Rack Installation Instructions for Universal 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.
- Make sure that the room air temperature is below 35°C (95°F).
- 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 requirement:
  - Minimum depth of 70 mm (2.76 in.) between the front mounting flange and inside of the front door.

Use safe practices when lifting.

≥18 kg (39.7 lb)

≥32 kg (70.5 lb)

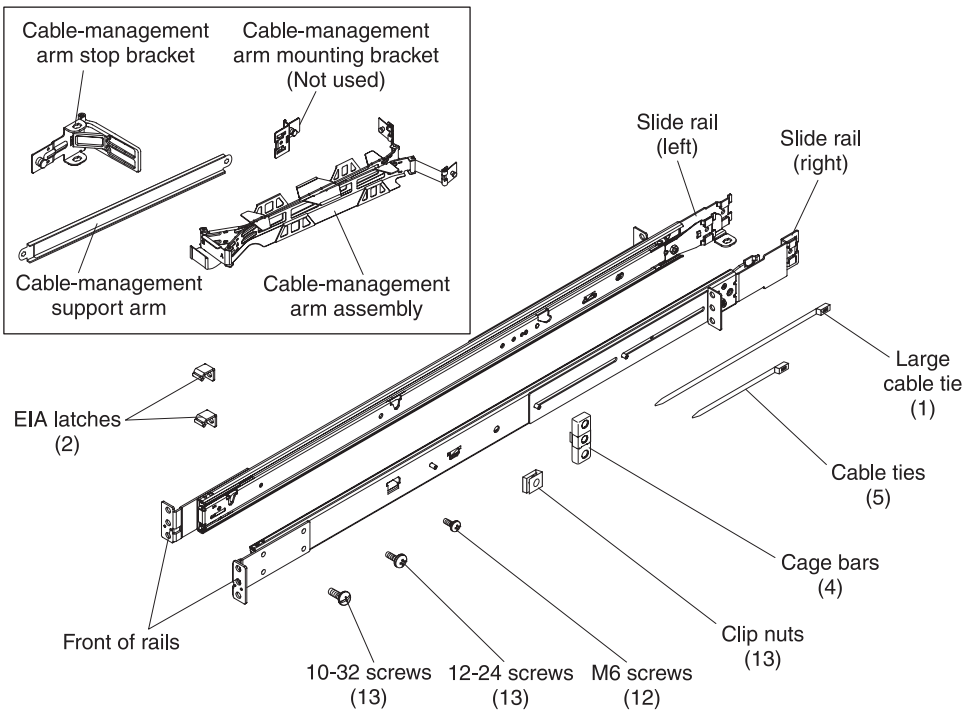
≥55 kg (121.2 lb)

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

Note: You can install the cable-management arm on either side of the server. 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.

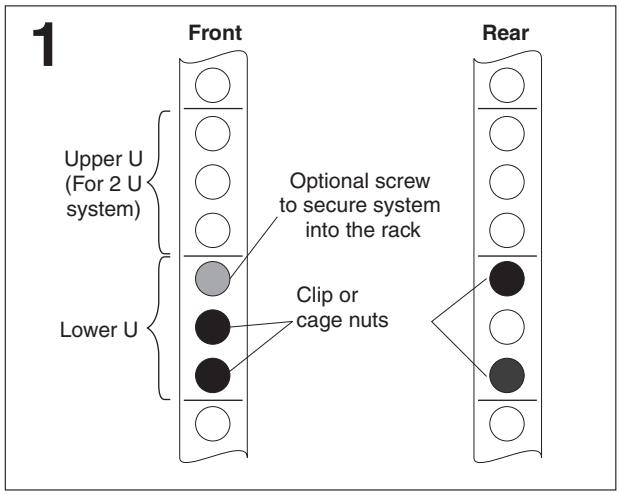
The following illustration shows the items that you need to install the server in the rack cabinet. If any items are missing or damaged, contact your place of purchase.

Note: Some items come with the server, not in the rack installation kit.

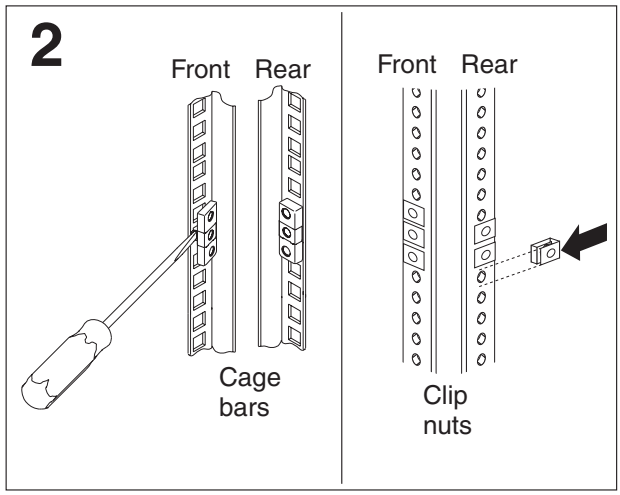


Notes:

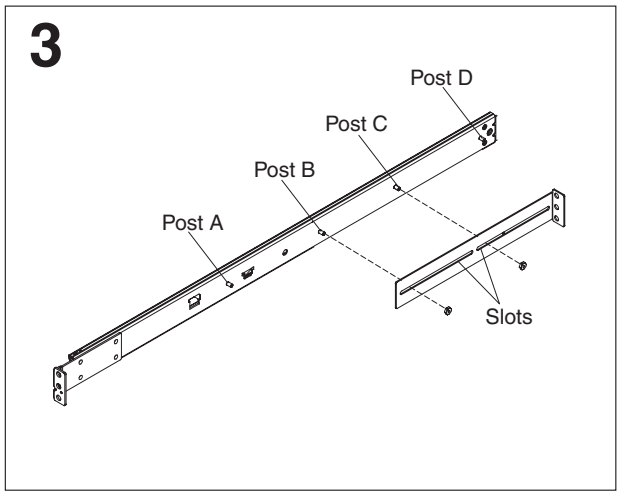
1. Use cage bars with square-holed racks, clip nuts with round-holed racks, and your own screws or the screws provided in this kit with threaded-hole racks.
2. If the slide rails in your rack installation kit came with shipping thumbscrews, remove them before you begin the following installation procedure.



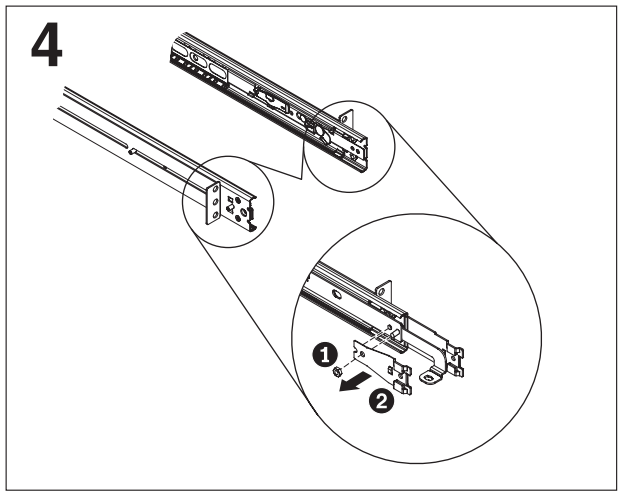
Select an available 1 U or 2 U space (depending on the server you are installing) in your rack to install your server. If you have either a round-holed or square-holed rack, install cage bars or clip nuts in the middle and the bottom (optional for the upper) holes of the lower U on each side of the front of the rack. Then, install cage bars or clip nuts in the upper and the bottom holes of the lower U on each side of the rear of the rack.



Use a screwdriver to install the cage bars or the clip nuts on the inside of the mounting rail, as required for your rack, into the selected holes.

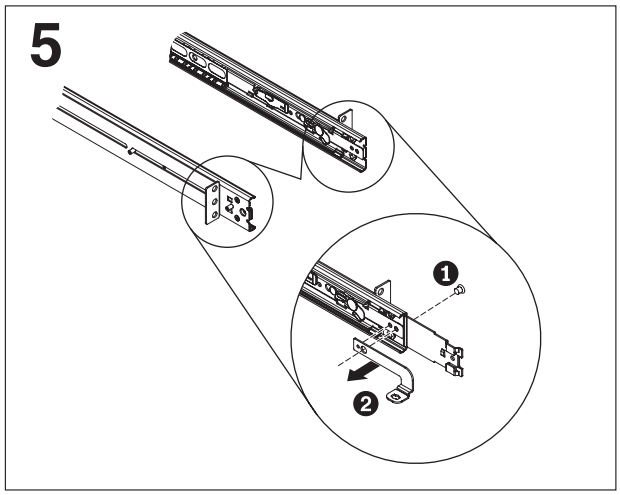


The rail depth can be adjusted from 17" (432 mm) to 31.25" (794 mm). To adjust the depth, you can loosen the nuts on the posts and slide the bracket until the distance between the front and rear slide rail flanges matches the distance between the front and rear EIA rails of the rack cabinet. If you need further adjustment, remove the nuts, move the bracket to the appropriate set of posts (A, B, C, and D) to obtain the appropriate slide rail depth, then reinstall and tighten the nuts.

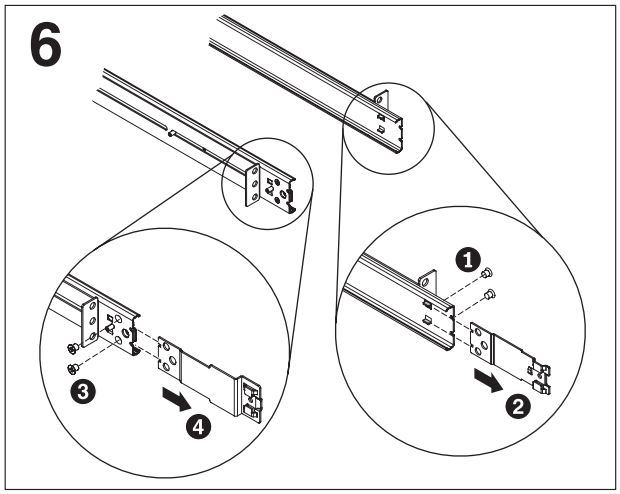


The cable-management arm can be installed on either side of the server. This document shows it being installed on the left side as viewed from the rear. If you install the cable-management arm on the left side as viewed from the rear (as shown in this document), go to step 7 now and skip steps 4, 5, and 6. To install the cable-management arm on the right side, follow the instructions and install the hardware on the opposite side. Steps 4 to 6 are removal steps required if the rack is not deep enough to fit these brackets, and they can be removed. If you are mounting the cable-management arm on the right side as viewed from the rear, go to step 6 now and skip steps 4 and 5.

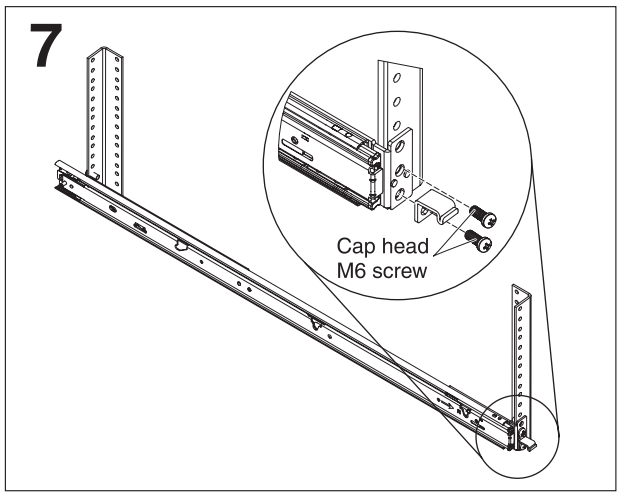
Disassemble the screw **1** and remove the bracket **2** on the rear of the slide rail.

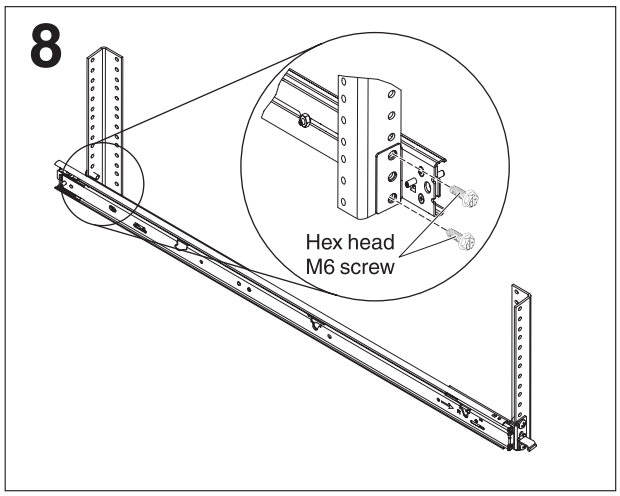


To remove the support bracket, remove the screw 1 and remove the bracket 2 from the rear of the slide rail.



To remove the mounting brackets, remove the screws 1 and 3 . Slide out the brackets 2 and 4 from the rear of the slide rail. If you are installing the cable management arm on the right side then reinstall these brackets on the opposite slide rails to accommodate mounting of the cable management arm.





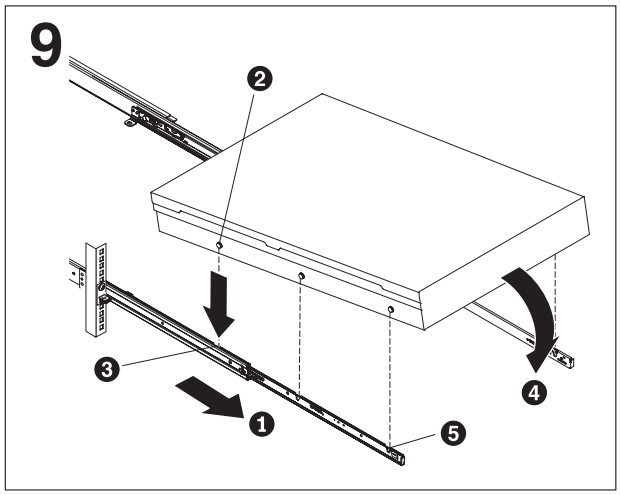
Notes:

1. When you fasten the slides to the rack, ensure the screws are engaged but the flange can move slightly. You will use a screwdriver to fully tighten them in step 10.
2. Use 12-24 screws (not hex head M6 screws) on the front mounting bracket if you are installing this system into a rack with round or square holes (i.e., not threaded holes).

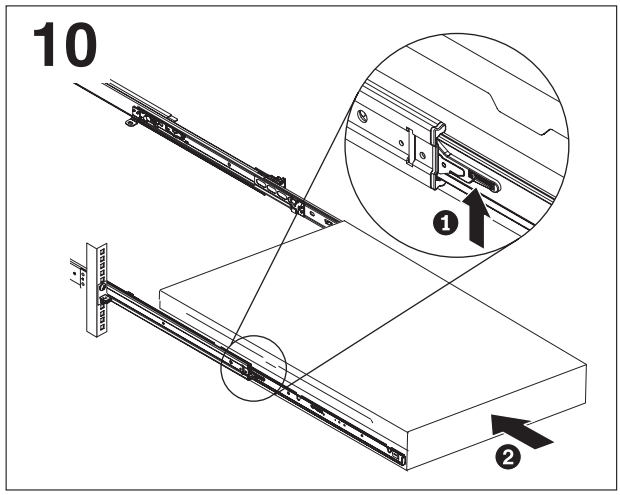
Attach the front of the slide rail and EIA latch to the front of the rack cabinet by installing a screw in the bottom hole of the lower U; then, install another screw in the middle hole of the lower U to attach the front of the slide rail to the front of the rack cabinet.

Use two screws to attach the rear of the slide rail to the rear of the rack cabinet in the upper and the bottom holes of the lower U.

Repeat steps 3 to 8 to install the other slide rail into the rack.

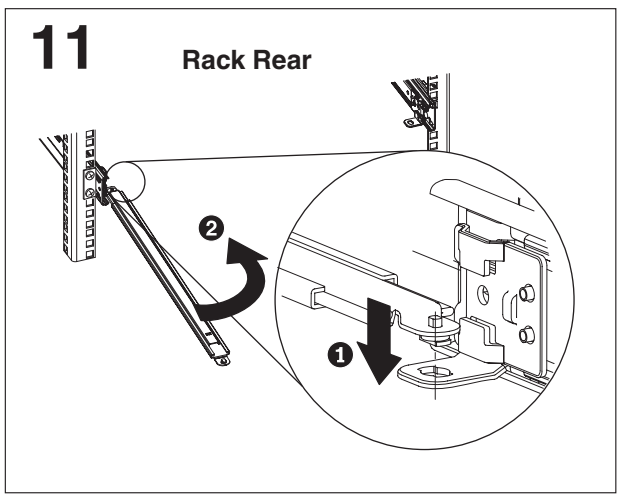


Pull the slide rails forward **1** until they click, two times, into place. Carefully lift the server and tilt it into position over the slide rails so that the rear nail heads **2** on the server line up with the rear slots **3** on the slide rails. Slide the server down until the rear nail heads slip into the two rear slots, and then slowly lower the front of the server **4** until the other nail heads slip into the other slots on the slide rails. Make sure that the front latch **5** slides over the nail heads.



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.

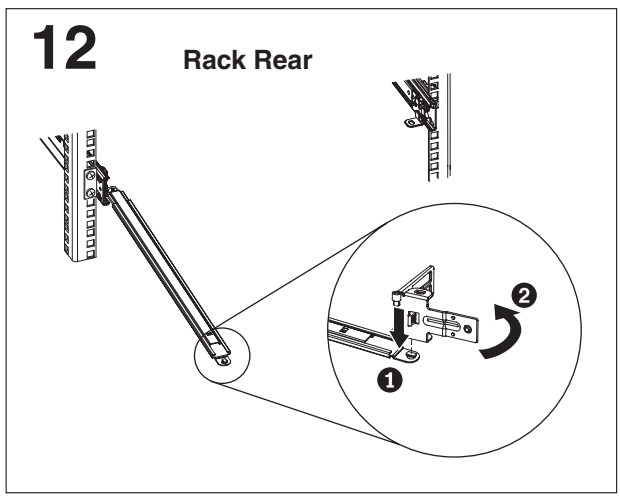
Slide the system in and out twice to make sure the system slides correctly. Push the system inwards to the rack as close as possible but able to access the screws with a screwdriver. Then tighten the screws with a screwdriver.



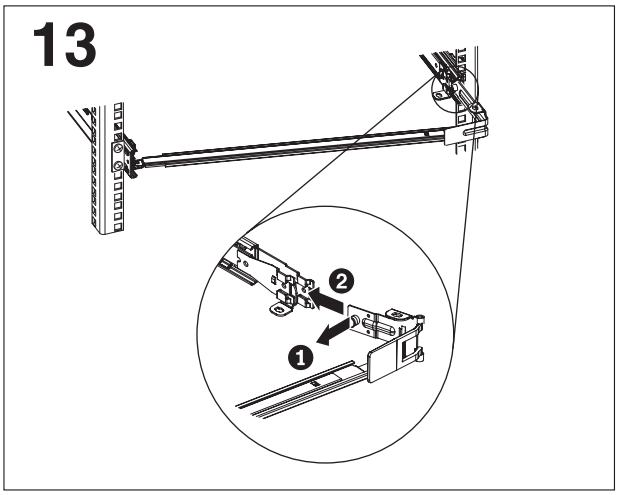
Note: If you are not installing the cable-management arm, skip this step and go to step 15.

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 and install the hardware on the opposite side.

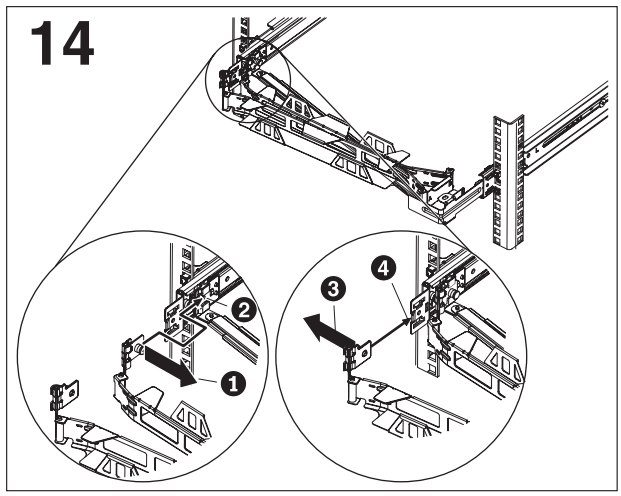
Connect one end of the support arm **1** to the same slide rail to which you plan to attach the cable-management arm so that you can swing the other end of the support arm **2** toward the rack.



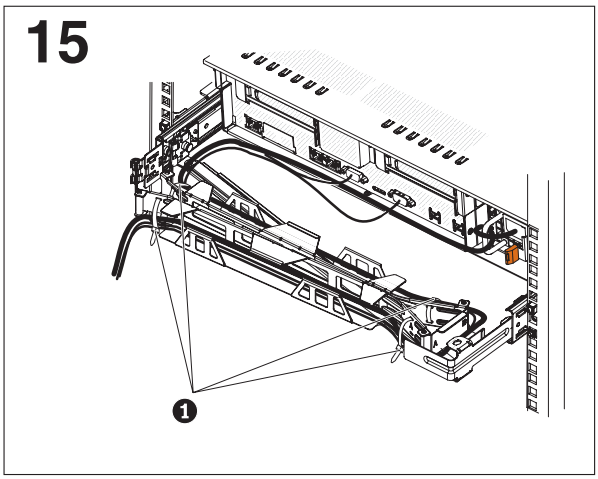
Install the L-shaped cable-management arm stop bracket **1** on the unattached end of the support arm. Turn the bracket **2** to secure it to the support arm.



To attach the other side of the support arm to the backside of the slide rail, pull the pin out **1**, and then slide the bracket **2** into the slide rail.

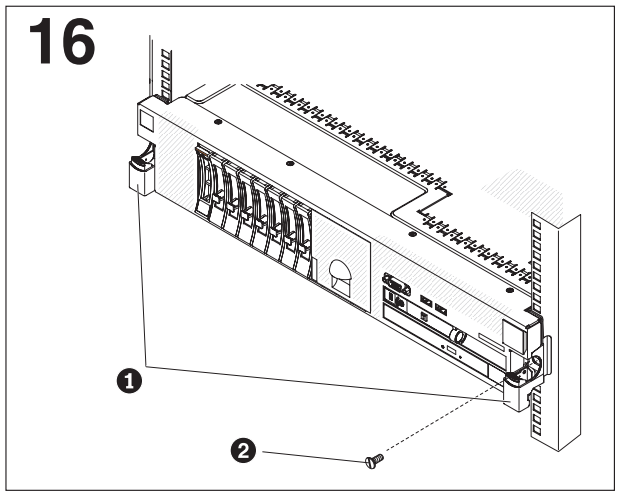


Place the cable-management arm on the support arm. Pull out the cable-management arm pin **1**, and then slide the cable-management arm tab **2** into the slot on the inside of the slide rail. Push the tab until it snaps into place. Pull out the other cable-management arm pin **3**, and then slide that cable-management arm tab into the slot **4** on the outside of the slide rail. Push the tab until it snaps into place.



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 **1** and secure them with cable ties or hook-and-loop fasteners.

Note: Allow slack in all cables to avoid tension in the cables as the cable-management arm moves.



Slide the server into the rack until it snaps into place. 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 optional M6 screws **2** in the front of the server.

To remove the server from the rack, reverse these instructions. You might find it easier to disassemble the cable-management arm before you remove the server from the rack. Store this information with your server documentation for future use.

Second Edition (May 2010)

Printed in the U.S.A.

IBM is a trademark of the IBM Corporation in the United States, other countries, or both.

© Copyright IBM Corporation 2010.
US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

(1P) P/N: 69Y4050