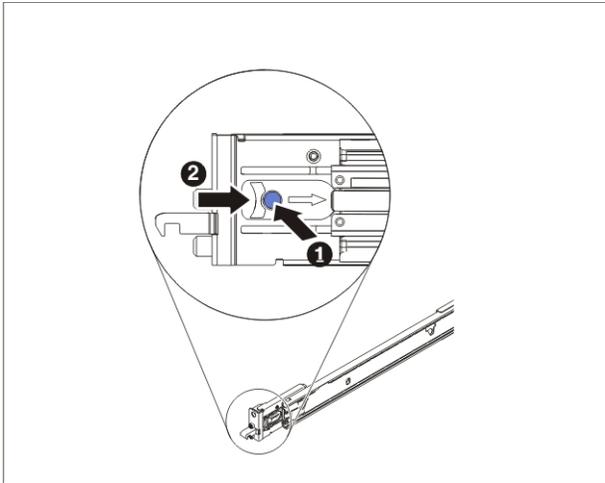
The information in this topic provides instructions about how to install the rails in the rack cabinet.

Opening the front slide rail latches

This topic provides information about how to open the front slide rail latches to install the slide rails into the rack cabinet.

To open the front slide rail latches, complete the following steps:

1. If your front slide rails are shipped with the front latches in the *open* position, proceed to [“Opening the rear slide rail hooks” on page 4](#).
2. If your front slide rails are shipped with the front latches in the *closed* position, complete the following step:
 - a. Open the latch by pushing the blue button in **1** and pushing the latch back **2**.



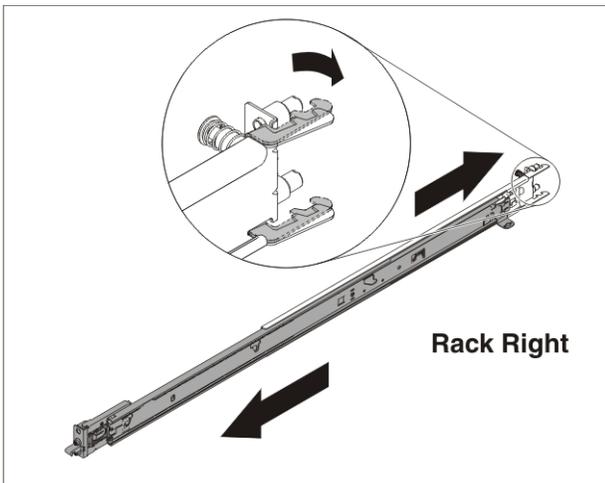
Opening the rear slide rail hooks

This topic provides information about how to open the rear slide rail hooks.

To open the rear slide rail hooks, complete the following steps:

1. Select the first slide rail you want to install.
2. Pull the rear bracket all the way back until it clicks into place.

Note: Each slide rail is marked with **LEFTFRONT/REAR** or **RIGHTFRONT/REAR** on its ends.

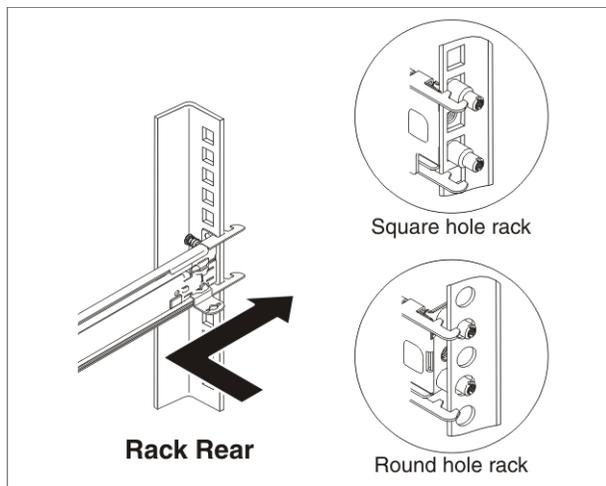


Installing the rear end of the slide rails into the rack cabinet

This topic provides information about how to install the rear end of the slide rails into the rack cabinet.

To install the rear end of the slide rails, complete the following steps:

1. From the front of the rack cabinet, line up the two pins on the rear of the slide rail in the lower U of the selected 2U on the rear of the rack cabinet.
2. Push the rails so that the pins go into the holes.
3. Slide the rails into the rack cabinet to lock the rear of the slide rails into the rack cabinet.

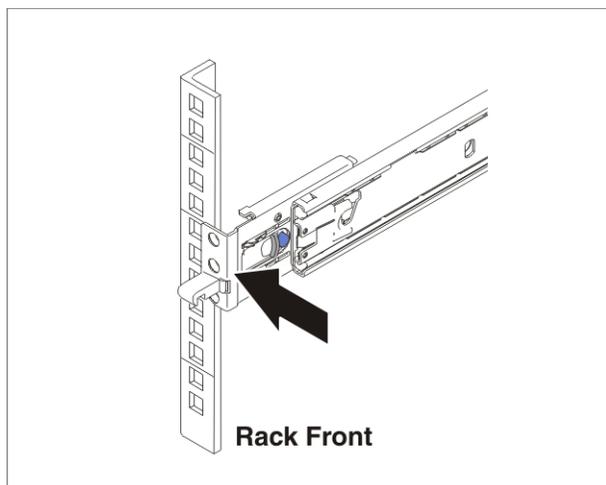


Aligning the front of the slide rails to the rack cabinet

This topic provides information about how to align the front of the slide rails to the rack cabinet.

To align the front of the slide rails to the rack cabinet, complete the following steps:

1. Pull the slide rails forward and locate the front latches in the appropriate U spaces in front of the rack EIA rails.
2. Make sure that the front end is being rotated into position with the front latch in front of the EIA rail of the rack.



Installing the front end of the slide rails into the rack cabinet

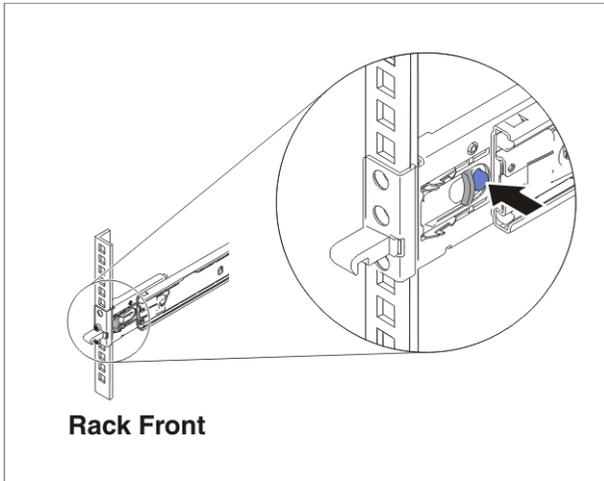
This topic provides information about how to install the front end of the slide rails into the rack cabinet.

To install the front end of the slide rails, complete the following steps:

1. Press the blue button to close the bracket with the pins.
2. Move the slide rail up and down to ensure the rail is fully engaged.
3. Repeat the steps in the following sections to install the other rail into the rack cabinet:
 - [“Opening the front slide rail latches” on page 3](#)
 - [“Opening the rear slide rail hooks” on page 4](#)

- “Installing the rear end of the slide rails into the rack cabinet” on page 4
- “Aligning the front of the slide rails to the rack cabinet” on page 5
- “Installing the front end of the slide rails into the rack cabinet” on page 5

Note: Make sure that each front latch is fully engaged.



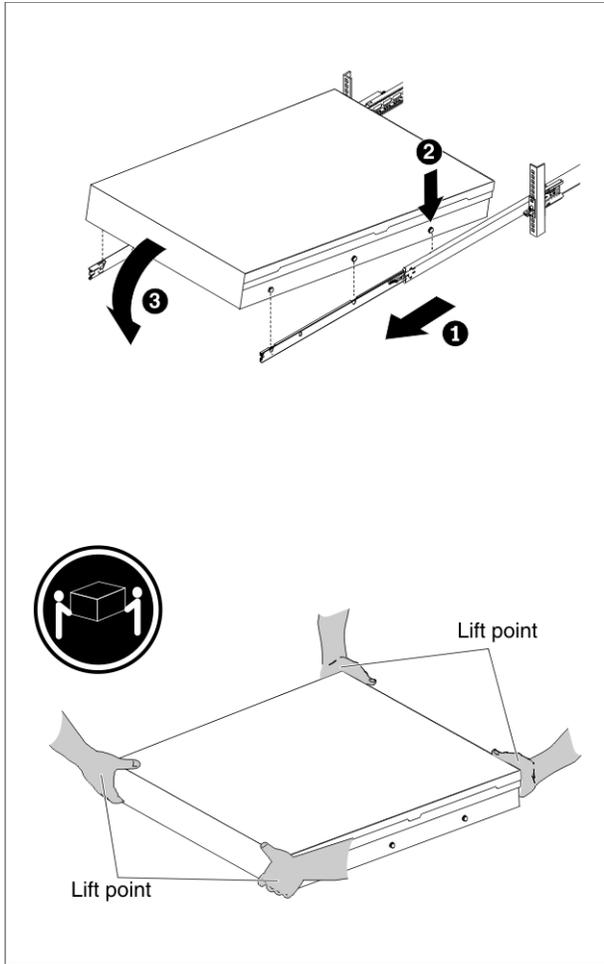
Installing the server on the slide rails

This topic provides information on how to install the server on the slide rails.

To install the server on the slide rails, complete the following steps:

1. Pull the slide rails forward **1** until the slide rails click into place.
2. Carefully lift the server. Tilt it into position over the slide rails so that the rear nailheads **2** on the server line up with the slots in the slide rails.
3. Lower the server down until the rear nailheads slip into the two rear slots.
4. Slowly lower the front of the server **3** until the other nailheads go into the other slots on the slide rails.

Note: Make sure the front latch covers the front nailhead to ensure the server is secured to the slide rails.

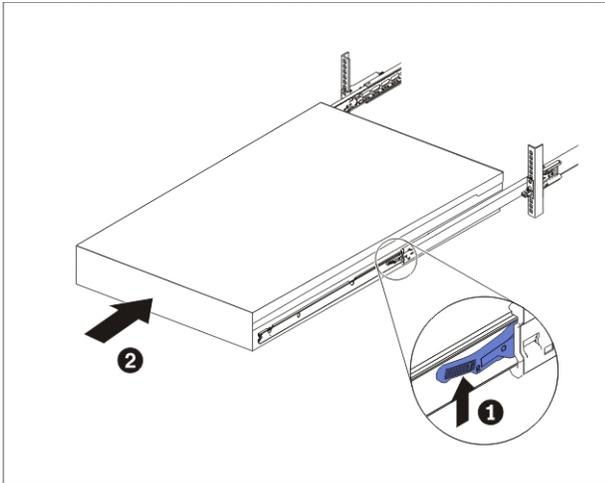


Sliding the server into the rack cabinet

This topic provides information about how to slide the server into the rack cabinet.

To slide the server into the rack cabinet, complete the following steps:

1. Lift the locking levers **1** on the slide rails.
2. Push the server **2** all the way into the rack cabinet until it clicks into place.



Installing the cable management support bar

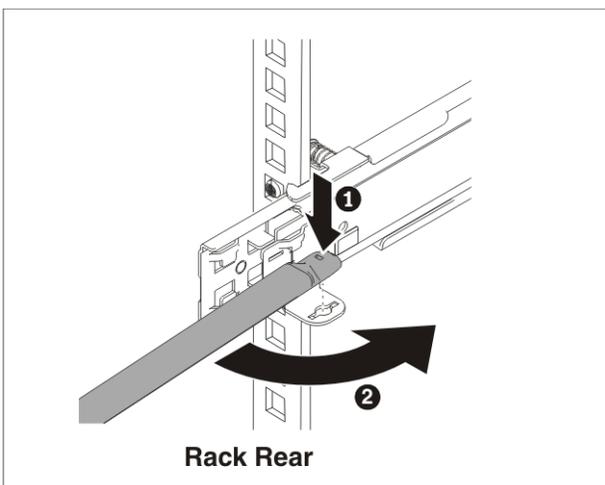
This topic provides information on how to install the cable management support bar.

Notes:

- The cable-management arm can be installed on either side of the rack. This document shows it being installed on the left side of the rack. To install the cable-management arm on the right side of the rack, see [“Installing the cable management arm on the right side of the rack” on page 21](#).
- The outer rail of the cable management support bar must be installed on the side that the cable management arm is attached to.

To install the cable management arm on the left-rear side of the rack, complete the following steps:

1. Align the cable management arm stop bracket parallel to the slide rail.
2. Lower the end of the cable management support bar **1** to the same slide rail to which you plan to attach the cable management arm.
3. Rotate the cable management support bar towards the rear of the server **2**.

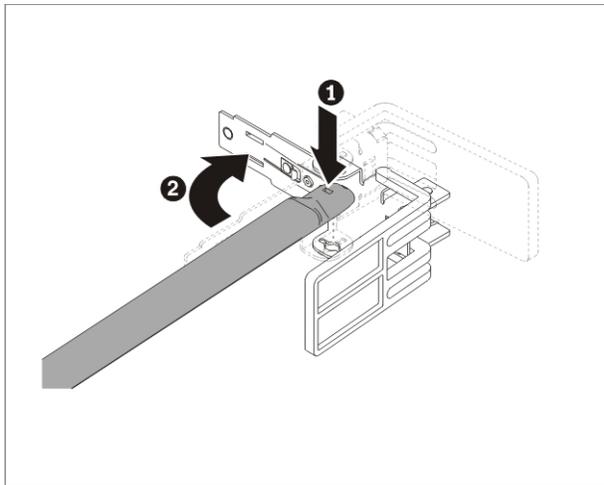


Connecting the cable management support bar to the cable management arm stop bracket

This topic provides information on how to connect the cable management support bar to the cable management arm stop bracket.

To connect the cable management support bar to the cable management arm stop bracket, complete the following steps:

1. Align the cable management arm stop bracket so that the metal tab is parallel to the cable management support bar.
2. Place the tab located on the underside of the cable management support bar into the lower hole in the cable management arm stop bracket **1**.
3. Rotate the cable management arm stop bracket **2** until the metal tab faces the back of the slide rail.



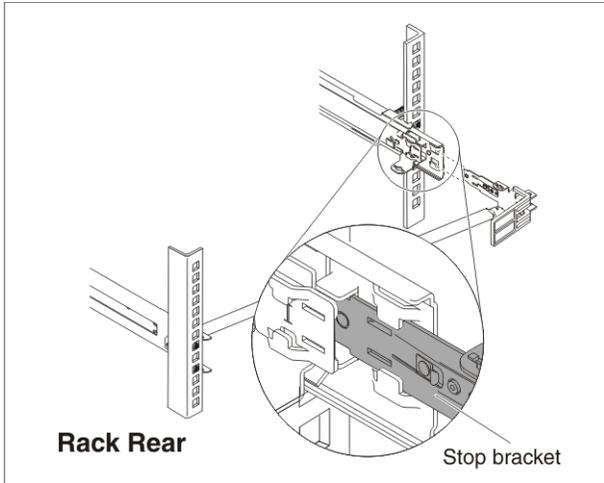
Connecting the cable management arm stop bracket to the slide rail

This topic provides information on how to connect the cable management arm stop bracket to the slide rail.

To identify the inside and outside tabs, the capital letters **I** and **O** are printed on the cable management arm tabs and the cable management arm stop bracket.

To connect the cable management arm stop bracket to the slide rail, complete the following steps:

1. Install the cable management arm stop bracket (with capital letter **O**) on the outer slide member (with capital letter **O**).
2. Make sure that the cable management support bar is securely installed.

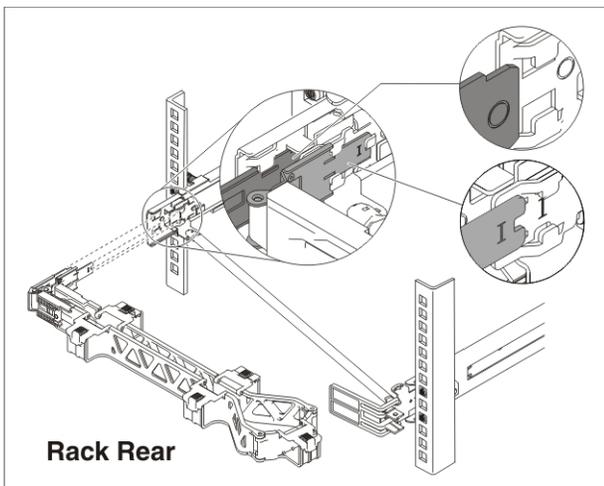


Installing the cable management arm

This topic provides information on how to install the cable management arm to the rack cabinet.

To install the cable management arm, complete the following steps:

1. Place the cable management arm on the cable management support bar.
2. Align the inner and outer tabs of the cable management arm with the inner and outer slots on the slide rails.
3. Slide the cable management arm tabs into both the inside and the outside slots of the slide rail.
4. Push the tabs until they snap into place.



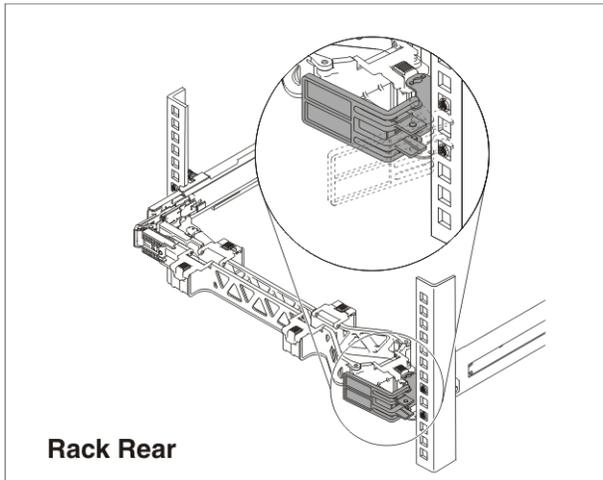
Opening and closing the cable management arm stop bracket

This topic provides information about the cable management arm stop bracket.

To make it easier to rotate the cable management arm on and off the cable management support bar, complete the following steps:

1. Open the cable management arm stop bracket by pushing the tabs located above and below the support stop bracket.

2. Rotate the cable management arm away from the server after opening the support stop bracket.
- 3.



Connecting and routing the cables

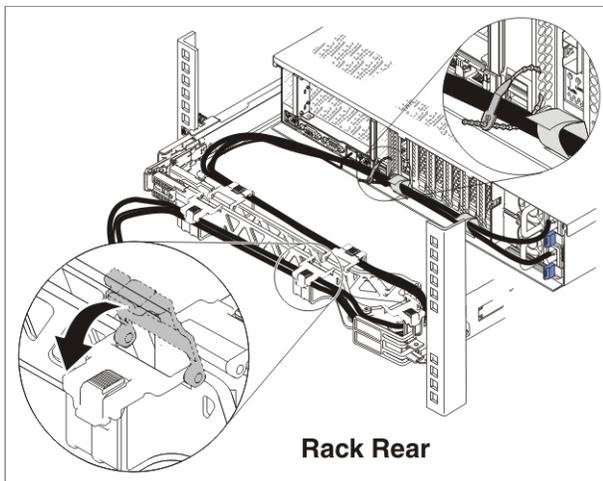
This topic provides information on how to connect and route the cables to the server.

Notes:

- The location of the cable straps may be slightly different on your server.
- Use the cable straps provided on the rear of the server to retain the cables and prevent them from sagging.

To connect and route the cables to the server, complete the following steps:

1. Open the blue retaining clips on the cable management arm to allow the cables to be routed in the cable management arm.
2. Attach the power cords and other cables to the rear of the server (including keyboard, monitor, and mouse cables, if required).
3. Route the cables and power cords in the cable management arm.
4. Close the retaining clips on the cable management arm.



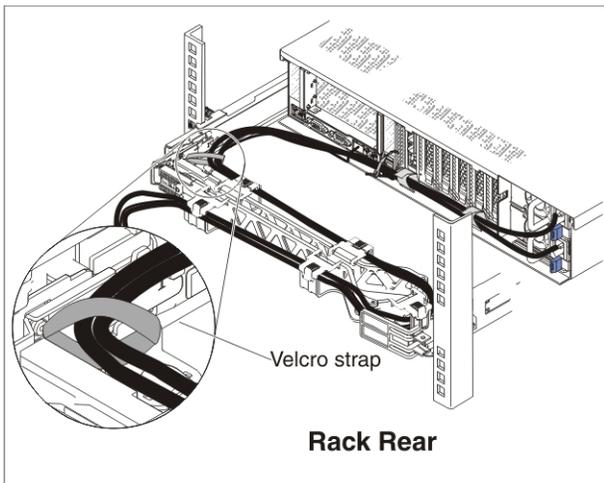
Securing the cables with the hook-and-loop fasteners

This topic provides information about securing the cables with the hook-and-loop fasteners.

Cables must be bundled with hook-and-loop fasteners for proper movement of the cable management arm.

Notes:

1. Make sure the cables do not sag below the U space so they will not get caught on the lower servers.
2. Allow slack in all cables to avoid tension in the cables as the cable management arm moves.
3. Pull the server in and out of the rack twice to make sure the cables are routed correctly and to ensure there is no strain on any cables while sliding the server in and out of the rack.

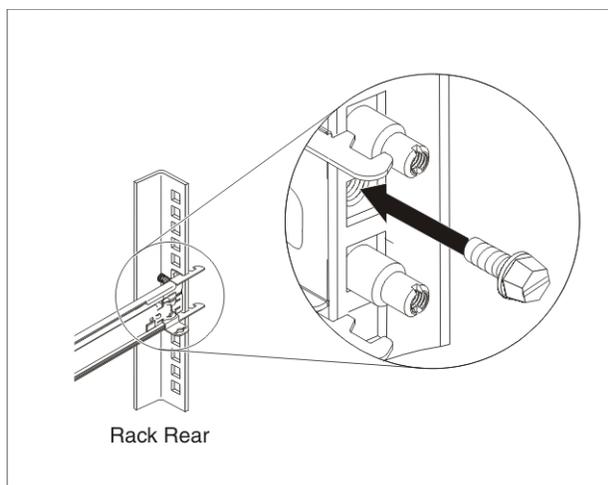


Securing the cable management arm and the server in the rack for shipping

This topic provides information about how to secure the cable management arm and the server in the rack for shipping.

To secure the cable management arm and the server in the rack for shipping (if the shipping the rack with the server installed or if you are in a vibration-prone area).

1. Insert the M6 screws to the rear of the slides.
2. Use a cable tie to secure the free end of the cable management arm to the rack, if needed.

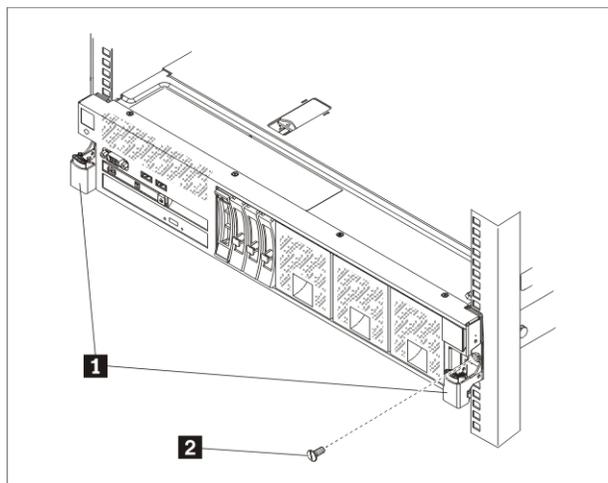


Installing the front screws

This topic provides information about installing the screws in the front of the server.

To install the screws in the front of the server, if needed, when you move the rack cabinet, or if you install the rack cabinet in a vibration-prone area, complete the following steps:

1. Press on the release latches **1** to slide the server out of the rack.
2. Insert the M6 screws **2** in the front of the server.



Chapter 3. Removing the server from the rack

Use this information to remove the server from the rack cabinet.

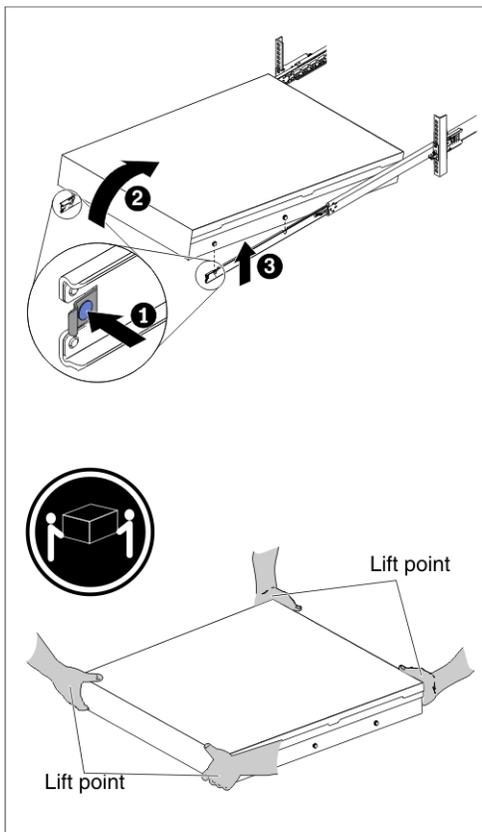
Unlatching and rotating the front of the server

This topic provides information about how to unlatch and rotate the front of the server.

Note: Make sure that you have two people when lifting the server. Their hands should be positioned as illustrated.

To remove the server from the rack, complete the following steps:

1. Disconnect the cables from the rear of the server.
2. Press the release latches **1** inward, while supporting the rear of the server.
3. Lift the front of the server up slightly **2** to clear the nailhead **3** from the slot.



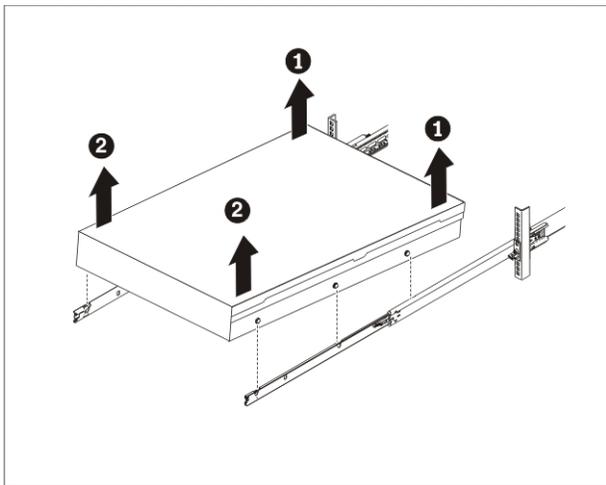
Lifting the server off the slide rails

This topic provides information about how to lift the server off of the slide rails.

Note: Use safe practices while lifting.

To lift the server off of the slide rails, complete the following steps.

1. Lift up on the front or the server, then after the front nailheads clear the latches, lift up on the rear **1** of the server to level the server.
2. Lift the server out of the rack **2** and place the server on a sturdy surface.

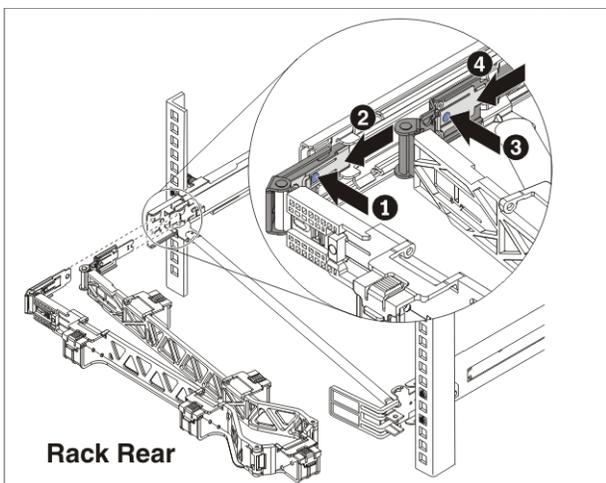


Removing the cable management arm

This topic provides information on how to remove the cable management arm from the rack cabinet.

To remove the cable management arm, complete the following steps:

1. Slide the slide rails forward slightly to access both cable management arm mounting brackets.
2. Push the blue touchpoint on one of the mounting brackets; then, slide the bracket toward the rear until the bracket is released.
3. Repeat [Step 2](#) for the other mounting bracket.
4. Remove the cable management arm from the rack cabinet.

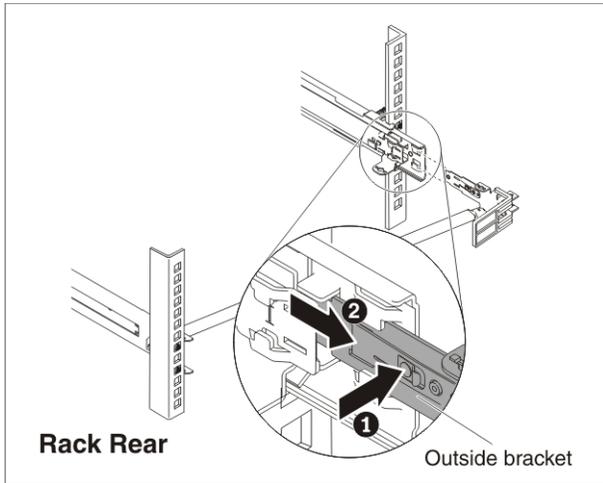


Disconnecting the cable management arm stop bracket from the slide rail

This topic provides information on how to disconnect the cable management arm stop bracket from the slide rail.

To disconnect the cable management arm stop bracket from the slide rail, complete the following steps:

1. Push the blue touchpoint **1** on the cable management arm stop bracket.
2. Slide the stop bracket toward the rear **2** to disconnect the stop bracket from the slide rail.

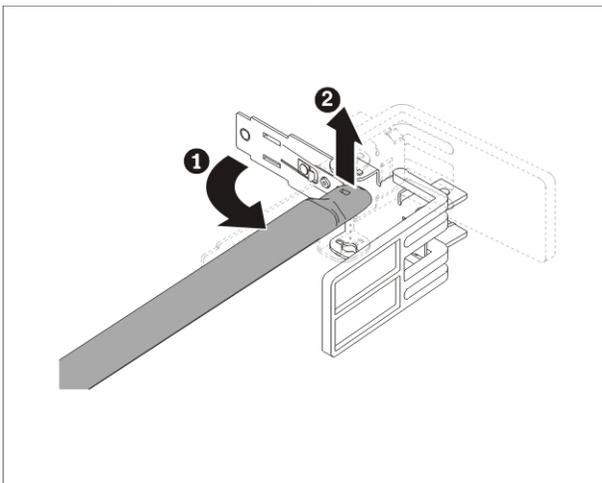


Disconnecting the cable management support bar from the cable management arm stop bracket

This topic provides information on how to disconnect the cable management support bar from the cable management arm stop bracket.

To disconnect the cable management support bar from the cable management arm stop bracket, complete the following steps:

1. Rotate the cable management arm stop bracket *one-quarter* turn relative to the cable management support bar **1**.
2. Lower the cable management arm stop bracket slightly to separate it from the cable management support bar **2**.

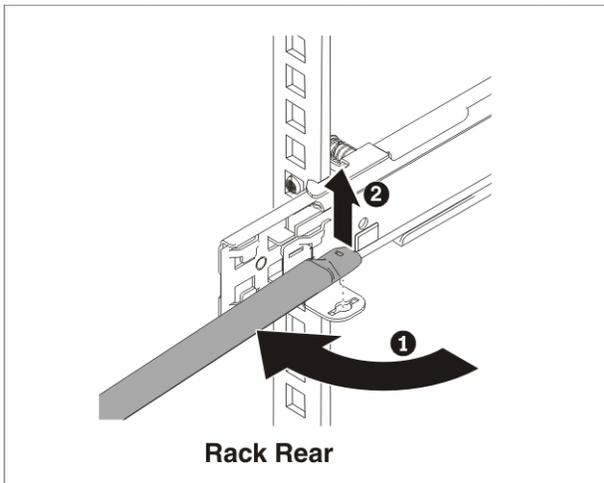


Removing the cable management support bar from the slides rails

This topic provides information on how to remove the cable management support bar from the slide rails.

To remove the cable management support bar from the slide rails, complete the following steps:

1. Rotate the cable management support bar toward the rear of the rack so it is parallel to the slide rails **1**.
2. Lift the front end of the cable management support bar slightly to disengage it from the hole on the slide rail **2**.
3. Remove the support bar from the slide rail.

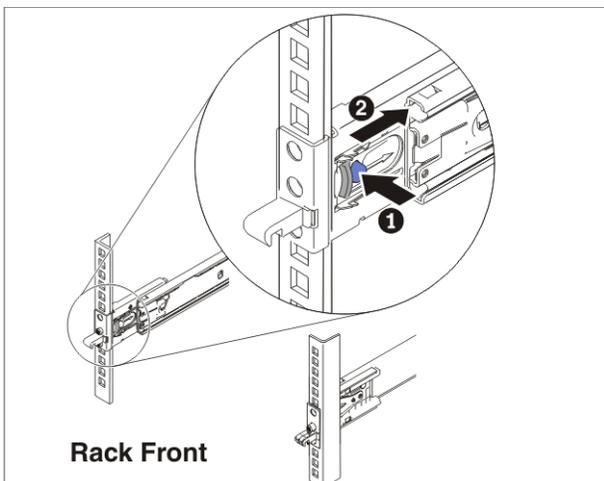


Removing the slide rails from the front of the rack

This topic provides information on how to remove the slide rails from the front of the rack.

To remove the slide rails from the front of the rack, complete the following steps:

1. Push in on the blue button **1** and slide the latch assembly backward until the latch clicks into the open position **2**.
2. Rotate the front end of the slide rail towards the center of the rack.

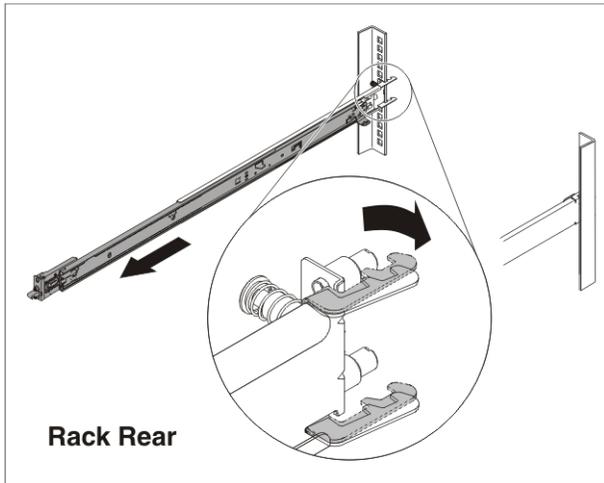


Removing the slide rails from the rear of the rack

This topic provides information on how to remove the slide rails from the rear of the rack.

To disengage the slide rails from the rear of the rack, complete the following steps:

1. Pull the front of the slide rail forward to unlatch the rear hooks.
2. Remove the slide rail from the rack.



Chapter 4. Changing the cable management arm for installation on the right side of the rack

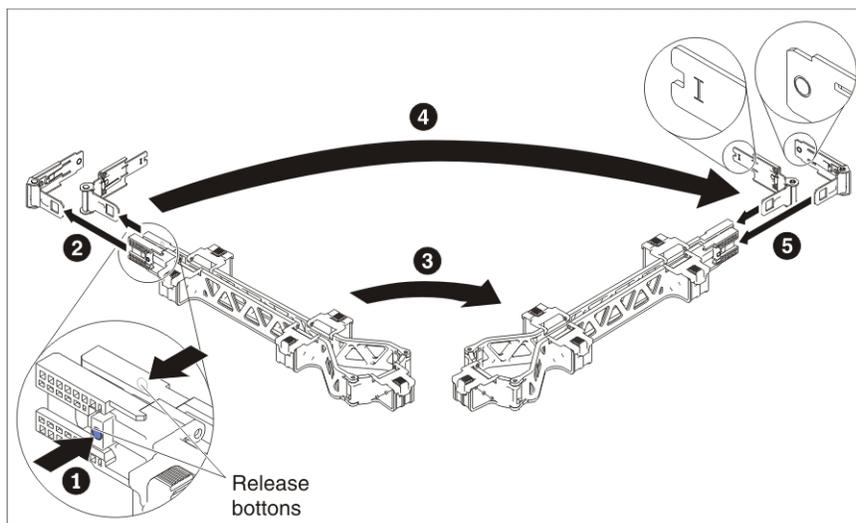
Use this information for instructions on how to install the cable management arm on the right side of the rack.

Installing the cable management arm on the right side of the rack

This topic provides information on how to install the cable management arm on the right side of the rack.

To install the cable management arm on the opposite side, complete the following steps:

1. Press the release buttons **1** and slide the mounting brackets **2** out of the cable management arm.
2. Rotate the cable management arm **3**, and flip the mounting brackets **4**.
3. Insert the inner bracket (marked with **1**) and outer bracket (marked with **0**) into the inner and outer sections of the cable management arm **5**.



Part Number: 00MV580

Printed in China

(1P) P/N: 00MV580

