

Dell™ Systems

# Rack-to-Tower Conversion Guide

Guide de conversion de rack en tour

Konvertieranleitung Rack-nach-Tower

ラック-タワー転換ガイド

Guía de conversión de estante a torre



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Dell™ Systems

# Rack-to-Tower Conversion Guide



# Notes, Notices, and Cautions



**NOTE:** A NOTE indicates important information that helps you make better use of your computer.



**NOTICE:** A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



**CAUTION:** A CAUTION indicates a potential for property damage, personal injury, or death.

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This conversion guide provides instructions for trained service technicians in removing one or more systems from a rack cabinet and converting the system to a tower version. One rack-to-tower conversion kit is required for each system to be converted from rack version system to a tower version system.

 **CAUTION:** The system may weigh up to 43 kilograms (95 pounds) when fully loaded. To prevent personal injury, do not attempt to move the system by yourself.

## Safety Instructions


Use the following safety guidelines to ensure your own personal safety and to help protect your system from potential damage.

Throughout this safety section, the caution icon () is used to indicate cautions and precautions that you need to review and follow. For complete safety information, refer to the *System Information* document that came with your system.

### Precautions for Rack-Mountable Products

Observe the following precautions for rack stability and safety. Also refer to the rack installation documentation accompanying the system and the rack for specific caution statements and procedures.

Systems are considered to be components in a rack. Thus, "component" refers to any system as well as to various peripherals or supporting hardware.

 **CAUTION:** Installing systems in a rack without the front and side stabilizers installed could cause the rack to tip over, potentially resulting in bodily injury under certain circumstances. Therefore, always install the stabilizers before installing components in the rack.

**After installing system/components in a rack, never pull more than one component out of the rack on its slide assemblies at one time. The weight of more than one extended component could cause the rack to tip over and may result in serious injury.**



**NOTE:** Your system is safety-certified as a free-standing unit and as a component for use in a Dell rack cabinet using the customer rack kit. The installation of your system and rack kit in any other rack cabinet has not been approved by any safety agencies. It is your responsibility to have the final combination of system and rack kit in a rack cabinet evaluated for suitability by a certified safety agency. Dell disclaims all liability and warranties in connection with such combinations.

- System rack kits are intended to be installed in a rack by trained service technicians. If you install the kit in any other rack, be sure that the rack meets the specifications of a Dell rack.



**CAUTION: Do not move racks by yourself. Due to the height and weight of the rack, a minimum of two people should accomplish this task.**

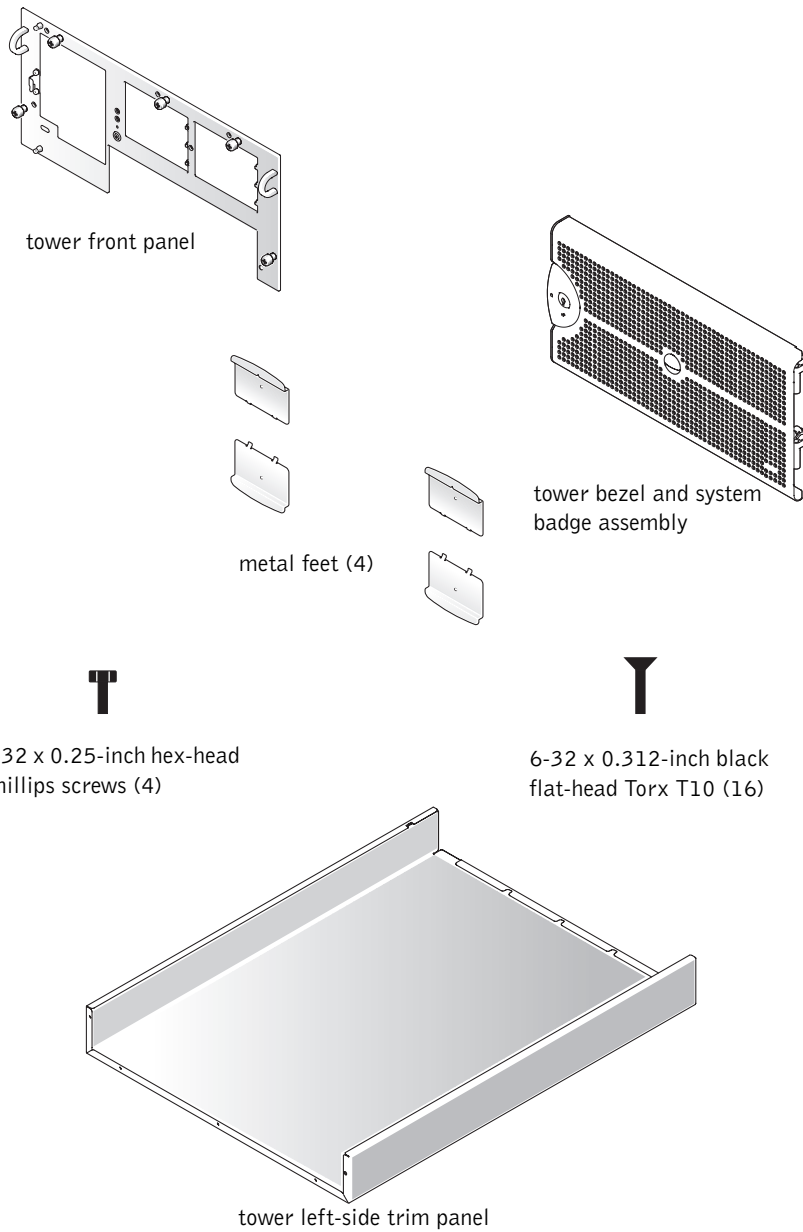
- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- Always load the rack from the bottom up, and load the heaviest item in the rack first.
- Make sure that the rack is level and stable before extending a component from the rack.
- Use caution when pressing the component rail release latches and sliding a component into or out of a rack; the slide rails can pinch your fingers.
- After a component is inserted into the rack, carefully extend the rail into a locking position, and then slide the component into the rack.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- Ensure that proper airflow is provided to components in the rack.
- Do not step on or stand on any component when servicing other components in a rack.

## Rack-to-Tower Kit Contents

The rack-to-tower kit includes the following items (see Figure 1-1):

- One tower bezel and system badge assembly, complete with keylock, and keys
- One tower front panel
- One tower left-side trim panel
- Four metal feet
- Four 6-32 x 0.25-inch hex-head Phillips screws
- Sixteen 6-32 x 0.312-inch black flat-head Torx screws

**Figure 1-1. Rack-to-Tower Kit Contents**





# Before You Begin

Before you begin removing your system from the rack and converting it to a tower version system, carefully read "Safety Instructions."

## Removing the Rack Doors

See the procedures for removing doors in the documentation provided with your rack cabinet.

## Recommended Tools and Supplies

The following tools are required to perform the conversion:

- A #2 Phillips screwdriver
- A flat-blade screwdriver
- Torx T-10 driver (for removing and installing the front panels)

## Conversion Tasks

Removing a system from the rack and removing the rack mounting hardware from the rack cabinet includes the following tasks:

- Removing the rack doors
- Removing the cable-management arm and the cable tray
- Removing the system from the rack
- Removing the cover, bezel, and front panel
- Installing the tower left-side trim panel
- Installing the tower front panel
- Installing the metal feet
- Installing the tower front bezel
- Removing the slide assemblies
- Replacing the rack doors

## Removing the Rack Doors

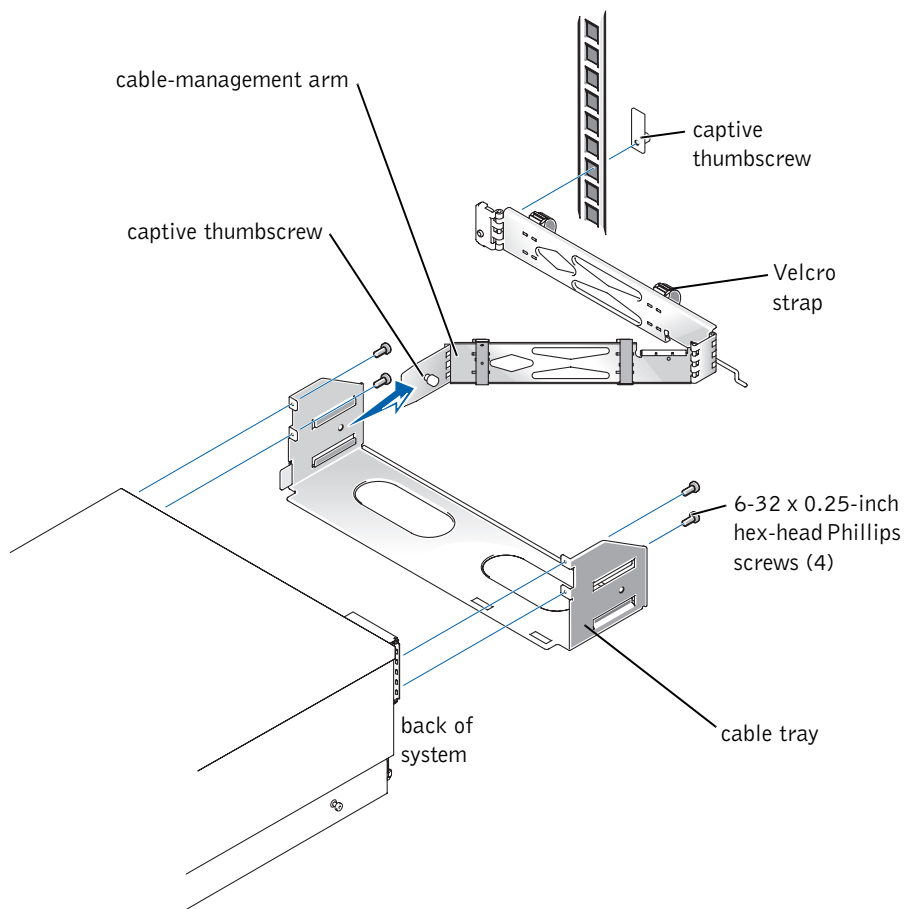
You must remove the doors from the rack cabinet to provide access to the interior of the rack and to prevent damage to the doors while removing the system and its rack kit from the rack cabinet.

See the documentation provided with the rack for instructions on removing rack doors. If you are removing a system from a rack cabinet, see the procedures contained in the system *Rack Installation Guide*.

## Removing the Cable-Management Arm


- 1 Shut down and turn off the system you are removing and all peripherals attached to this system.
- 2 At the back of the rack cabinet, disconnect and remove the AC power cable and all cables connected to the back of the system and secured to the cable-management arm with the arm's Velcro straps.
- 3 Loosen the captive thumbscrew securing the front of the cable-management arm to the cable tray (see Figure 1-2).
- 4 Pull the cable-management arm from the cable tray.
- 5 Remove the captive thumbscrew and its bracket that secures the back end of the cable-management arm to the back vertical rail (see Figure 1-2).


**Figure 1-2. Removing the Cable-Management Arm**



- 6 Remove the cable tray from the back of the system by removing the four 6-32 x 0.25-inch hex-head Phillips screws (see Figure 1-2).

# Removing the System From the Rack

 **CAUTION:** If you are removing more than one system from the rack cabinet, remove the highest of the systems to be removed first. Complete the removal of the first system from the rack before starting the second. Never extend more than one system from the rack at a time.

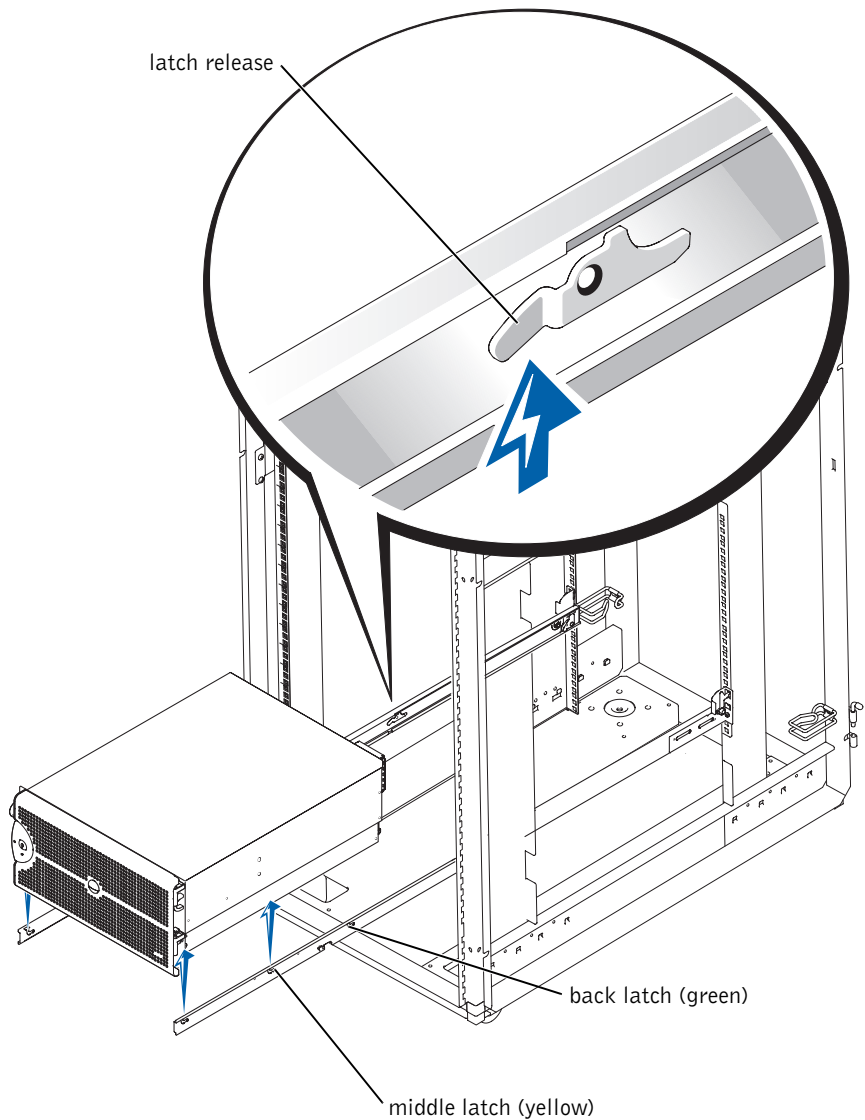
 **CAUTION:** Removing a system from a position high up in the rack cabinet will require up to four people and may require a sturdy, elevated platform to stand on. A mechanical lifting platform or similar equipment of the proper capacity may also be useful. If you attempt to remove and lower the system without enough people to safely perform the task, you risk personal injury to yourself and to others and damage to the system.

- 1 Loosen the thumbscrews that secure the front panel to the front vertical rails (at the front of the rack cabinet).
- 2 Pull the system out of the rack on its slide assemblies until the slide assembly lock snaps into place at the fully-extended position.
- 3 Press up on the yellow system release latch and pull the system toward the front and to the outermost position on the slide assemblies (see Figure 1-3).
- 4 Using two to four people, grasp the system at each corner and lift the system up and out of the slide assemblies (see Figure 1-3).

The shoulder screws should lift out of the outermost slide section. If you have difficulty, make certain that the shoulder screws in the slide assembly are aligned with their opening on the top of the slide.

- 5 Place the system on a smooth work surface.

**Figure 1-3. Removing the System From the Slide Assemblies**

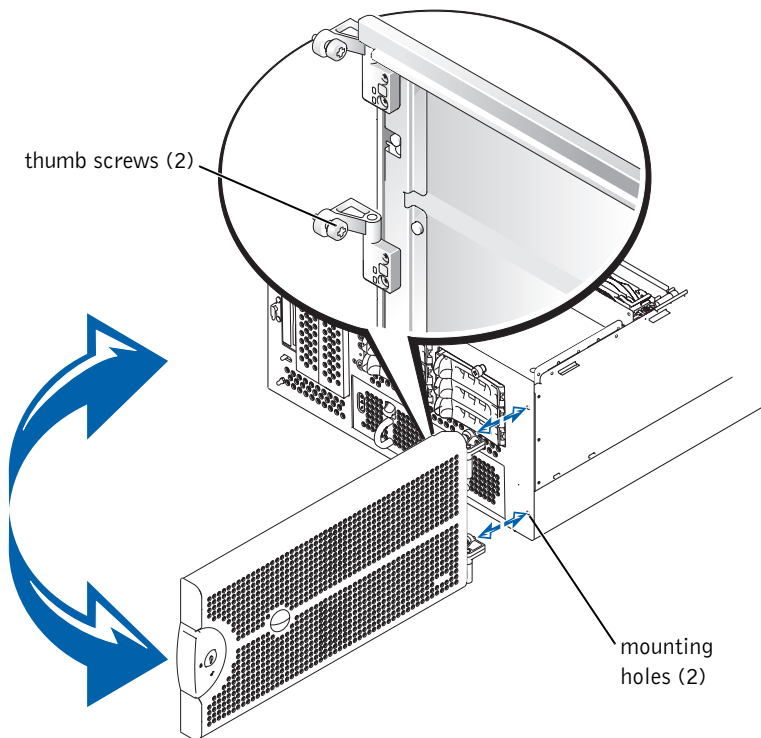


# Removing the Bezel, Cover, and Front Panel

This procedure is best performed with the system on its side (see Figure 1-4).

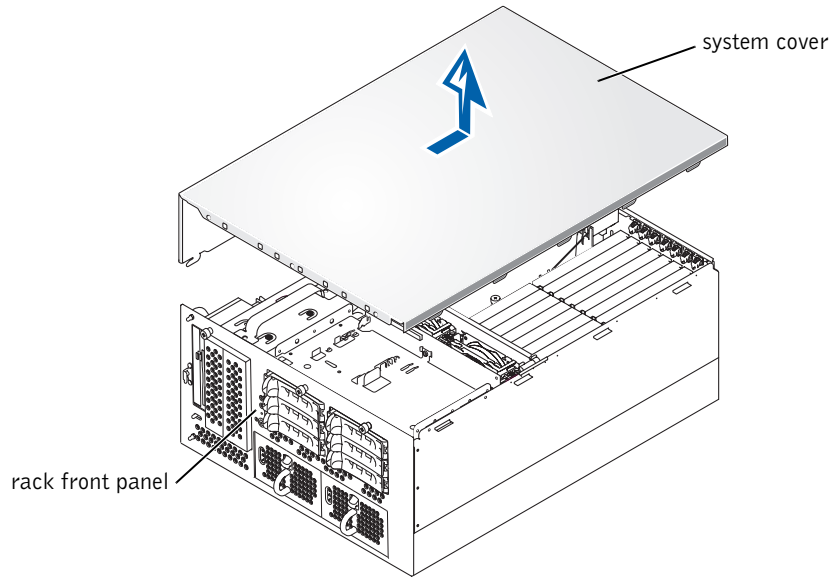
- 1** Remove the bezel and set it aside:
  - a** Using the system key, unlock the bezel.
  - b** Pull the bezel away from the system so that it is perpendicular to the system (see Figure 1-4).
  - c** Loosen the thumbscrews to release the bezel (see Figure 1-4).
  - d** Pull the bezel away from the chassis.

**Figure 1-4. Removing or Replacing the Front Bezel**




- 2 Remove the system cover and set it aside (see Figure 1-5):
  - a Loosen the three thumbscrews on the front of the system (see Figure 1-5).

**Figure 1-5. Removing the System Cover**




- b Slide the system cover back and grasp the cover at both ends (see Figure 1-5).
    - c Carefully lift the cover away from the system and set it aside.
  - 3 Label each hard drive with its location in the chassis.
  - 4 Remove the hard drives from the system.
  - 5 Remove the 13 T-10 Torx screws that secure the rack front panel to the chassis.
  - 6 Lift the rack front panel away from the chassis and set it aside.

## Installing the Tower Left-Side Trim Panel

 **NOTE:** It may be more convenient to set the chassis upright in the tower position while installing the left-side trim panel.

Position the tower left-side trim panel into position with the back end extending 12.7 millimeters (0.5-inch) beyond the back of the chassis, and then slide the side trim panel toward the front panel until it stops.

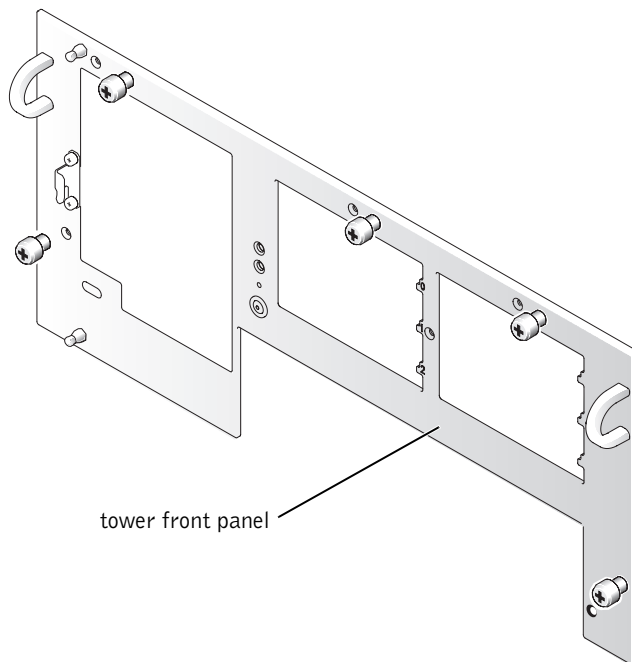
 **NOTE:** You may need to tilt the chassis slightly to provide clearance for installing the left-side trim panel.

Check to see that the trim panel is flush with the front of the system chassis.

## Installing the Tower Front Panel

- 1 Install the tower front panel on the front of the chassis (see Figure 1-6), and secure it with 16 T-10 Torx screws.
- 2 Reinstall the hard drives into their proper slots.

**Figure 1-6. Installing the Tower Front Panel**





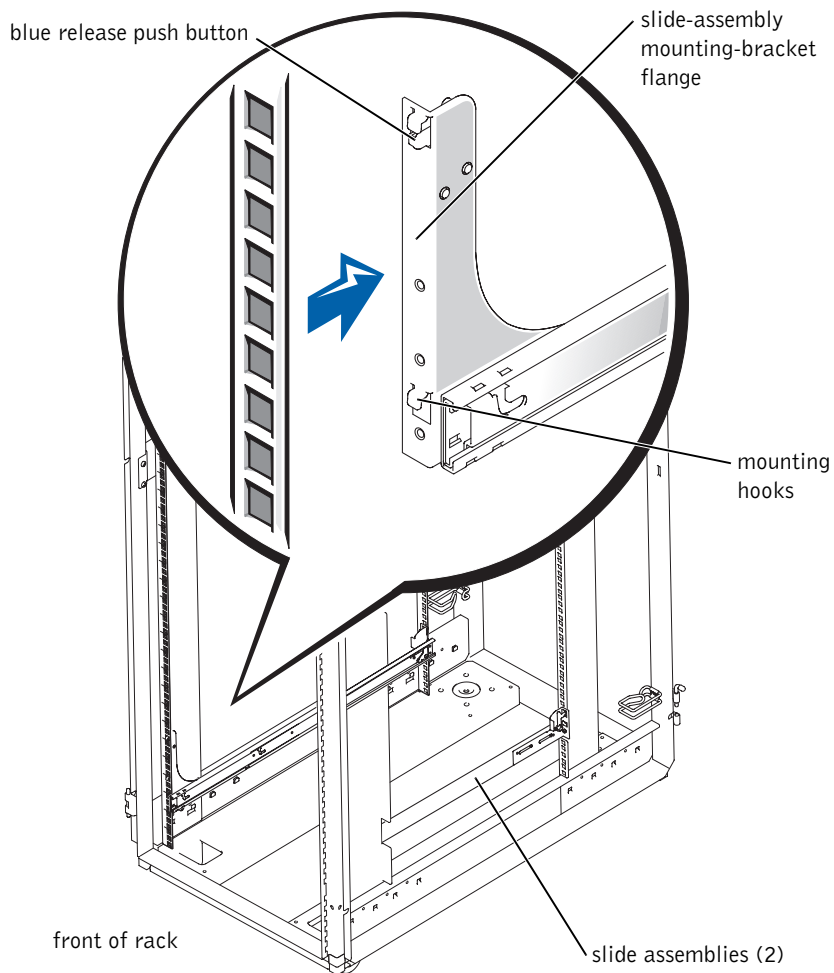
## Installing the Cover, Feet, and Bezel

- 1** Lay the system on its left side.
- 2** Replace the system cover.
- 3** Position a metal foot over the hole in each corner and secure the foot with a 6-32 x 0.25-inch hex-head Phillips screw.
- 4** Replace the bezel:
  - a** Align the two thumbscrew with the mounting holes on the front of the system (see Figure 1-4).
  - b** Tighten the thumbscrews to secure the bezel (see Figure 1-4).
  - c** Swing the bezel closed until it snaps into place.
  - d** Using the system key, lock the bezel.

## Removing the Slide Assemblies

- 1** At the front of the rack cabinet, locate the blue release push-button on one of the slide assembly's mounting-bracket flanges (see Figure 1-7).
- 2** From the front of the rack cabinet, press in on the blue release push button, lift up, and push the slide assembly back approximately one inch away from the front vertical rail until the mounting-bracket flange and its mounting hooks disengage from the square holes in the front vertical rail (see Figure 1-7).
- 3** Repeat step 2 at the back of the cabinet for this slide assembly.
- 4** Repeat steps 1 through 3 for the remaining slide assembly on the other side of the rack.
- 5** Place the cable-management arm, the cable tray, the slide assemblies, and all fastener hardware in a box. Label the box as a rack installation kit for the system model you removed from the rack.

**Figure 1-7. Removing the Slide Assemblies**



## Replacing the Rack Doors

See the procedures for replacing doors in the documentation provided with your rack cabinet.

This completes the tower conversion of your system.