

# Rail Installation Guide

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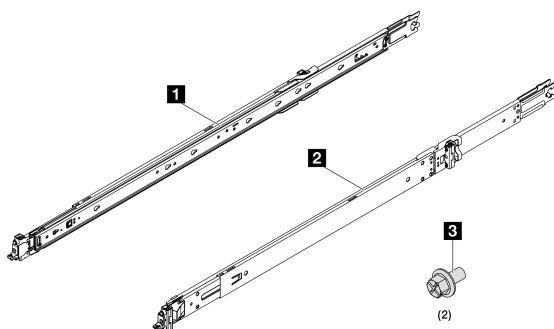
## ThinkSystem Toolless Slide Rail Kits V4

This document provides important information about the ThinkSystem Toolless Slide Rail Kit V4 and ThinkSystem Advanced Toolless Slide Rail Kit V4.

### Rail kit parts inventory

Each slide rail kit package contains the following items:

Figure 1. Rail kit parts inventory



- 1** One left rail
- 2** One right rail
- 3** Two M6 screws

**Note:** If any part is missing, contact your local support.

**Note:** Refer to the following for different types of rack hole supported. The installation methods of each slide rail kit are similar.

ThinkSystem Toolless Slide Rail Kit V4 supports:

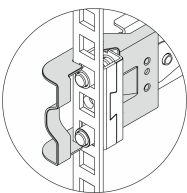


Figure 2. Square-hole rack

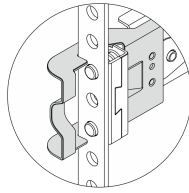


Figure 3. Round-hole rack

ThinkSystem Advanced Toolless Slide Rail Kit V4 supports:

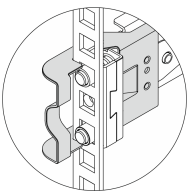


Figure 4. Square-hole rack

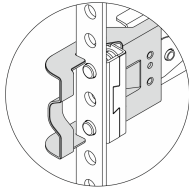


Figure 5. Round-hole rack

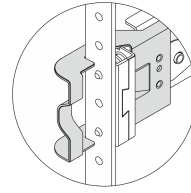


Figure 6. Threaded-hole rack

## Read these guidelines first

Read the following guidelines before installing the rail kit and system to the rack.

- The rail travel distance is 825 mm (32.48 inches).
- The maximum system weight that a rail kit supports:
  - 34 kg (74.96 lb) for ThinkSystem Toolless Slide Rail Kit V4
  - 40 kg (88.18 lb) for ThinkSystem Advanced Toolless Slide Rail Kit V4
- Install the system to a rack that meets the following requirements:
  - Minimum depth of 70 mm (2.76 inches) between the front mounting flanges and inside of the front door.
  - Minimum depth of 214 mm (8.43 inches) between the chassis rear wall and inside of the rear door.
  - Maximum distance between the front mounting flange and the rear mounting flange is 864 mm (34.00 inches).
  - If you want to install the rails and a 0U PDU into the same rack, the rack must meet the following height and depth requirements:
    - 42U or higher
    - At least 1000 mm (39.37 inches) deep if no CMA is to be installed
    - At least 1200 mm (47.24 inches) deep if a CMA is to be installed
  - Only install the system into a rack with perforated doors. Remove the rack doors and side panels for easy access during installation.
  - When installing multiple units, start with installing the heaviest device to the lowest part of the rack.
  - See the server *User Guide* for the requirements of room air temperature.
  - Do not block any air vents. Spare at least 15 cm (6 inches) of space for proper airflow.
  - Do not leave the unoccupied space above or below an installed system in the rack empty. To prevent damage to system components, always install filler panels to cover unoccupied space to ensure proper air circulation.
  - Do not leave more than one system slid out from the rack at the same time.
  - Do not overload the power outlet when multiple devices are installed in the rack.

### S036



18 - 32 kg (39 - 70 lb)



32 - 55 kg (70 - 121 lb)

**CAUTION:**  
Use safe practices when lifting.

### R006



**CAUTION:**

Do not place any object on top of a rack-mounted device unless that rack-mounted device is intended for use as a shelf.

## Install the rail kit to the rack

**Note:** The rails are extensible as shown in the following illustration.

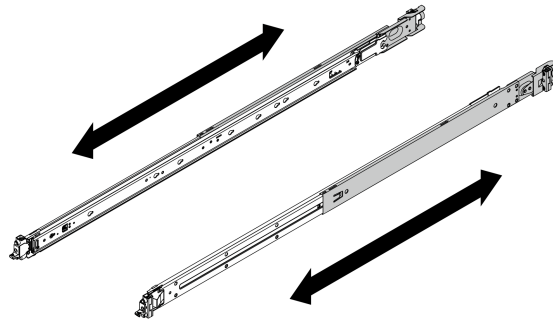


Figure 7. Extensible rails

- Step 1. Select the first rail that you want to install.
- Step 2. Make sure the rail is shortened to the shortest position.
- Step 3. Install the rail to the rack, starting from the rear and proceeding to the front.

**Note:** The rail mounting pins take up 1U space. Follow the U space marking on the rack when installing the rail kit.

- Step 4. Install the rear mounting pins to the rack.

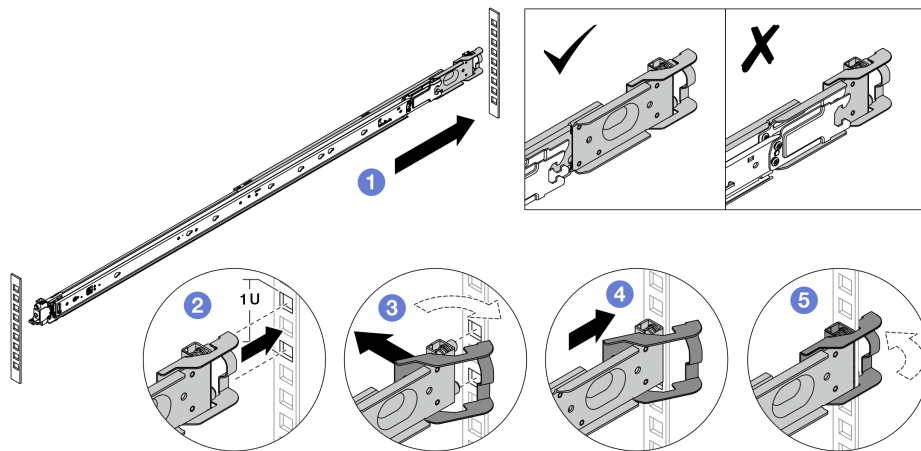


Figure 8. Installing rear mounting pins

- a. ① Extend the outer rail toward the rear mounting flanges in the rack.
- b. ② Align the mounting pins with the rear mounting flanges and set the opening of the rear latch against the rack frame.
- c. ③ Push the rail toward outside of the rack until the rear latch opens.
- d. ④ Push the rail toward the rear mounting flanges.
- e. ⑤ Rotate the rear latch back to the closed position.

Step 5. Install the front mounting pins to the rack.

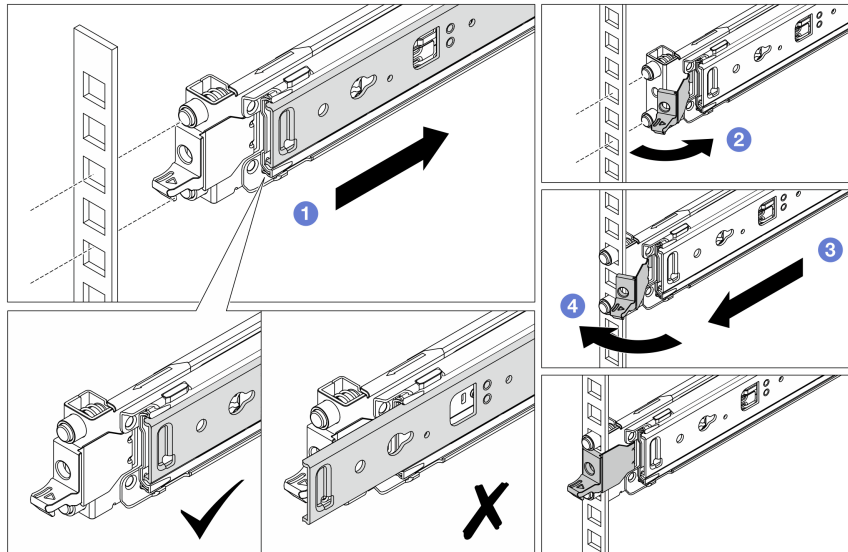
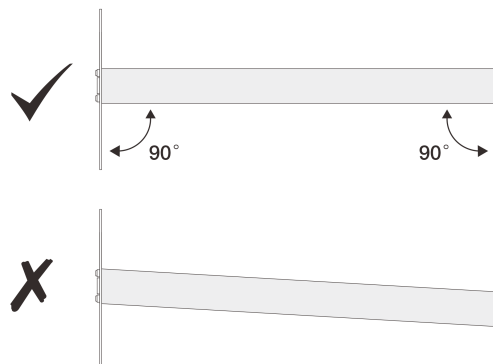


Figure 9. Installing front mounting pins

- a. ① Slide the inner rail all the way in to allow the front latch to open.
- b. ② Open the front latch and align the mounting pins with corresponding front mounting flanges.
- c. ③ Pull the rail forward until the mounting pins go through the holes.
- d. ④ Release the front latch to secure the rail to the rack.

Step 6. Make sure that the rail is securely engaged in the flange holes by inspecting that the hook has caught and by sliding back and forward to ensure the rail does not pop out.

**Important:** Make sure both ends of the rail are seated at the same height.



Step 7. Repeat Step 2 to Step 5 to install the other rail.

## Install the server to rails

Step 1. Remove the inner rails from the intermediate rails.

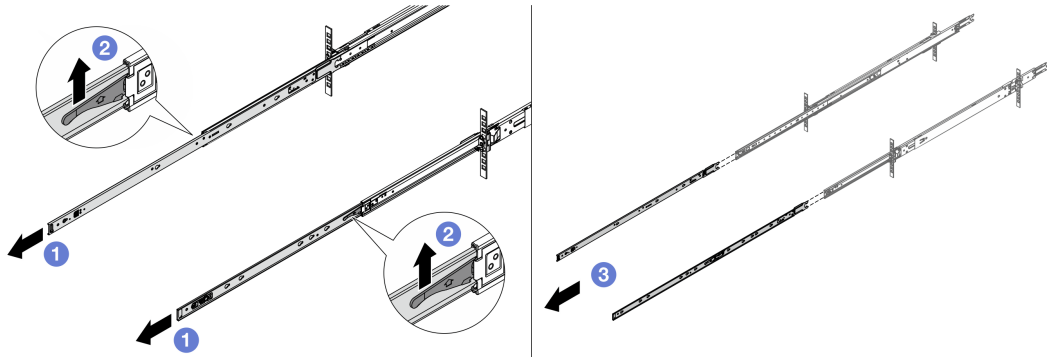


Figure 10. Removing the inner rails

- a. 1 Extend the inner rails.
- b. 2 Push up the latches to disengage inner rails from the intermediate ones.
- c. 3 Remove the inner rails.

Step 2. Align the slots on the inner rail with the corresponding T-pins on the side of the server; then, slide the inner rail forwards until the T-pins lock into place.

### Notes:

1. Make sure that the stamp “Front” always face toward the front when assembling the inner rails to the server.
2. “L” and “R” stamps indicate the left and right sides of the rails.

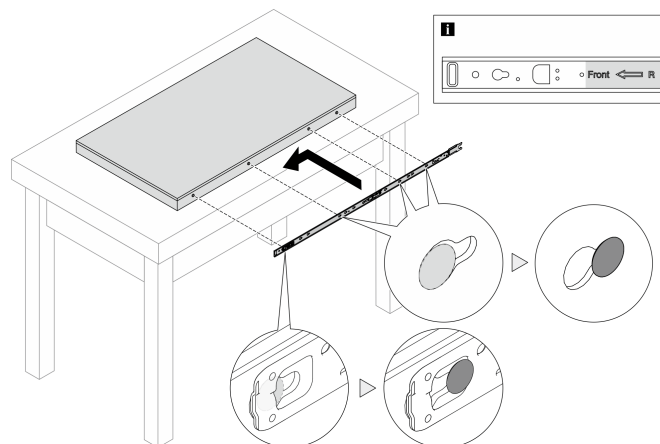


Figure 11. Installing an inner rail to the server

Step 3. Repeat the previous step to the other rail.

Step 4. Carefully lift up the server with three people.

**CAUTION:**  
Make sure three people are lifting the sever by holding the  lift points.

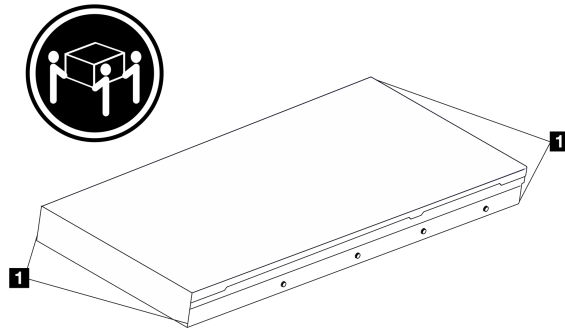


Figure 12. Lifting up the server

Step 5. Install the server to the rack. Align both rear ends of the inner rails with the openings in the intermediate rails, and make sure that the two pairs of rails mate correctly.

**Note:** Before installing the inner rails to the intermediate ones, make sure that the ball retainers on both sides reach the outmost position. If the retainers are not in good position, slide them to the front until they stop.

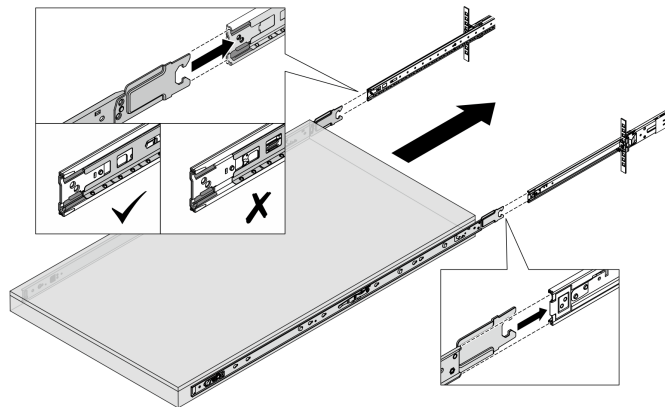


Figure 13. Installing the server

Step 6. Lift the lock latches to proceed to slide the server in.

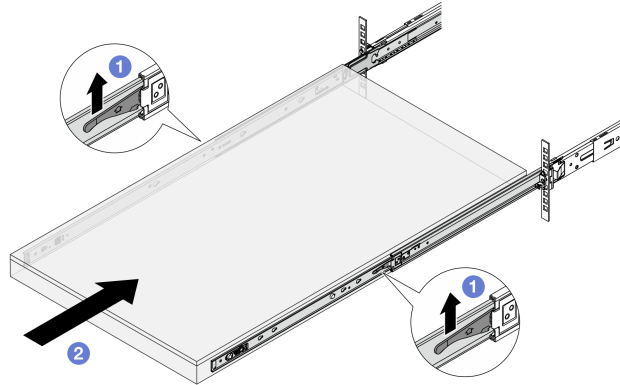


Figure 14. Locking latches

- a. ① Lift the lock latches on both sides.
- b. ② Push the server all the way into the rack until both latches lock into position with a click.

Step 7. Secure the server to the rack.

- a. Secure the server to the front of the rack. Fasten the two screws located on the rack latches.

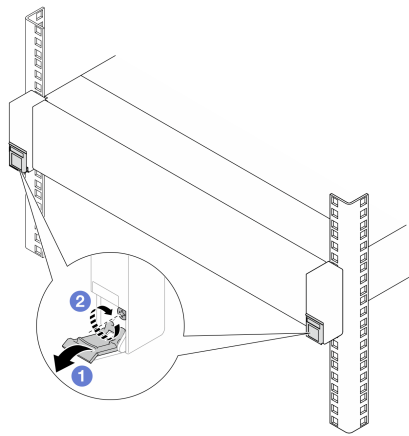


Figure 15. Securing the server to the front of the rack

- ① Flip down the covers on the rack latches.
  - ② Tighten the screws to secure the server.
- b. (Optional) If the rack is shipped with servers or placed in a vibration-prone area, install one M6 screw to each of the rails to secure the server to the rear of the rack.

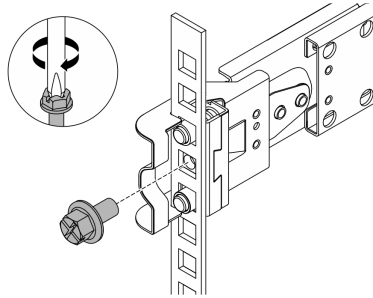


Figure 16. Securing the server to the rear of the rack

### Server replacement

To “Remove the server from the rack” and to “Remove the rails from the rack”, refer to the “Hardware replacement procedures” chapter in the server *User Guide*. Search your server and select its *User Guide* at Lenovo server product portfolio page: <https://pubs.lenovo.com/>.



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