IBM

Rack Installation Instructions for IBM Gen-III Slides Kit

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:

- Two or more people are required to install devices 2U or larger in a rack cabinet.
- See the server *Installation and User's Guide* 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.
- 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.).

Use safe practices when lifting.

≥18 kg (39.7 lb) ≥32 kg (70.5 lb) ≥55 kg (121.2 lb)

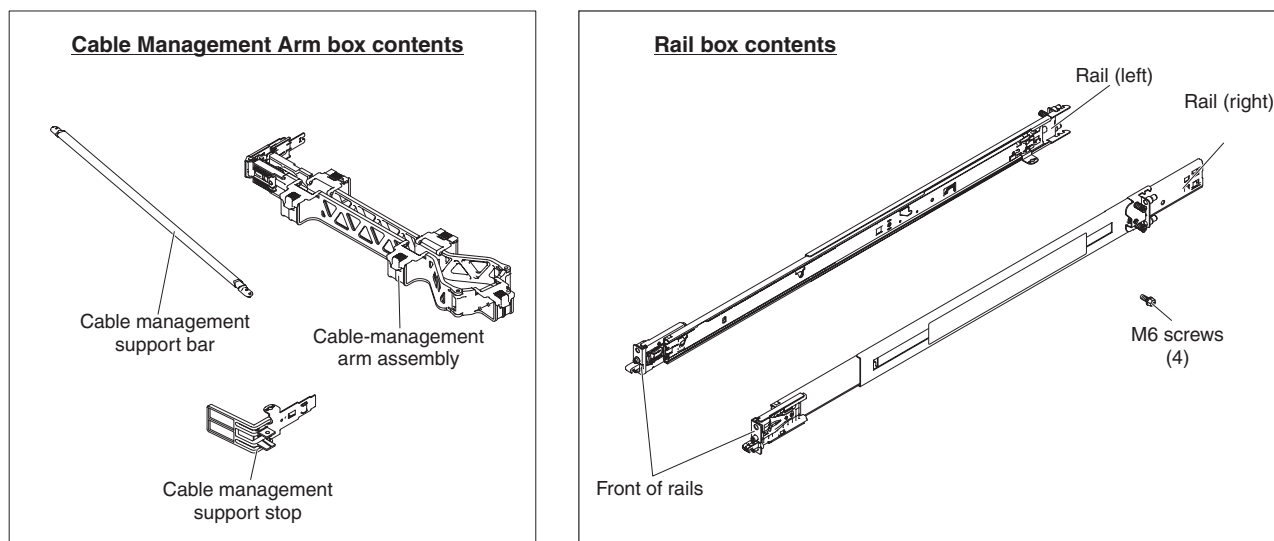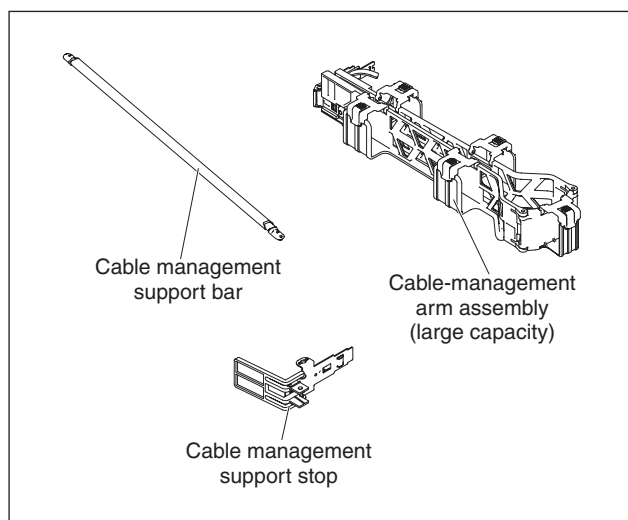Do not place any object on top of rack-mounted devices.

Notes:

1. Clip nuts/cage nuts are not used with the slide kit and tools are only needed if the rack is to be shipped after installation or the rack is in a vibration-prone area.
2. You can install the cable management arm on either side of the server. 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 side of the server not shown.

The following illustration shows 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.

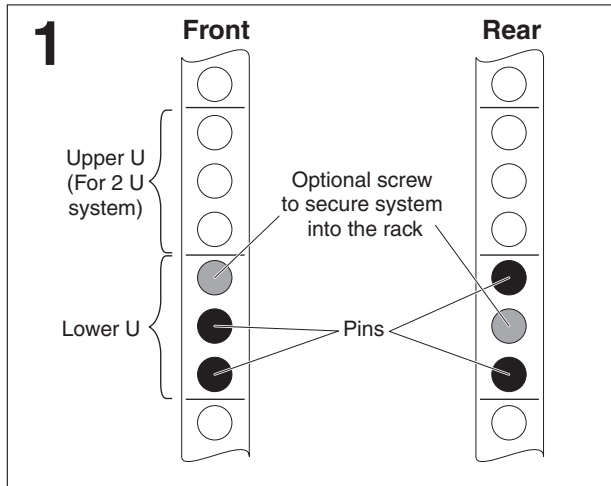**Note:** You will need both the slide rail box and the cable management arm box for this installation.

Or, you can choose the optional cable management arm assembly for large capacity:

Description	Option part number
Gen-III Slides Kit	81Y6821
Gen-III Cable Management Arm	81Y6822
Gen-III Large Capacity Cable Management Arm	69Y1192

Note: The part numbers may change.

1

Front   **Rear**

Upper U
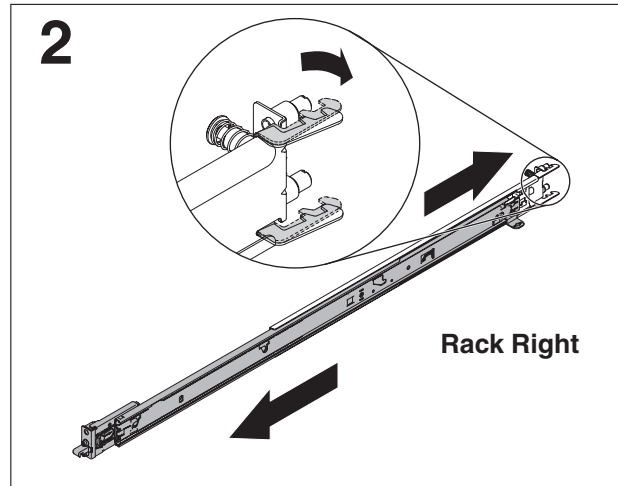(For 2 U
system)

Optional screw
to secure system
into the rack

Lower U   Pins

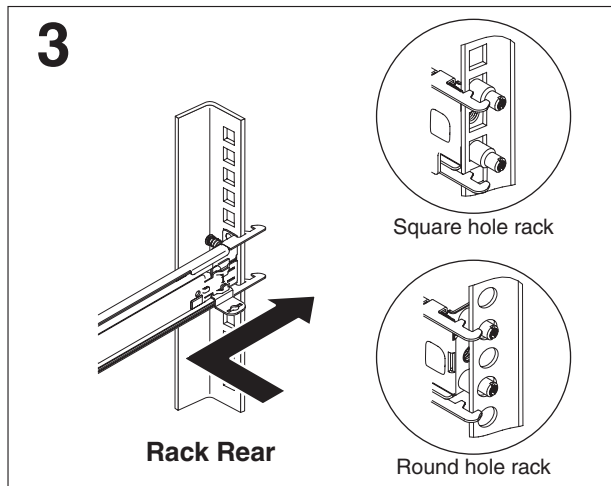**Identify rack space for system.**

Note: When you install a 2U server, be sure to install the slide rails in the bottom U of the 2U area in the rack.

Select an available 1 U or 2 U space (depending on the server you are installing) in your rack to install your server.

2

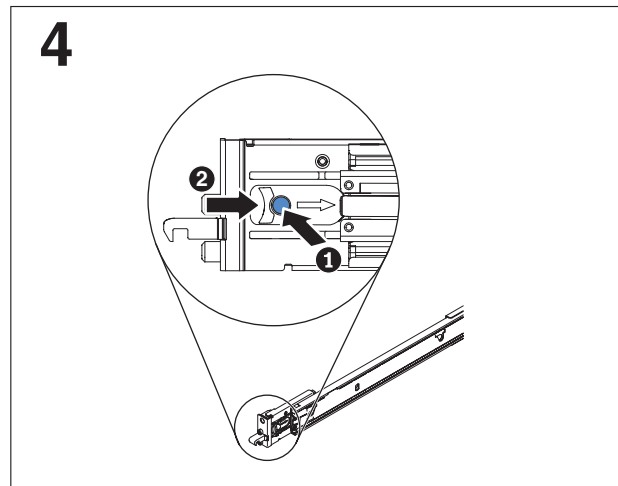**Rack Right**

Open the rear slide rail hooks.

Each slide rail is marked with either `LEFT` `FRONT/REAR` or `RIGHT` `FRONT/REAR` on its ends. Select one of the slide rails and pull the rear bracket all the way back until it clicks into place.

3

Square hole rack

Rack Rear

Round hole rack

Install the rear end of the slide rails.

Note: If you are installing the slide rails into a 1U space with devices already installed directly above and below this 1U space, you will need to extend the rails to slide the rear of the slide rails into the rear of the rack.
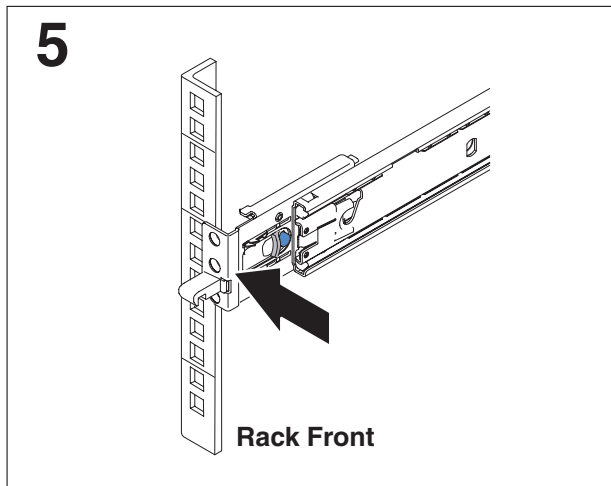
From the front of the rack, line up the two pins on the rear of the slide rail in the selected U on the rear of the rack. Push the rails so that the pins go into the holes and slide the rails into the rack to lock the rear of the slide rails into the rack.

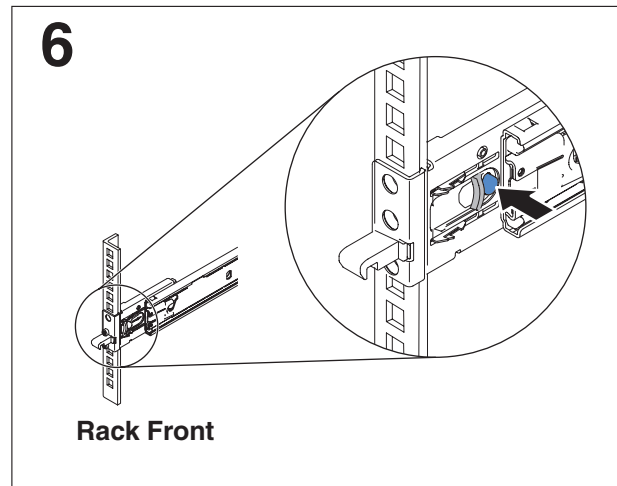**4**

Open front slide rail latch.

Note: If your slide rails are shipped with the front latches in the open position, skip this step and go to step `5` .

If they are closed when you receive them, open the latches by pushing the blue button in and pushing the latch back.

5

Rack Front
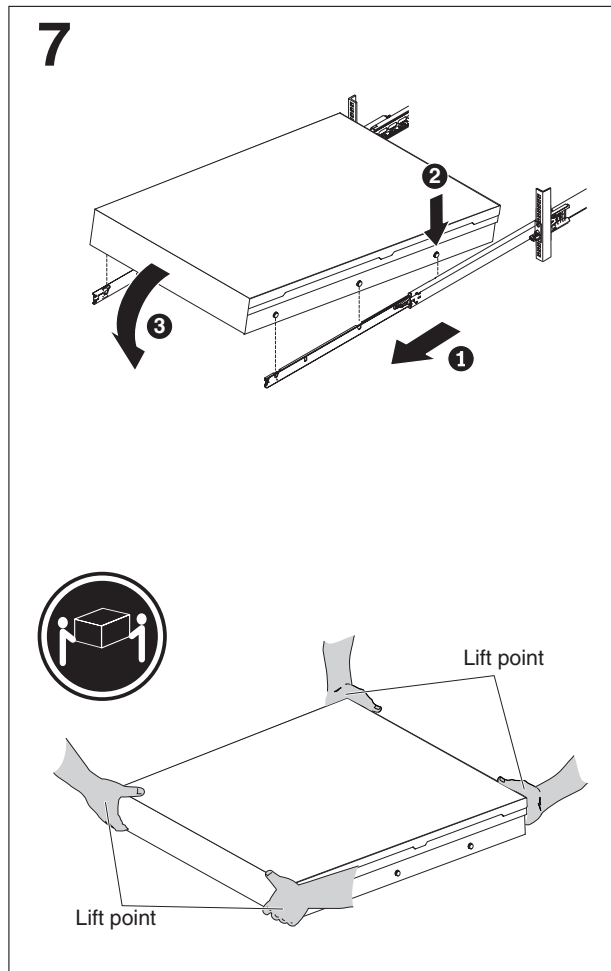
Align front of slide rails to rack.

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

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Rack Front

Install the front end of the slide rails.

Press the blue button to close the bracket with the pins. Moving the slide rail up and down to ensure the rail is fully engaged.

Repeat steps 1 through 5 to install the other rail into the rack. Make sure that each front latch is fully engaged.
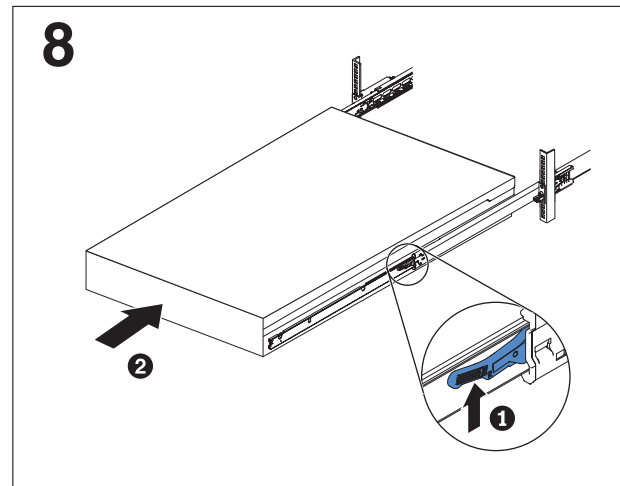
7

8

Lift point

Lift point

Install the server on the slide rails.
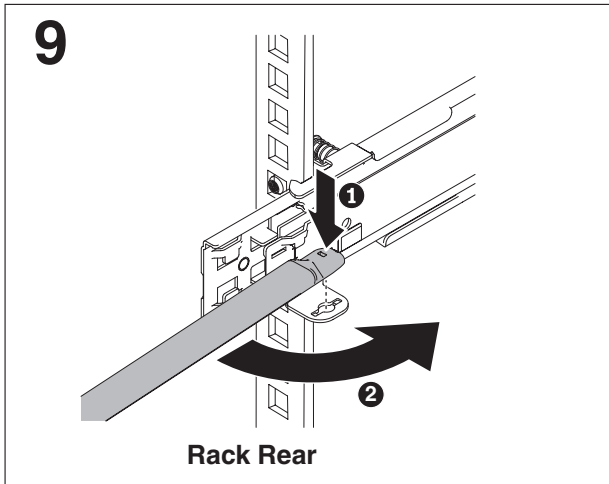
Notes:

1. Use safe practices while lifting.

2. If you are installing a 2U server, make sure that you have two people when lifting the server. Their hands should be positioned as illustrated.

Pull the slide rails forward **1** until they click, two times, into place. Carefully lift the server and 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. Lower the server down until the rear nailheads slip into the two rear slots, and then slowly lower the front of the server **3** until the other nailheads go into the other slots on the slide rails (by hearing the clicks twice). Make sure the front latch covers the front nailhead so the system is secured to the slide rails.

Slide the server into the rack.

Lift the locking levers **1** on the slide rails and push the server **2** all the way into the rack until it clicks into place.
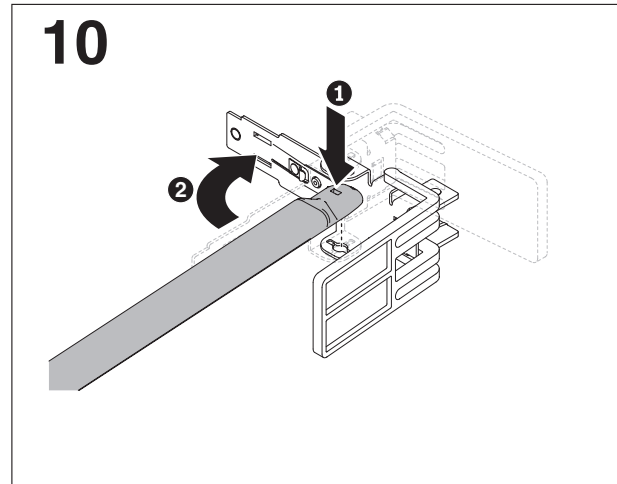
9

Rack Rear

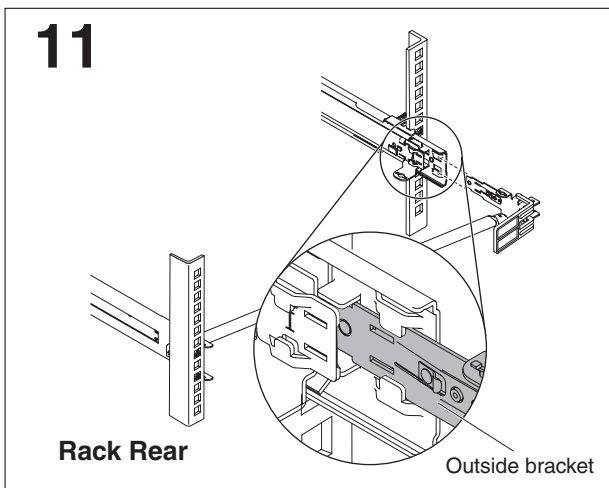**Install the cable management support arm.**

Notes:

1. The cable-management arm can be installed on either side of the server. This document shows it being installed on the left side. To install the cable-management arm on the right side, follow the instructions in the `Appendix` section and install the hardware on the opposite side.

2. Make sure the inner rail of the cable management support arm must be on top in order to work correctly.

Install the cable management arm on the left-rear side of the server. Connect one end of the support arm to the same slide rail to which you plan to attach the cable management arm so that you can swing the other end of the support arm toward the rack.
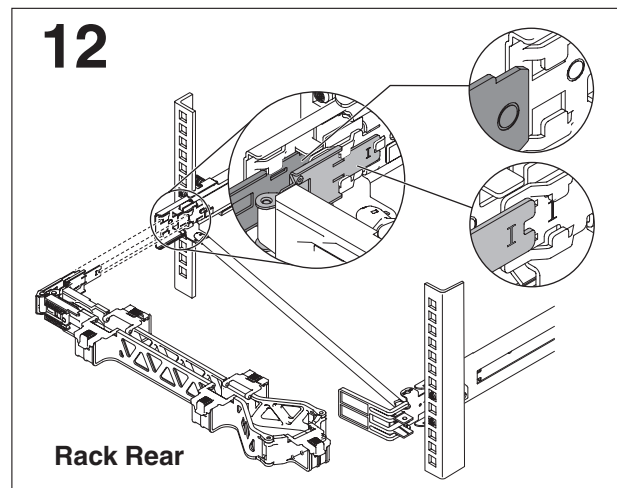
10

Connect cable management support arm to the stop bracket.

Connect the other end of the support arm to the stop bracket.
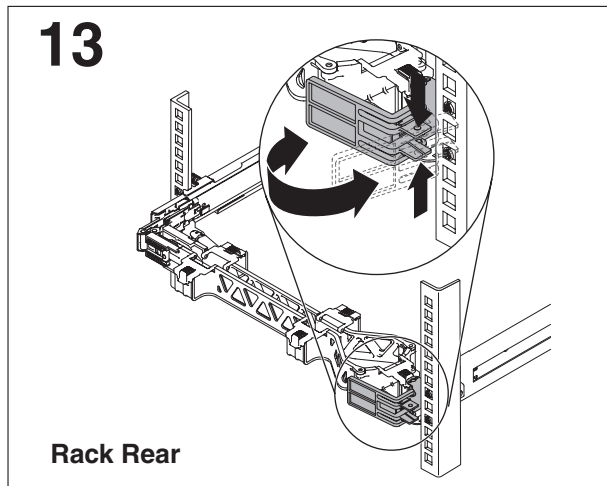
11

Rack Rear

Outside bracket

Connect the stop bracket to the slide rail.

The capital letters `I` and `O` are printed on cable management arm pins to identify the inside and outside pins. Install the cable management stop bracket (with capital letter `O`) on the unattached end of the support arm. Make sure the support arm is securely installed.
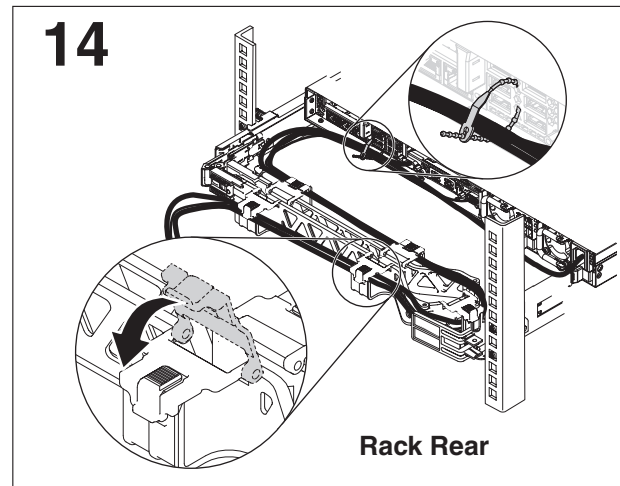
12

Rack Rear

Install the cable management arm stop bracket.

Place the cable management arm on the support arm. Pull out both the inside and the outside pins of the cable management arm and then slide the cable management arm tabs into both the inside and the outside slots of the slide rail. Push the tabs until they snap into places.

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Rack Rear

Close the cable management support stop.

In order to make it easier to rotate the cable management arm on and off the cable management support arm, you can open the stop bracket by pushing the tabs above and below the cable management support stop bracket for closing it.
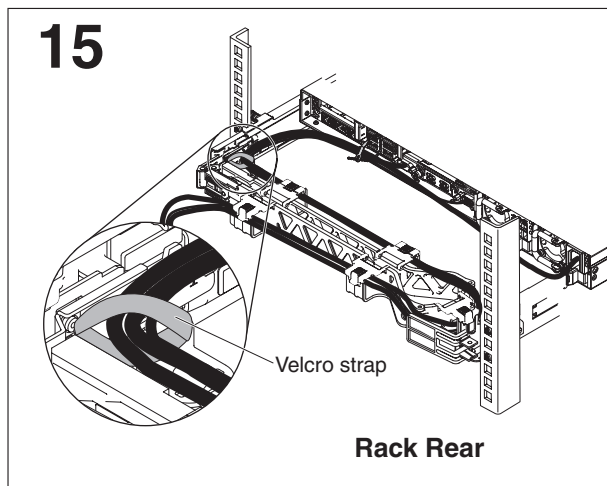
14

Rack Rear

Connect and route the cables.

Notes:

1. The location of the cable straps may be slightly different in different systems.
2. Use the cable straps provided on the rear of the system to retain the cables and prevent them from sagging.

Attach the power cords and other cables to the rear of the server (including keyboard, monitor, and mouse cables, if required).

Route the cables and power cords on the cable management arm and secure them with cable ties or hook-and-loop fasteners.
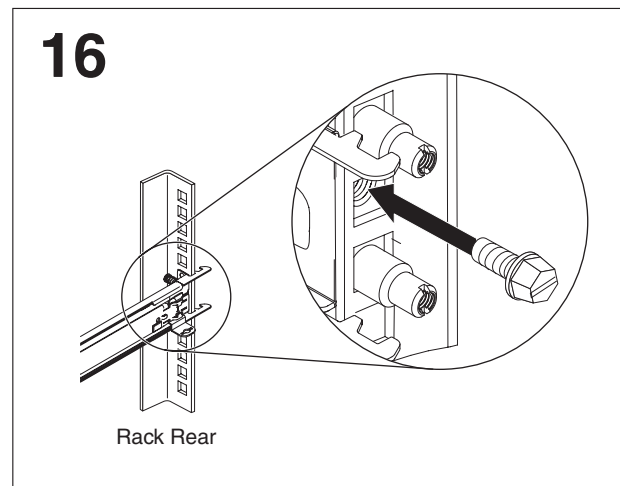
15

Velcro strap

Rack Rear

Secure the cables with velcro strap.

Cables must be bundled with velcro strap for proper movement of the cable management arm.
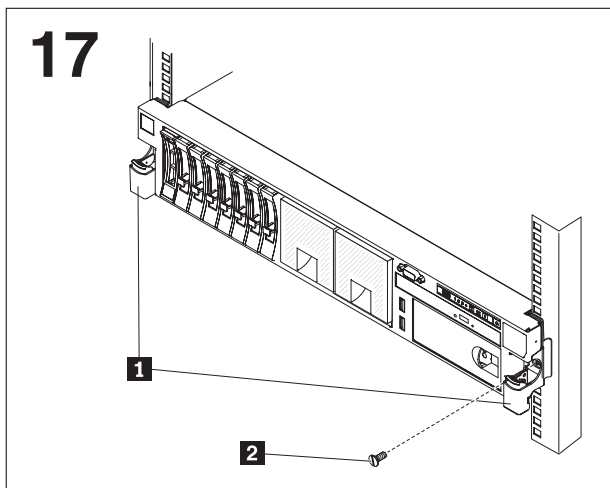
Notes:

1. Make sure the cables do not sag below the U space so they will not get caught on the lower systems.
2. Allow slack in all cables to avoid tension in the cables as the cable management arm moves.

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Rack Rear

Secure the cable management arm and the server in the rack for shipping if needed.

If you are shipping the rack with the system installed or if you are in a vibration-prone area, insert the M6 screws to the rear of the slides. Use a cable tie to secure the free end of the cable management arm to the rack if needed.
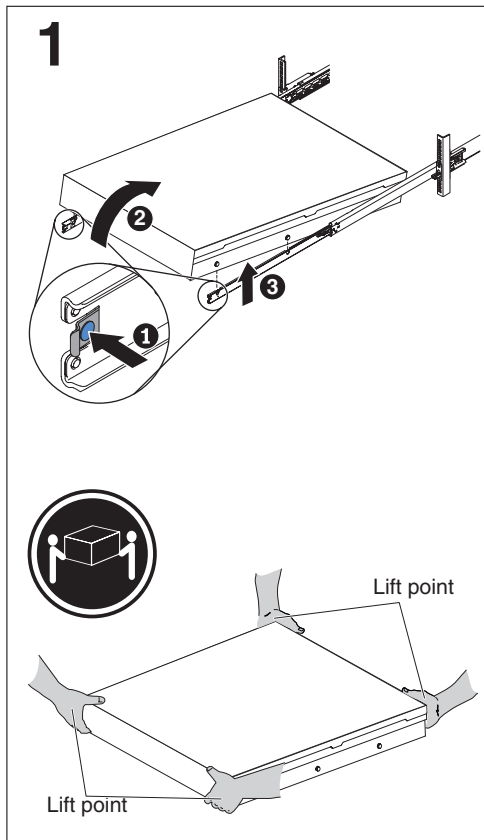
Install the front screws if needed.

To slide the server out of the rack, press on the release latches
1 .
Note: When you move the rack cabinet, or if you install the rack cabinet in a vibration-prone area, insert the M6 screws **2** in the front of the server.
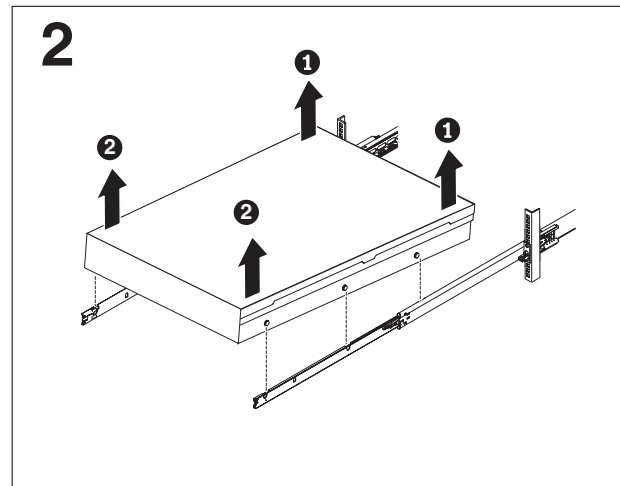
1

2

Lift point

Lift point

Unlatch and rotate the front of the server.

Note: If you are removing a 2U server, 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, disconnect the cables from the rear of the server. Remove the cable management arm by pulling the pins out while sliding the tabs out of the mounting location.
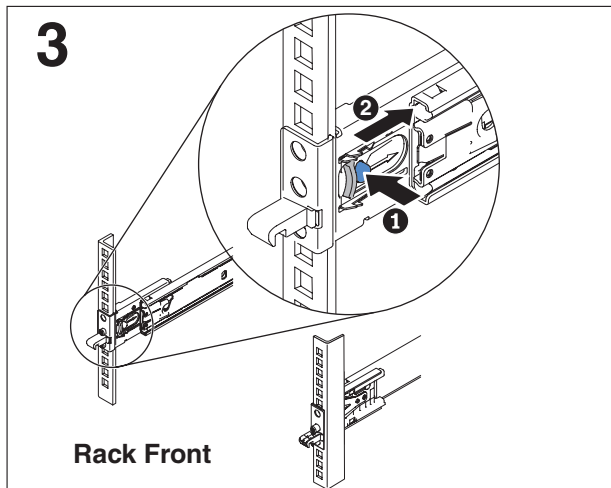
Pull the locking levers **1** forward, while supporting the rear of the server, and lift the front of the server up slightly **2** to clear the nailhead **3** from the slot.

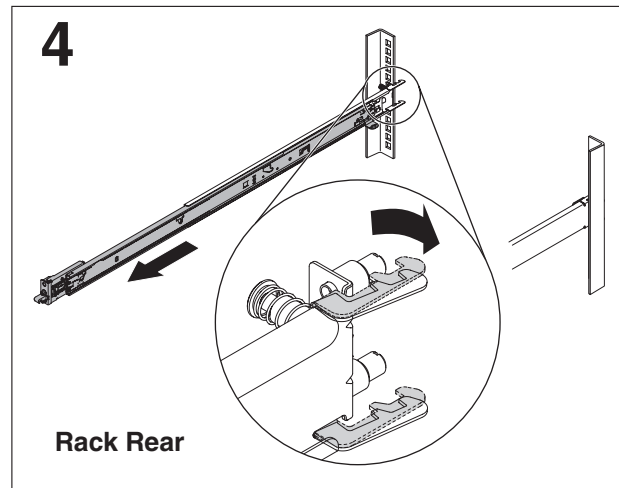**Lift the server off of the slide rails.**

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

Note: Use safe practices while lifting.

9

3

Rack Front

4

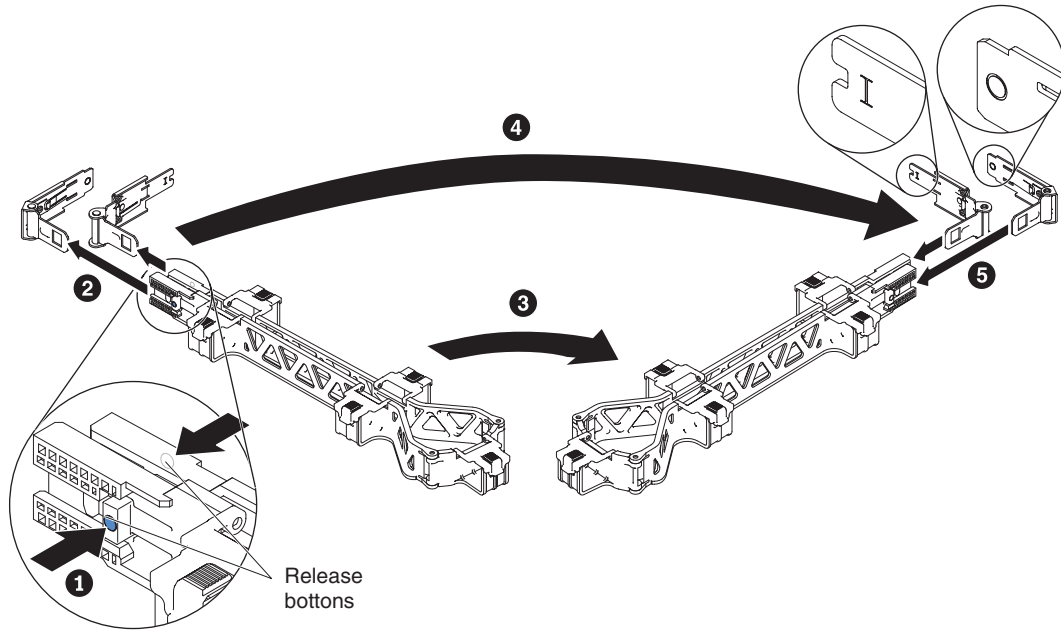**Rack Rear**

Remove the front end of the slide rails.

To remove the slide rails from the front of the rack, push up the front tab and slide out the front latch. Press the blue button and lift up slightly on the front of the slide rail. Remove the slide rail from the rack.

Remove the rear end of the slide rails.

To disengage the slide rails from the rear of the rack, pull from the front of the slide rail forward to unlatch the rear hooks and take the rails out of the rack.

To change the cable management arm to install on the right side of the rack, press the release buttons **1** and slide the mounting brackets **2** out of the cable management arm. Then, rotate the cable management arm **3**, flip the mounting brackets **4**, and insert the inner bracket (marked with **I**) and outer bracket (marked with **0**) into the inner and outer sections of the cable management arm **5**.

Store this information with your server documentation for future use.

(1P) P/N: 90Y5656