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# ThinkSystem Toolless Friction Rail v2

## Read guidelines first

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

- Two or more people are required to install 2U/4U or larger devices in a rack.
- Some illustrations might differ from your server. All types of server are removed and installed in a similar manner.
- See the *Maintenance Manual* for the maximum room air temperature.
- Install the server only in a rack that has perforated doors.
- Do not block any air vents, usually 15 cm (6 inches) of air space provides proper airflow.
- For horizontal rack:
  - Plan the device installation starting from the bottom of the rack.
  - Install the heaviest device in the bottom of the rack.
  - Do not leave open space above or below an installed server in your rack. To help prevent damage to server components, always install a filler panel to cover the open space and to help ensure proper air circulation.
  - Do not extend more than one device out of the rack at the same time.
- For vertical rack:
  - Plan the device installation starting from the center of the rack.
  - Install the heaviest device in the center of the rack.
  - Do not leave open space on the left or right side of an installed server in your rack. To help prevent damage to server components, always install a filler panel to cover the open space and to help ensure proper air circulation.
- Do not place any objects on the top of the rack-mounted devices.
- Connect all power cords to properly wired and grounded electrical outlets.
- Do not overload the power outlet when installing multiple devices in the rack.
- Remove the rack doors and side panels to provide easier access during installation.
- Install the server in a rack that meets the following requirements:
  - Minimum depth of 70 mm (2.76 inches) between the front mounting flange and inside of the front door.
  - Minimum depth of 190 mm (7.48 inches) between the rear mounting flange and inside of the rear door.
  - The maximum distance between the front and the rear EIA flange of the rack is 810 mm (31.9 inches).
  - If you want to install the rails and a 0U PDU into the same rack, the rack must be 42U or higher/wider.

## Safety notice



**CAUTION:**  
Make sure the rails support your server model and use safe practices when lifting



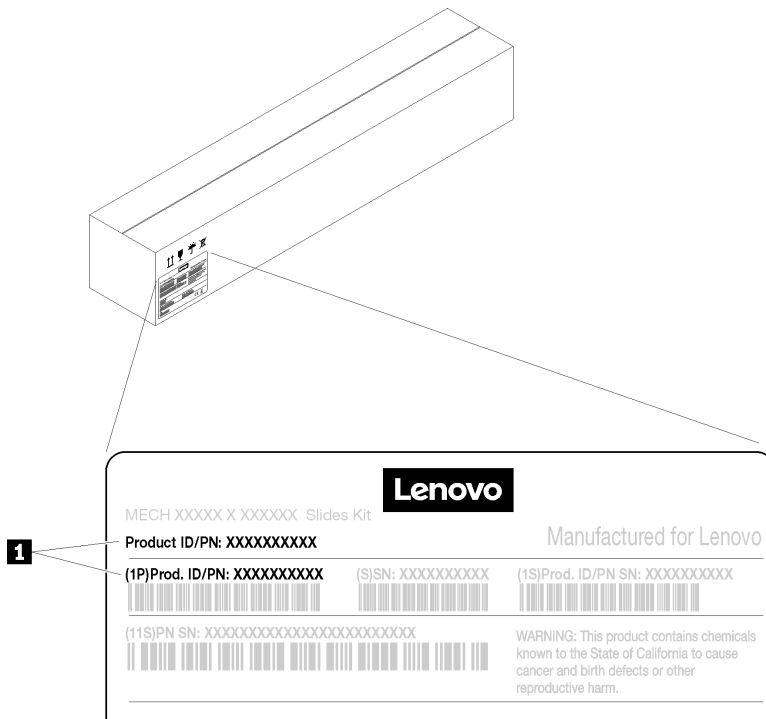
## Rail Support Matrix

For the detailed information about the rail support, see the following website: <https://en.resources.lenovo.com/brochures/thinksystem-rail-support-matrix>



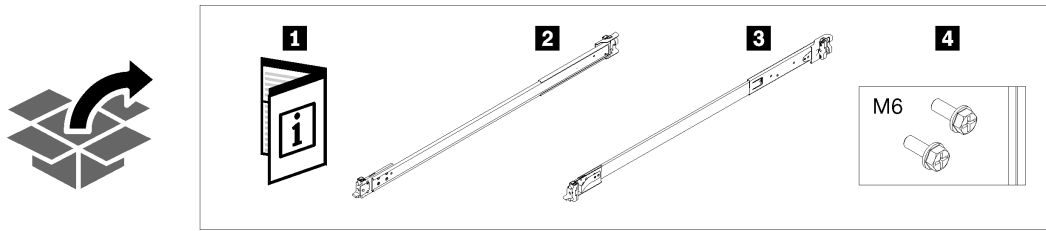
## Part number

Find the rail part number on the label as shown, use the part number to identify your rail model in the Rail Support Matrix above.



**1** Part number (10 digits)

The rail package contains the following items:



**1** Document

**2** Left rail

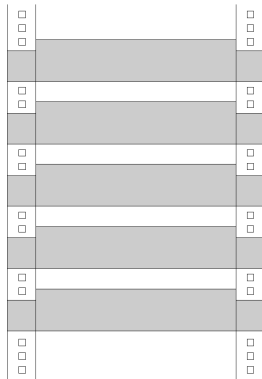
**3** Right rail

**4** Two M6 screws

**Note:** When install the outer rail to the vertical rack, use left rail as top rail, and right rail as bottom rail.

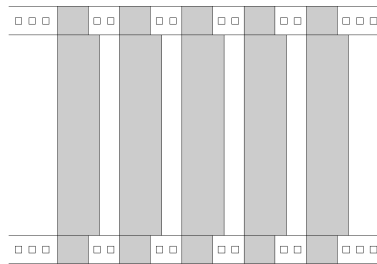
### Horizontal and vertical rack

In Horizontal rack, servers are installed and placed horizontally. In vertical rack, servers are installed and placed vertically. See the illustration below.



**1**

**1** Horizontal rack



**2**

**2** Vertical rack



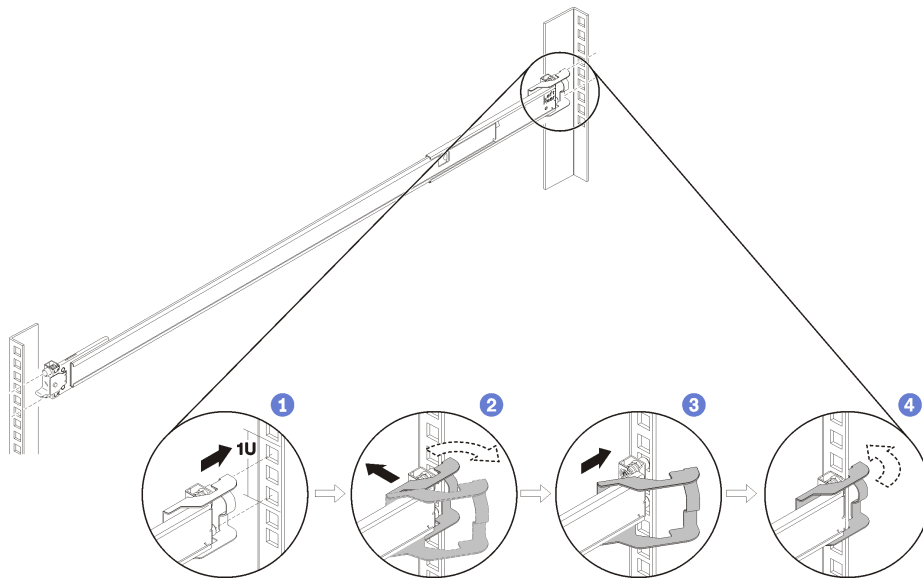
### 3. Install Rear Mounting Bracket to Rack

Step 1. Align the pins on the rear end of the outer rail to the holes on the rear of the rack.

Step 2. Slightly move the rail aside to hook the rear mounting bracket latch to the frame, and then push the outer rail outward as shown.

Step 3. Push the rail back until the pins protrude through into the corresponding holes in the rack.

Step 4. The bracket will lock into place automatically.



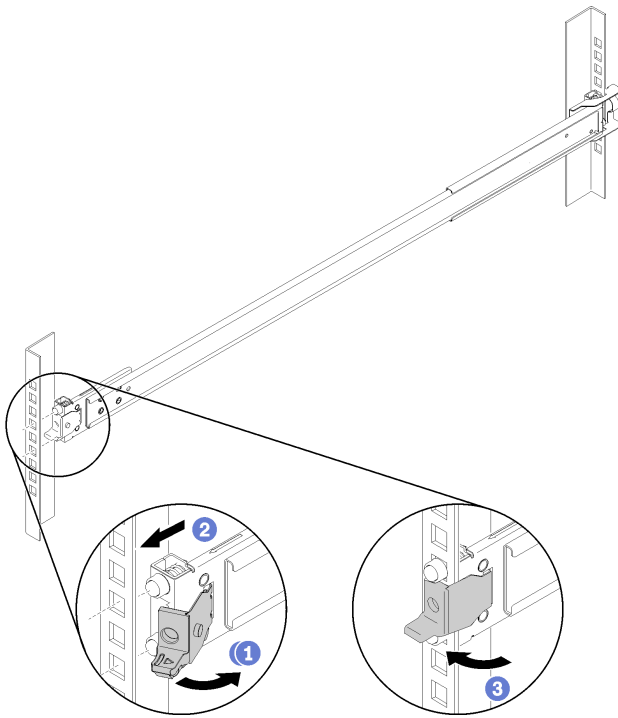
**Note:** When install the rail to the vertical rack, use left rail as top rail, and right rail as bottom rail. Installation methods are the same in both racks.

#### 4. Install Front Mounting Bracket to Rack

Step 1. Open the front bracket and align the front end of the outer rail to the holes in the rack. Ensure that the front end and rear end of the rail are at the same horizontal level.

Step 2. Pull the outer rail in the direction as shown until the pins are inserted into the corresponding holes.

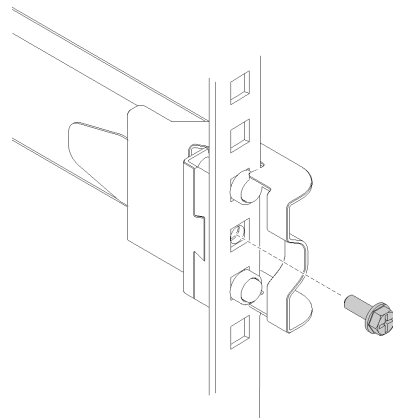
Step 3. Close the front bracket to lock the rail in position.



**Note:** When install the rail to the vertical rack, use left rail as top rail, and right rail as bottom rail. Installation methods are the same in both racks.

#### 5. Install Rear Screws (optional)

If you want to ship the rack with the server installed or place the rack in a vibration-prone area, install the M6 screws into the rear of the rails.

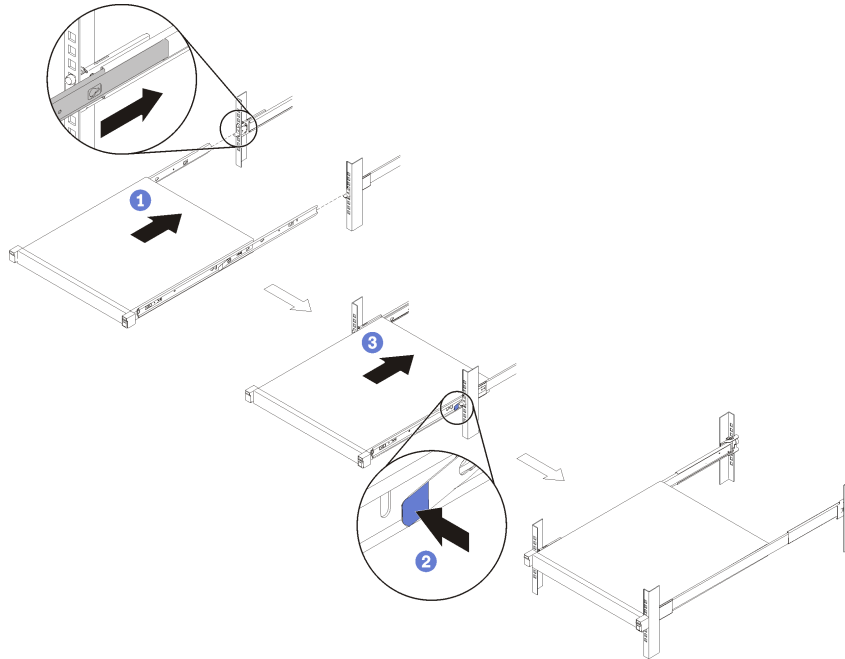


## 6. Slide System into Rails in Rack (horizontal rack)

Step 1. Carefully lift the server and align the server to the slide rails. Position the server as shown and push the server into the rack.

Step 2. Press the release latches.

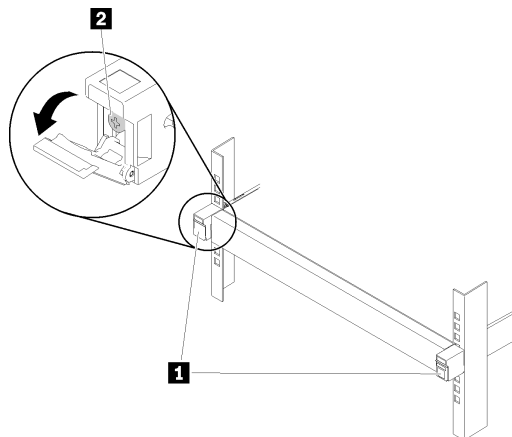
Step 3. Push the server all the way into the rack until the server locks into place with a click.



**Note:** Use the same installation steps for the vertical rack.

## 7. Tighten Front Screws (optional)

Secure the server before you move the rack, or if you place the rack in a vibration-prone area. Open the rack release latches and tighten the screws to firmly secure the rail.



**1** Rack release latches

**2** Front screw

## Removal steps

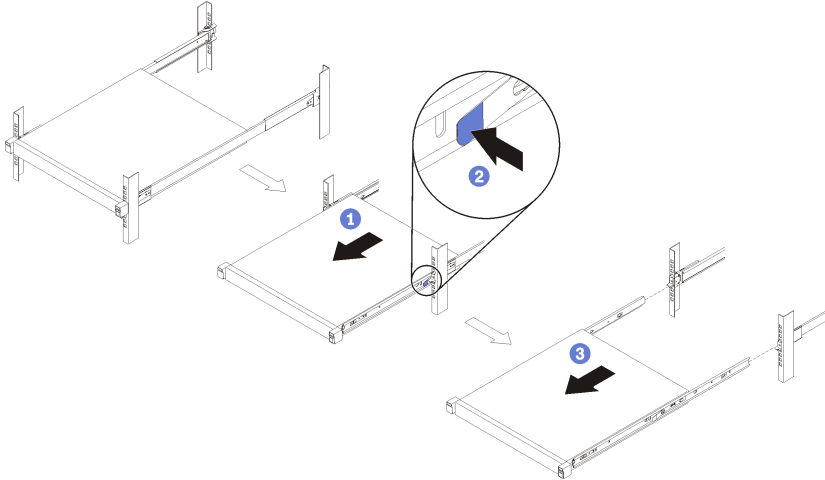
### Removal of System from Rack (horizontal rack)

**Note:** Make sure you have enough help and use safe practices when performing Step 3.

Step 1. Disconnect all cables from the rear server. Open the rack release latch in the front of the server; then, slowly slide the server out until it stops.

Step 2. Press the release latches.

Step 3. Carefully pull the server out of the rack.



**Note:** Use the same removal steps for the vertical rack.

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