IBM ®

Rack installation instructions

Review the documentation that comes with your rack cabinet for safety and cabling information. Before installing your BladeCenter™ unit in a rack cabinet, review the following guidelines:

- Three or more people are required to install the device in a rack cabinet, after all the blade servers are removed.
- Do not leave any unused U space within a rack cabinet open. Blank filler panels must be used to prevent recirculation of warm air.
- Install your BladeCenter unit only in a rack cabinet with perforated front and rear doors.
- Plan the device installation starting from the bottom of the rack cabinet.
- Install the heaviest devices 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 BladeCenter unit to a 220-volt power distribution unit (PDU) or to a properly grounded 220-volt power outlet.
- Do not overload the power outlet when installing multiple devices in the rack cabinet.
- Install your BladeCenter 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 559 mm (22 in.) and maximum depth of 762 mm (30 in.) between the front and rear mounting flanges.

Use safe practices when lifting.

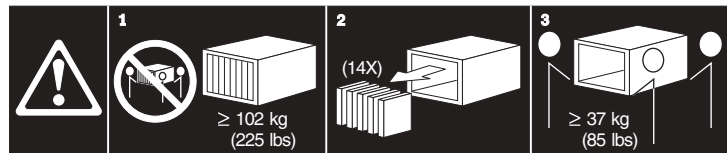≥18 kg (39.7 lb)   ≥32 kg (70.5 lb)   ≥55 kg (121.2 lb)

Do not place any object weighing more than 50 kg (110 lb) on top of rack-mounted devices.

>50 kg (110 lb)

To avoid personal injury, before lifting the unit, remove all the blades to reduce the weight.

1   ≥ 102 kg (225 lbs)   2 (14X)   3   ≥ 37 kg (85 lbs)

CAUTION:
If you install a strain-relief bracket option over the end of the power cord that is connected to the device, you must connect the other end of the power cord to an easily accessible power source.

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1

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

Cable strap
(6)

Rail
(2)

Rear of rail

Cable ties
(6)

M6 screws
(10)

Clip nut
(10)

Cage nut
(10)

Front of rail

1
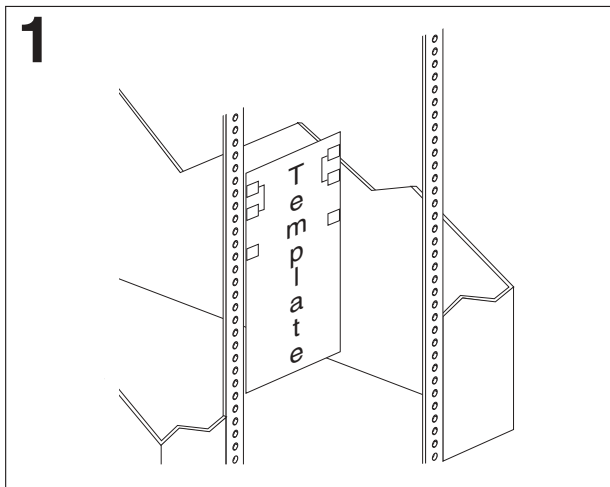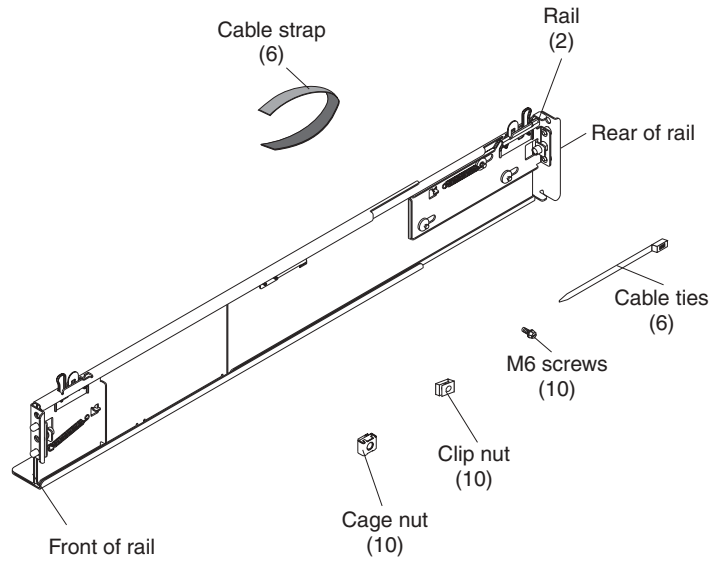
Position the template on the rack so that the edges of the template do not overlap any other devices to be installed. Line up and select the holes on the front and rear of the rack in the locations indicated by the arrows on the attached template.

2
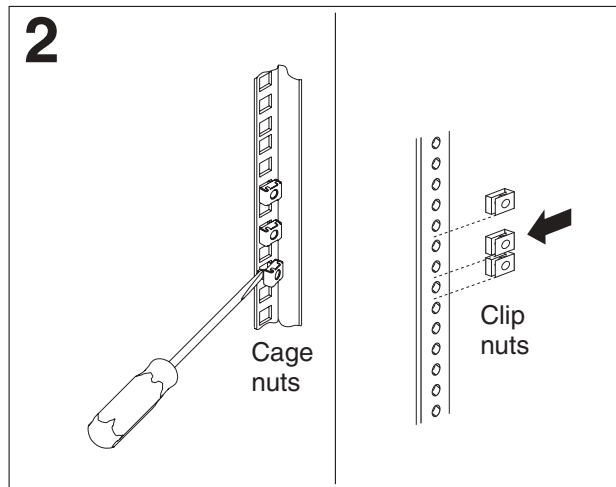
Cage nuts

Clip nuts

Use a screwdriver to install the cage nuts, or the clip nuts, as required for your rack, into the selected holes.

Note: For racks with square holes, use the cage nuts. For racks with round holes, use clip nuts.

3
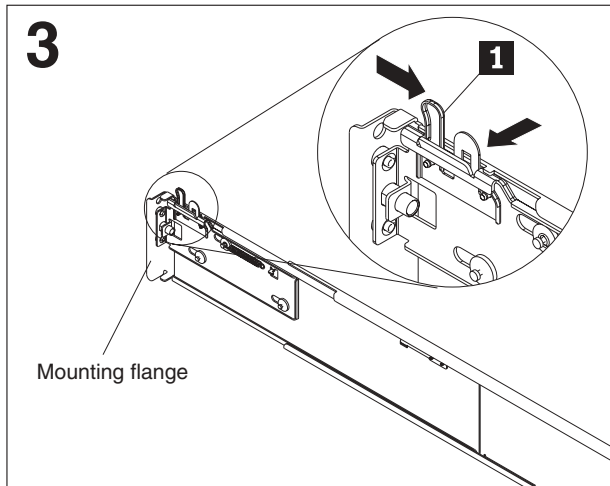
Mounting flange

A set of rail pins and a mounting flange are on each end of the rail. Position the rail as shown in the illustration; then, pull back on the finger pull **1** while pressing in on the rail latch. Release the rail latch and let it click into place, locking the rail pins in the open position. Open the rail pins on the opposite end of the rail; then, repeat the process on the remaining rail.

4
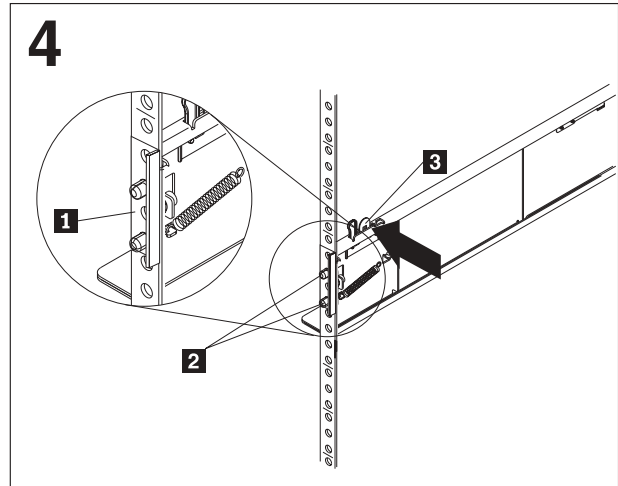
Fully extend the rail and fit the mounting flange **1** on each end of the rail around the rack cabinet rail, aligning the rail pins **2** with the holes in the rack cabinet rail. Release the rail pins by pressing on the rail latchs **3** on each end, allowing the rail pins to pass through the rail and the mounting flange. Repeat these steps for the remaining rail.

Note: Make sure that the rail pins protrude through the mounting flanges and the rack cabinet rails.

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Rear view
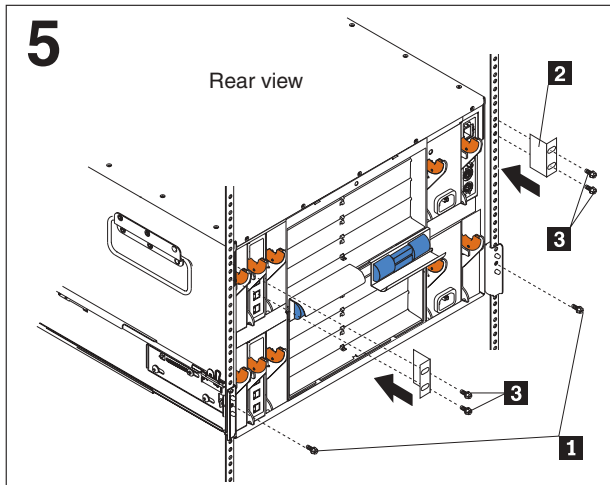
Note: Before installing a preconfigured BladeCenter unit, be sure to label the blade servers and BladeCenter unit bays to ensure that you you reinstall the blade servers in the correct bays. Then, remove all of the blade servers from the BladeCenter unit.

Slide the BladeCenter unit into the rack. Insert one M6 screw **1** in the center hole of each rail on the rear of the rack cabinet. Insert the stabilizer clips **2** and the four M6 screws **3** to secure the stabilizer clips on each side.

6
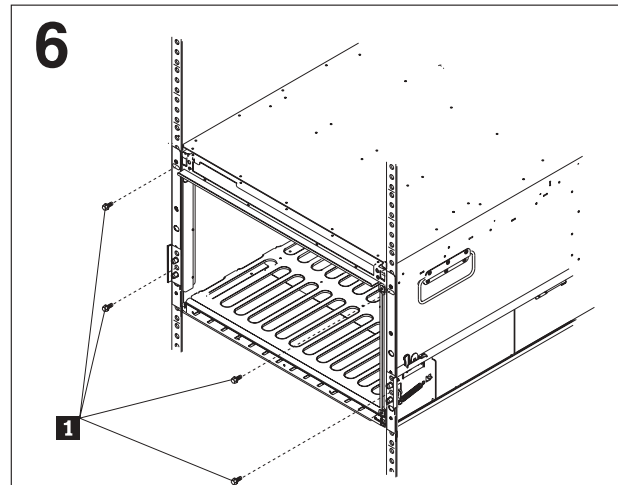
Insert four M6 screws **1** in the front of the BladeCenter unit to secure it to the rack cabinet and the front mounting flanges on the rails.
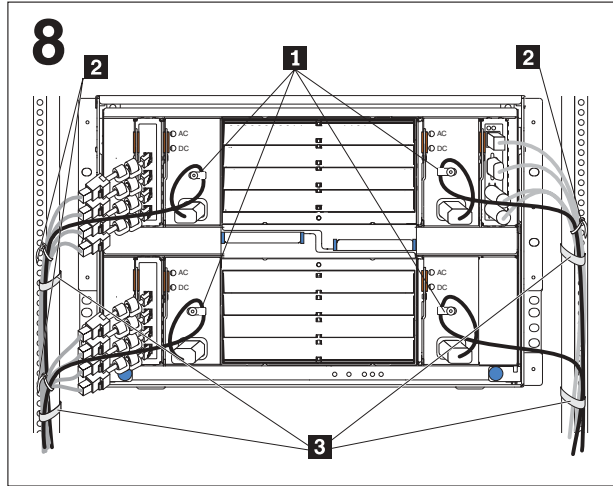
7
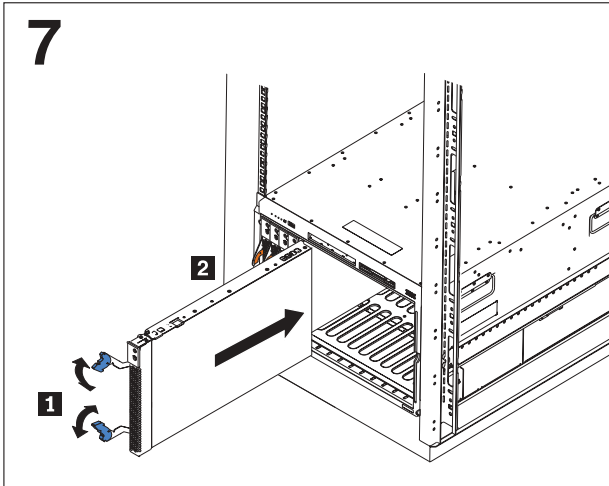
Reinstall the blade servers in the BladeCenter unit. Be sure to reinstall the blade servers in the same bays from which they were removed.

Make sure the release levers on the blade servers are in the open position **1** before you slide them into the BladeCenter **2** unit.

BladeCenter unit power-supply redundancy

- Power supplies in bays 1 and 2 supply power for blade bays 1 through 6.

- Power supplies in bays 3 and 4 supply power for blade bays 7 through 14.

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Attach the power cords and other cables to the rear of the BladeCenter unit. Route the power cables through the strain relief clamps **1** ; then, route all the cables as shown in the illustration.

Note: Allow slack in all cables to avoid tension in the cables and to allow you to remove adjacent modules without uncabling the BladeCenter unit.

Use the cable ties **2** and cable straps **3** to secure the cables together and to the rack cabinet rails.

System power redundancy

To maintain power redundancy at the system level, connect the power supplies as follows:

- Connect the power supplies in bays 1 and 3 to one building power source or service entrance.

- Connect the power supplies in bays 2 and 4 to a separate building power source or service entrance.

To remove the BladeCenter unit from the rack, reverse these instructions. Store this information with your BladeCenter documentation for future use.