

Dell™ Systems

RACK INSTALLATION GUIDE

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Notes, Notices, Cautions, and Warnings



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 potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



WARNING: A WARNING indicates a potentially hazardous situation which, if not avoided, may result in severe injury.

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Safety Instructions

Use the following safety guidelines to ensure your own personal safety and to help protect your server, storage system, or appliance from potential damage. For complete safety, regulatory, and warranty information, see your system's *System Information* document.


Precautions for Rack-Mountable Products

Observe the following precautions for rack stability and safety. Also see the rack installation documentation accompanying the system and the rack for specific warning and/or caution statements and procedures.

Servers, storage systems, and appliances are considered to be components in a rack. Thus, “component” refers to any server, storage system, or appliance, as well as to various peripherals or supporting hardware.

 **WARNING:** Installing Dell system components in a Dell 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 injure someone.

 **NOTE:** Dell's servers, storage systems, and appliances are certified as components for use in Dell's rack cabinet using the Dell customer rack kit. The final installation of Dell systems and rack kits in any other brand of rack cabinet has not been approved by any safety agencies. It is the customer's responsibility to have the final combination of Dell systems and rack kits for use in other brands of rack cabinets evaluated for suitability by a certified safety agency.

- System rack kits are intended to be installed in a Dell 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.
- Do not move large racks by yourself. Due to the height and weight of the rack, Dell recommends a minimum of two people to accomplish this task.
- Before working on the rack, make sure that the stabilizers are secure to the rack, extend 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 system or component when servicing other systems or components in a rack.

Contents

Two-Post Installation	1-1
Two-Post Support Tray Kit	1-1
Recommended Tools and Supplies	1-3
Two-Post Rack Installation Tasks	1-3
Marking the Rack	1-3
Two-Post RapidRails Kit	1-11
Four-Post Installation	1-22
Four-Post RapidRails Rack Kit	1-22
Before You Begin	1-23
Recommended Tools	1-23
Four-Post RapidRails Rack Installation Tasks	1-24
Marking the Rack	1-24
Installing the Slide Assemblies in the Rack	1-26
Installing the System in the Rack	1-28
Installing the Cable-Management Arm	1-30

Figures

Figure 1-1.	Two-Post Support Tray Rack Kit Components	1-2
Figure 1-2.	Two-Post, Open-Frame Relay Rack With Universal-Hole Spacing	1-4
Figure 1-3.	Two-Post, Open-Frame Relay Rack With Wide-Hole Spacing	1-5
Figure 1-4.	Installing the Support Tray in a Rack With Universal-Hole Spacing	1-6
Figure 1-5.	Installing the Support Tray in a Rack With Wide-Hole Spacing	1-7

Figure 1-6.	Installing the Center-Mount Brackets to the Support Tray	1-8
Figure 1-7.	Installing the Support Tray in a Rack With Universal-Hole Spacing	1-9
Figure 1-8.	Installing the Support Tray in a Rack With Wide-Hole Spacing	1-10
Figure 1-9.	Securing the System in the Rack (Flush-Mounted Tray Shown on Universal-Hole Spacing Rack)	1-11
Figure 1-10.	Two-Post RapidRails Rack Kit Components	1-12
Figure 1-11.	Installing the Slide Assemblies for Center-Mount Configuration	1-15
Figure 1-12.	Positioning Brackets for Flush-Mount Installation	1-16
Figure 1-13.	Installing the Slide Assemblies for Flush-Mount Configuration	1-17
Figure 1-14.	Installing the System in the Rack (Flush-Mount Configuration)	1-18
Figure 1-15.	Securing the System in the Rack (Flush-Mount Configuration)	1-19
Figure 1-16.	Installing the Cable Management Arm	1-20
Figure 1-17.	Attaching the Strain Relief Bracket	1-21
Figure 1-18.	Four-Post RapidRails Rack Kit Contents	1-23
Figure 1-19.	One Rack Unit	1-24
Figure 1-20.	Using the Template to Mark Vertical Rails	1-25
Figure 1-21.	Installing the Slide Assemblies	1-27
Figure 1-22.	Installing the System in the Rack	1-29
Figure 1-23.	Installing the Cable Management Arm	1-30
Figure 1-24.	Attaching the Strain Relief Bracket	1-31

This installation guide provides instructions for trained service technicians installing one or more Dell™ systems in a Dell rack. One rack kit is required for each system installed in the rack. This guide includes procedures for two-post and four-post rack kits.



CAUTION: Do not attempt to install rack kit components designed for another system. Use only the rack kit for your Dell system. Damage to the system and personal injury may result.

Two-Post Installation

There are two types of two-post rack kits: a two-post support tray kit and a two-post RapidRails™ rack kit. You can install each kit in a flush-mount or a center-mount configuration.

Two-Post Support Tray Kit

The two-post support tray kit is used to install a Dell system in a two-post, open-frame relay rack, such as those found in telecommunications equipment facilities. Both 3-inch and 6-inch wide two-post racks are accommodated. You can install this kit in a center-mount or a flush-mount configuration.

You must properly secure the two-post rack to the floor, to the ceiling or upper wall, and where applicable, to adjacent racks, using floor and wall fasteners and bracing specified or approved by the rack manufacturer or by industry standards. See the rack manufacturer's installation documentation for precautionary warnings before attempting this installation.



CAUTION: Do not attempt to install the system into a two-post, open-frame relay rack that has not been securely anchored in place. Damage to the system and personal injury may result.

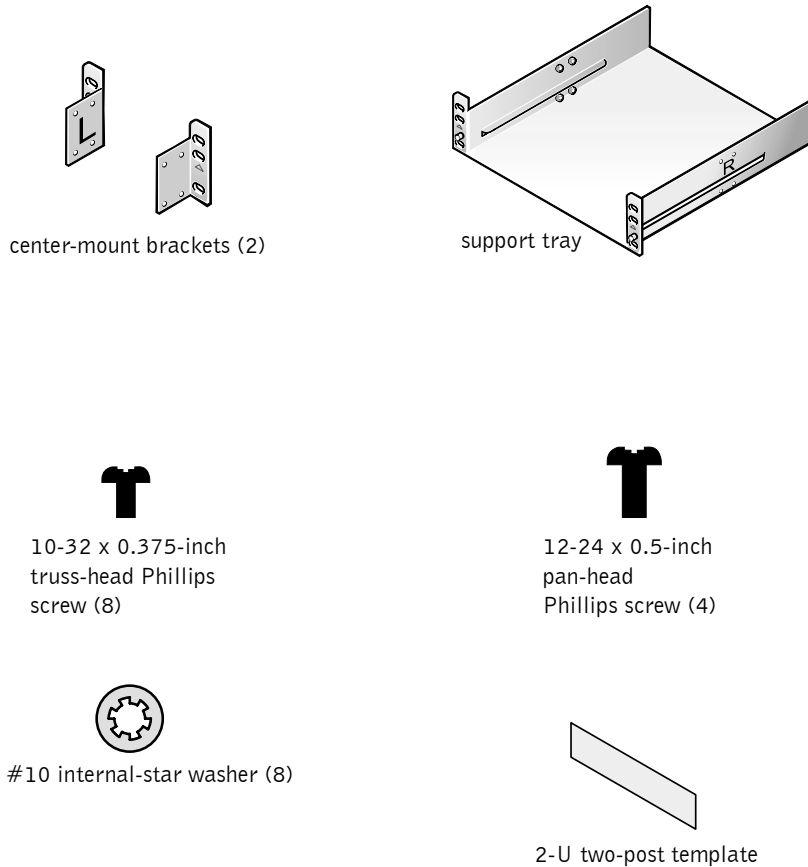
See “Safety Instructions” at the front of this document for additional safety information regarding rack installation.

Rack Kit Contents

The two-post support tray kit includes (see Figure 1-1):

- One 2-U support tray assembly (two-post)
- Four 12-24 x 0.5-inch pan-head Phillips screws
- Eight 10-32 x 0.375-inch truss-head Phillips screws
- Eight #10 internal-star lock washers
- One pair center-mount brackets
- One 2-U two-post template

Figure 1-1. Two-Post Support Tray Rack Kit Components



Recommended Tools and Supplies

You need the following tools and supplies to install the system in a two-post, open-frame relay rack:

- #2 Phillips screwdriver
- Masking tape or felt-tip marker pen to mark the mounting holes

Two-Post Rack Installation Tasks

Installing a two-post rack kit includes the following tasks:

- 1 Marking the rack
- 2 Flush mount installation
- 3 Center mount installation
- 4 Installing the system in the rack

Marking the Rack

- 1 Determine where you want to place the bottom of the support tray.

If you are installing other components in the rack, install the heaviest items at the bottom of the rack.

- 2 Place the 2-U template over the front of the rack rails in the desired location.
- 3 Position the bottom of the template in line with the desired bottom position of the system chassis.

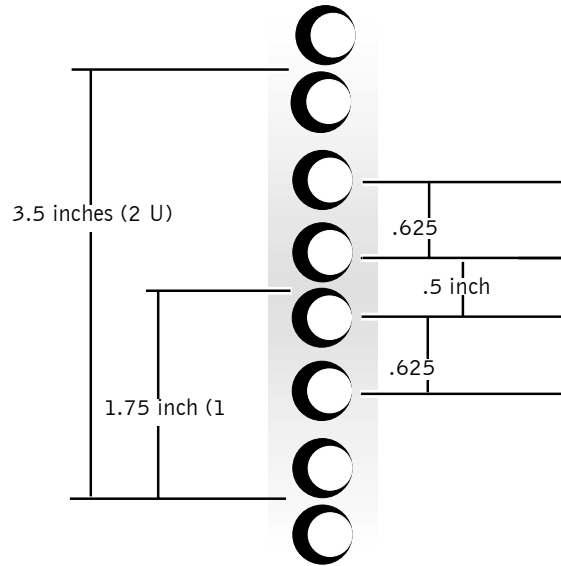


NOTE: If your rack has wide-hole spacing, go to step 5. If your rack has universal-hole spacing, continue with the next step.

- 4 Mark the upper- and lower-mounting positions on the vertical rails as shown by the bottom and top V-notches on the sides of the template.

Each 1-U (1.75-inch) vertical space on a rack with universal-hole spacing has three holes with center-to-center spacing between holes (beginning at the top of a 1-U space) of 0.625, 0.625, and 0.5 inches (see Figure 1-2).

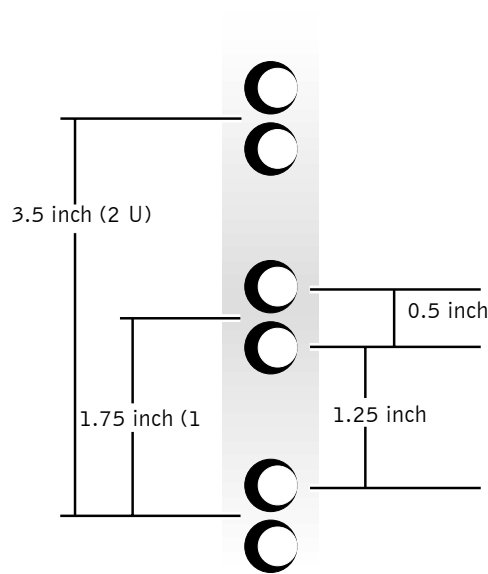
Figure 1-2. Two-Post, Open-Frame Relay Rack With Universal-Hole Spacing



- 5 If your rack has wide-hole spacing (see Figure 1-3), mark the lower and middle mounting positions on the vertical rails as shown by the bottom and middle V-notches on the sides of the template.

Each 1-U (1.75-inch) vertical space on a rack with wide-hole spacing has two holes with center-to-center spacing between holes (beginning at the top of a 1-U space) of 1.25 inches (see Figure 1-3).

Figure 1-3. Two-Post, Open-Frame Relay Rack With Wide-Hole Spacing



⚠ CAUTION: The 2-U support tray is designed to support a single system in a 2-post open frame relay rack. Do not attempt to install any other system in this support tray. Damage to the system and personal injury to you and others may result.

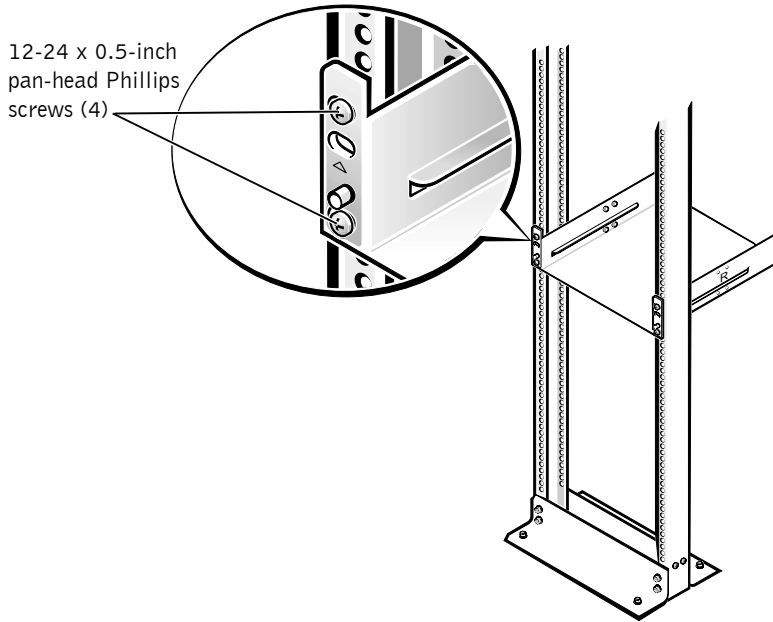
Flush-Mount Installation

This procedure uses the same support tray kit, but it does not use the center-mount brackets.

- 1 Place the support tray into the rack with the bottom of the tray at the marks you made in step 4 (for a universal-hole spacing rack) or in step 5 (for a wide-hole spacing rack) in the section, “Marking the Rack.” The center-mount brackets, the 10-32 x 0.375-inch truss-head screws, and the #10 internal-star washers are not used when mounting the support tray’s front mounting bracket flush against the 2-post rack.
- 2 If you are installing the support tray in a rack with universal-hole spacing, install four 12-24 x 0.5-inch pan-head Phillips screws to secure the support tray using the upper and lower holes that you marked on the rack’s front surface (see Figure 1-4).

An internally threaded stud projecting from the front of the tray flanges accepts the captive fasteners on the front panel of the system.

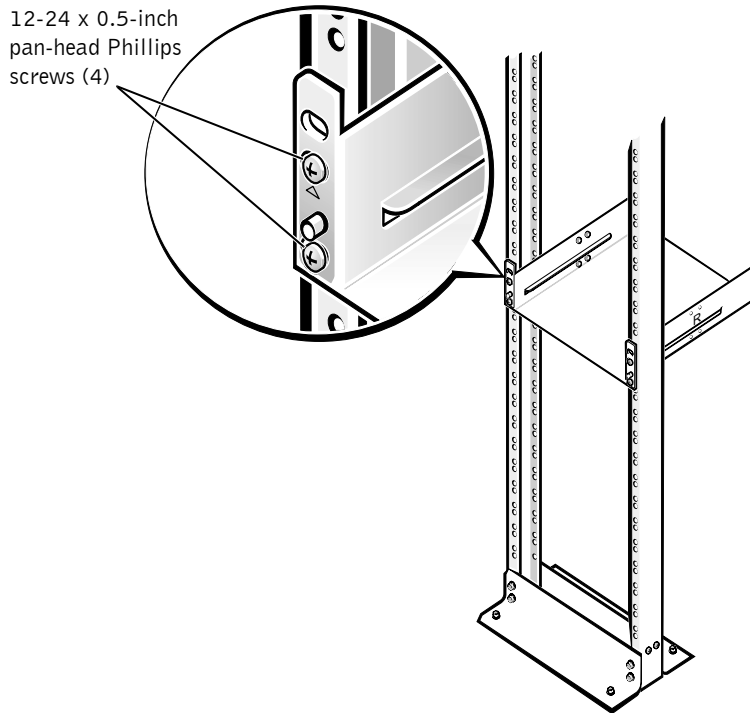
Figure 1-4. Installing the Support Tray in a Rack With Universal-Hole Spacing



- 3 If you are installing the support tray in a rack with wide-hole spacing, install the four 12-24 x 0.5-inch pan-head Phillips screws provided to secure the support tray using the bottom and the middle hole that you marked on the rack's front surface (see Figure 1-5).

An internally threaded stud projecting from the front of the support tray flange accepts the captive fastener on the front of the system.

Figure 1-5. Installing the Support Tray in a Rack With Wide-Hole Spacing

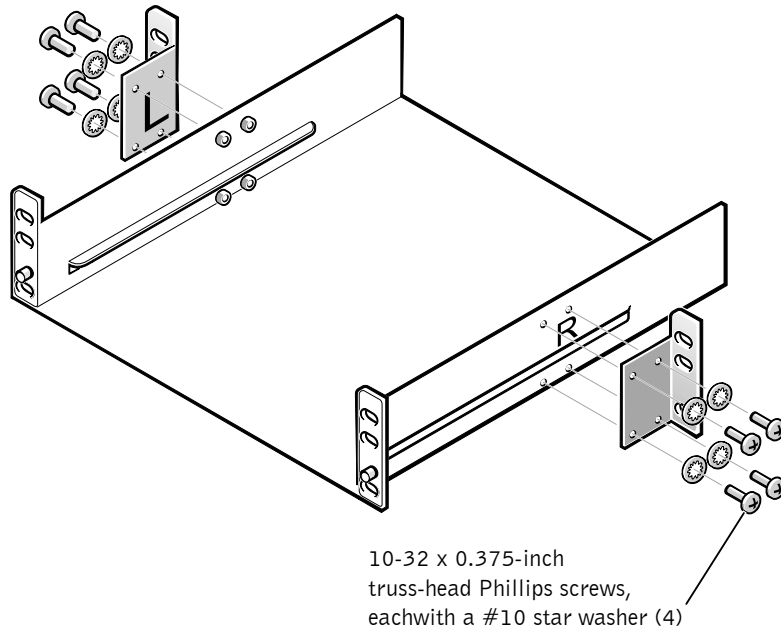


12-24 x 0.5-inch
pan-head Phillips
screws (4)

Center-Mount Installation

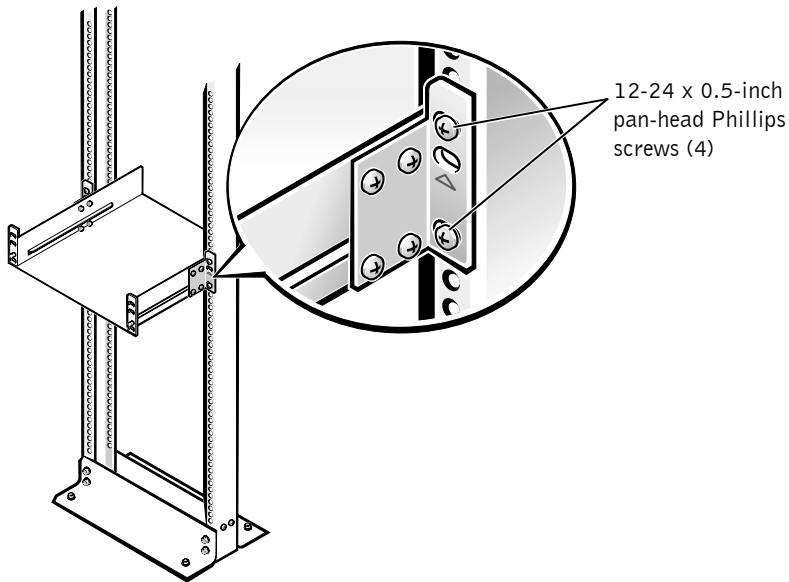
- 1** Position the left-hand, center-mount bracket with the stamped “L” on its side so that it faces the stamped “L” on the left side of the support tray. Ensure that the four holes on the side of the bracket align with the four matching holes on the left side of the support tray.
- 2** Secure the left-hand, center-mount bracket to the support tray using four 10-32 x 0.375-inch truss-head Phillips screws with #10 star washers (see Figure 1-6).

Figure 1-6. Installing the Center-Mount Brackets to the Support Tray



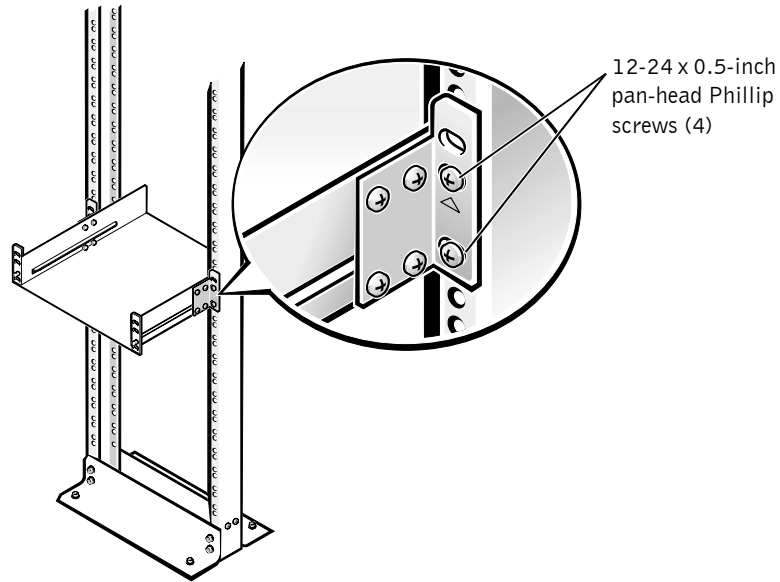
- 3 Install the right-hand, center-mount bracket to the right side of the support tray by repeating steps 1 and 2. Ensure that the stamped “R” on the bracket faces the stamped “R” on the right side of the support tray.
- 4 If you are installing the center-mount support tray into a universal-hole spacing rack with the bottom of the support tray positioned at the place you marked on the rack, install the four 12 - 24 x 0.5-inch screws finger-tight into the top and bottom holes of the center-mount bracket (see Figure 1-7).
- 5 Tighten the center-mount bracket screws to the front of the two-post rack.

Figure 1-7. Installing the Support Tray in a Rack With Universal-Hole Spacing



- 6 If you are installing the support tray onto a wide-hole spacing relay rack with the bottom of the support tray positioned at the place you marked on the rack, install the screws finger tight into the bottom and the marked middle hole of the center-mount bracket (see Figure 1-8).

Figure 1-8. Installing the Support Tray in a Rack With Wide-Hole Spacing



- 7 Tighten the center-mount bracket screws to the front of the two-post rack.

Installing the System in the Rack



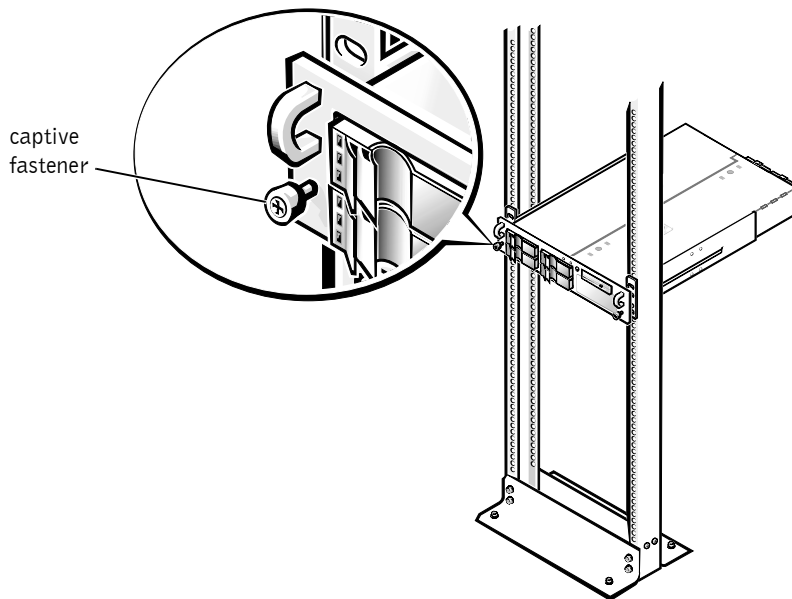
CAUTION: Due to the size and weight of the computer system, never attempt to install the computer system by yourself.



NOTE: The procedure for installing a system into a rack is identical for flush-mounted and center-mounted support trays.

- 1 If your system has a bezel, remove it (see the system *Installation and Troubleshooting Guide* for instructions).
- 2 Lift the system into position on the support tray.
- 3 Slide the system completely into position and secure it to the rack using the captive fasteners at the lower edge of the front panel (see Figure 1-9).

Figure 1-9. Securing the System in the Rack (Flush-Mounted Tray Shown on Universal-Hole Spacing Rack)



- 4 Attach the front bezel, if one is available, to the system (see the system *Installation and Troubleshooting Guide* for instructions).

You have completed the installation of the two-post support tray rack.

Two-Post RapidRails Kit

The two-post RapidRails rack kit is used to install a Dell system in a two-post, open-frame relay rack, such as those found in telecommunications equipment facilities. Both 3-inch and 6-inch wide two-post racks are accommodated. You can install this kit in a center-mount or a flush-mount configuration. The kit incorporates slide assemblies, which enable the system to be pulled out of the rack cabinet for servicing.

You must properly secure the two-post, open-frame relay rack to the floor, the ceiling or upper wall, and where applicable, to adjacent racks, using floor and wall fasteners and bracing specified or approved by the rack manufacturer or by industry standards. See the two-post, open-frame relay rack manufacturer's installation documentation for precautionary warnings before attempting this installation.

⚠ CAUTION: Do not attempt to install the system into a two-post, open-frame relay rack that has not been securely anchored in place. Damage to the system and personal injury may result.

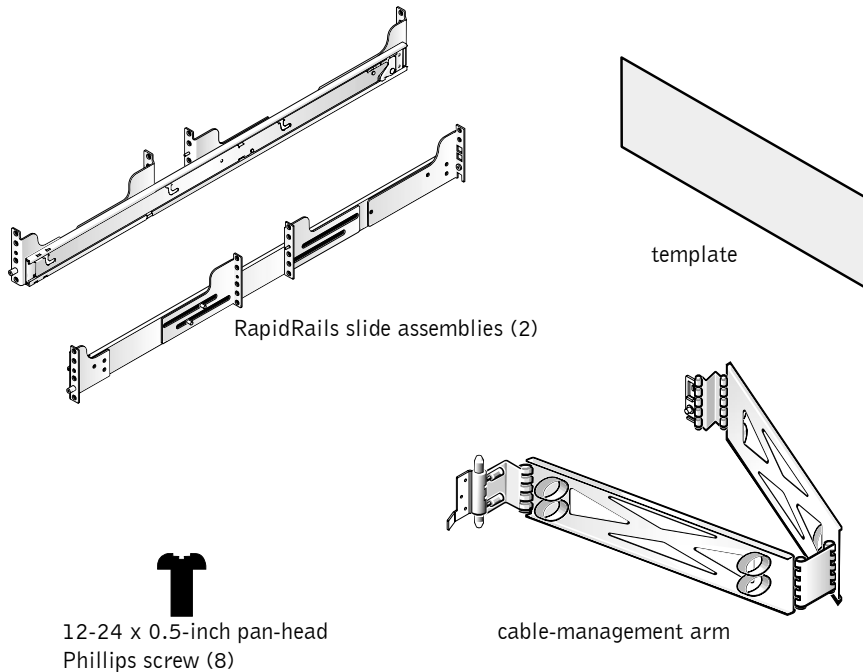
See “Safety Instructions” at the front of this document for additional safety information regarding rack installation.

Rack Kit Contents

The two-post RapidRails kit includes (see Figure 1-10):

- One pair of RapidRails slide assemblies (two-post)
- One cable-management arm
- Eight 12-24 x 0.5-inch pan-head Phillips screws
- One 2-U two-post template

Figure 1-10. Two-Post RapidRails Rack Kit Components



Recommended Tools and Supplies

You need the following tools and supplies to install the system in a two-post open-frame relay rack:

- #2 Phillips screwdriver
- 3/8-inch nut driver
- Masking tape or felt-tip marker pen to mark the mounting holes

Two-Post RapidRails Rack Installation Tasks

Installing a two-post RapidRails rack kit includes the following tasks:


- 1 Marking the rack
- 2 Installing the slide assemblies in the rack
 - a Center mount installation
 - b Flush mount installation
- 3 Installing the system in the rack
- 4 Installing the cable management arm

Marking the Rack

- 1 Determine where you want to place the bottom of the system.

If you are installing other components in the rack, install the heaviest items at the bottom of the rack.

- 2 Place the 2-U template over the front of the rack rails in the desired location.
- 3 Position the bottom of the template in line with the desired bottom position of the system chassis.

 **NOTE:** If your rack has wide hole spacing, go to step 5. If your rack has universal-hole spacing, continue with the next step.

- 4 Mark the upper- and lower-mounting positions on the vertical rails as shown by the bottom and top V-notches on the sides of the template.

Each 1-U (1.75-inch) vertical space on a rack with universal-hole spacing has three holes with center-to-center spacing between holes (beginning at the top of a 1-U space) of 0.625, 0.625, and 0.5 inches (see Figure 1-2).

- 5 If your rack has wide hole spacing (see Figure 1-3), mark the lower and middle mounting positions on the vertical rails as shown by the bottom and middle V-notches on the sides of the template.

Each 1-U (1.75-inch) vertical space on a rack with wide hole spacing has two holes with center-to-center spacing between holes (beginning at the top of a 1-U space) of 1.25 inches (see Figure 1-3).

Installing the Slide Assemblies in the Rack

You can install the slide assemblies in a 2-post open-frame rack having either universal-hole spacing (see Figure 1-2) or wide hole spacing (see Figure 1-3). You can install the 2-U RapidRails in either a flush-mount or center-mount configuration.



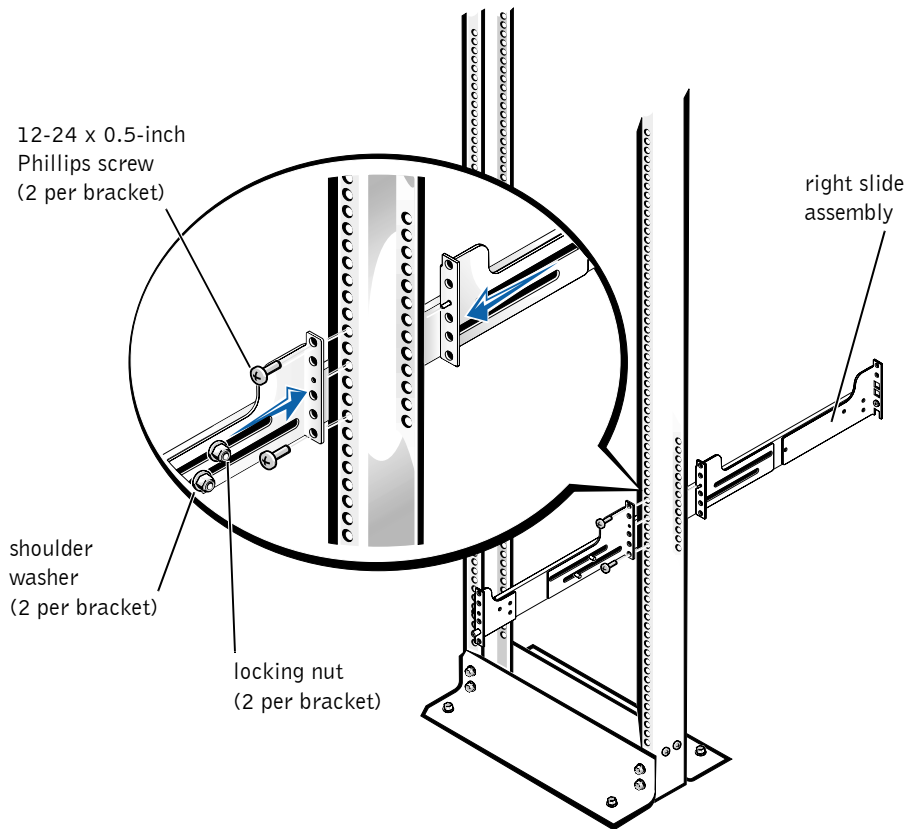
CAUTION: The 2-U RapidRails rack kit is designed to support a single system in a 2-post open frame relay rack. Do not attempt to install any other system using this kit. Damage to the system and personal injury to you and others may result.

Center-Mount Installation

To prepare the RapidRails slide assemblies for center-mount installation in the 2-post rack, perform the following steps:

- 1 Using a 3/8-inch nut driver, loosen by one-half turn the two locking nuts that attach the center bracket to each slide assembly.
- 2 Center the alignment hole on the bracket with an appropriate alignment hole on each slide assembly. There is an alignment hole on each movable bracket (see Figure 1-12).
- 3 Position the right slide assembly in the two-post rack at the location you marked, adjust the front and rear brackets tightly against the vertical two-post rack and secure the front and rear center mounting brackets to the rack with two 12-24 x 0.5-inch pan-head Phillips screws.
- 4 Repeat step 3 to install the left slide assembly in the rack.
- 5 Using a 3/8-inch nut driver, tighten the locking nuts on the center mounting brackets of both right and left slide assemblies (see Figure 1-11).


Figure 1-11. Installing the Slide Assemblies for Center-Mount Configuration



Flush-Mount Installation

To prepare the RapidRails slide assemblies for flush-mount installation in the 2-post rack, perform the following steps:

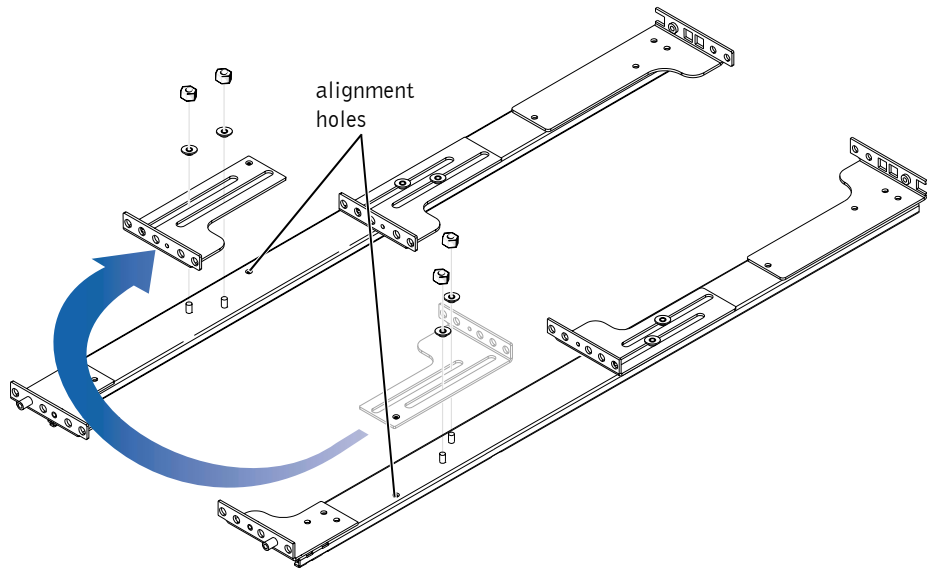
- 1 Locate the left slide assembly and place it on a smooth work surface. Place the right slide assembly to the right of the left slide assembly. Position both rails so that the center brackets are facing upwards.

 **NOTE:** The slide assemblies are factory configured for center-mount use. For flush-mount installation, you must remove, rotate 180 degrees, and reinstall the mounting bracket on the opposite slide assembly.

- 2 Remove two locking nuts and two shoulder washers from each center bracket.

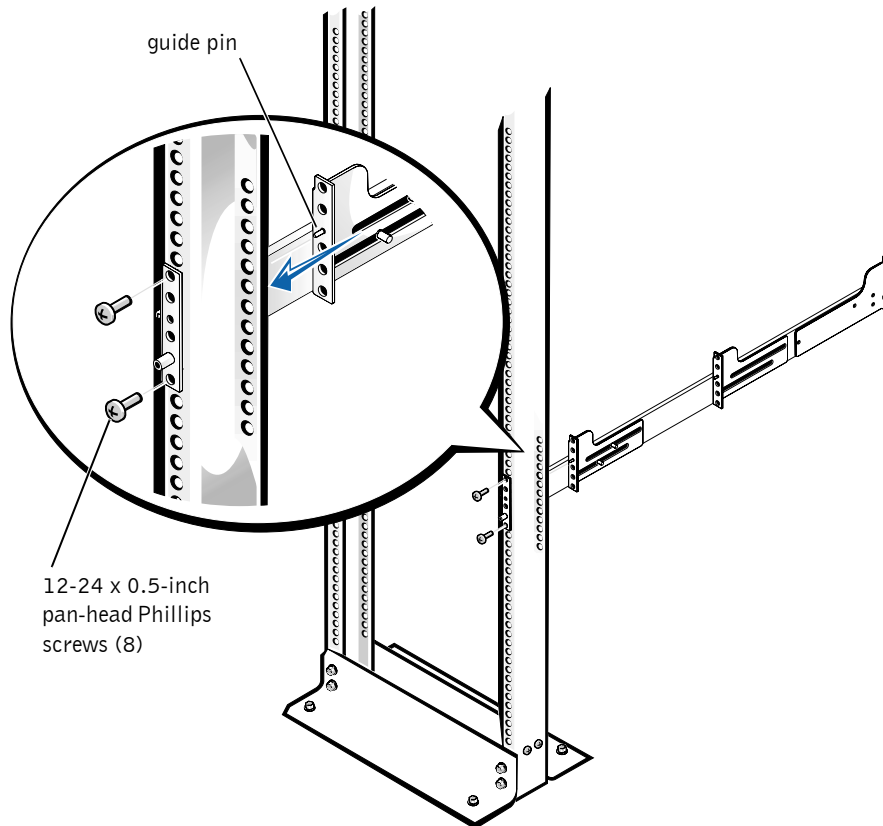
- 3 Place the bracket from the right slide assembly on the threaded studs on the left slide assembly, with the bracket turned 180 degrees so that the mounting flange faces forward (see Figure 1-12).
- 4 Secure each center mount bracket (by its locking nuts and shoulder washer) finger tight on their opposite slide assemblies using the two shoulder washers and two locking nuts you removed in step 2 (see Figure 1-12).

Figure 1-12. Positioning Brackets for Flush-Mount Installation



- 5 Holding the left slide assembly into position in the two-post rack at the location you marked, adjust the front and rear brackets tightly against the vertical two-post rack and secure the front and rear center mounting brackets to the rack with two 12-24 x 0.5-inch pan-head Phillips screws on each back mounting flange.
- 6 Perform steps 3 through 6 to install the right slide assembly in the rack.
- 7 The guide pin on the mounting flange should enter a mounting hole in the rack (see Figure 1-13).
- 8 Use a 3/8-inch nut driver to fully tighten the locking nuts on the mounting brackets that were finger tight.

Figure 1-13. Installing the Slide Assemblies for Flush-Mount Configuration



- 9 Secure the front mounting flange to the front of the two-post rack using two 12-24 x 0.5-inch screws.
- 10 Secure the center bracket to the back of the two-post rack using two 12-24 x 0.5-inch screws.
- 11 Tighten the two locking nuts that secure the center bracket on each slide assembly.

Installing the System in the Rack

⚠ CAUTION: Due to the size and weight of the computer system, never attempt to install the computer system by yourself.

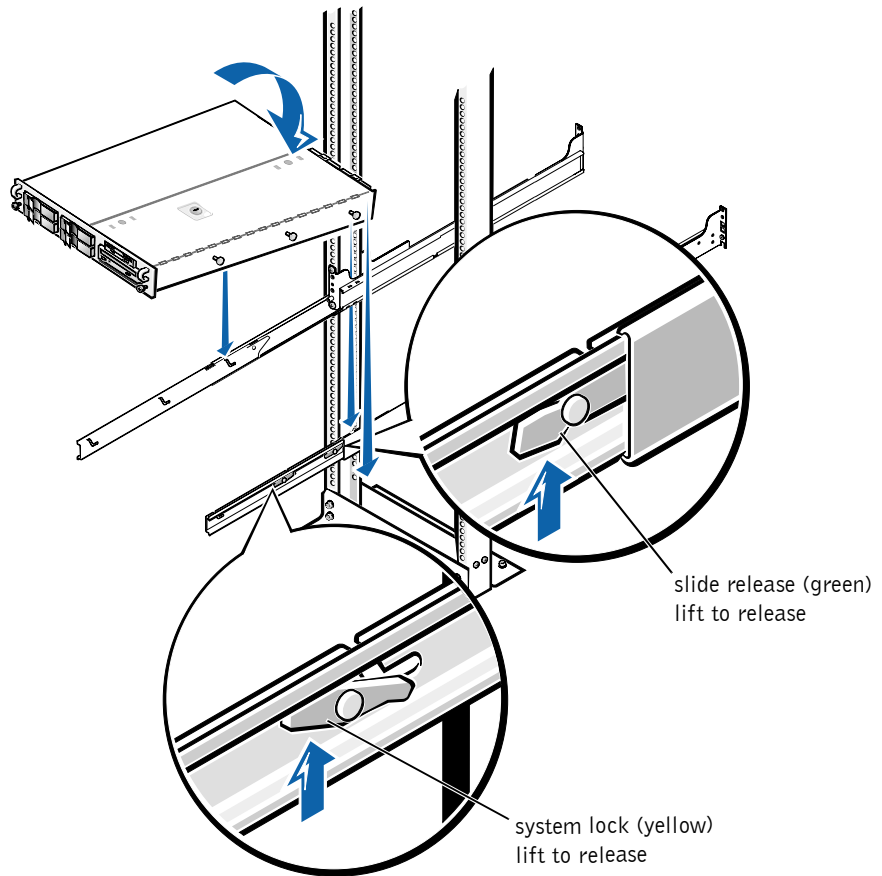
🔧 NOTE: The procedure for installing a system into a rack is identical for flush-mounted and center-mounted support trays.

- 1 Pull the inner slides out to their fully extended position.
- 2 If your system has an optional bezel, remove it (see the system *Installation and Troubleshooting Guide* for instructions).

⚠ CAUTION: Because of the size and weight of the system, never attempt to install the system in the slide assemblies by yourself.

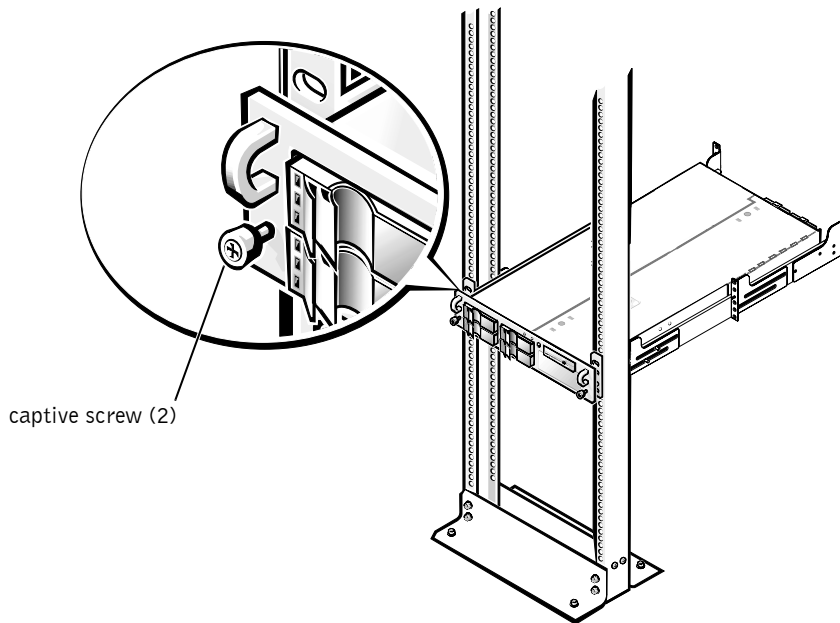
- 3 Lift the system into position.

Figure 1-14. Installing the System in the Rack (Flush-Mount Configuration)



- 4 Place one hand on the front-bottom of the system and the other hand on the back-bottom of the system.
- 5 Tilt the system while aligning the back shoulder nuts on the sides of the system with the back slots on the slide assemblies (see Figure 1-14).
- 6 Engage the back shoulder nuts in the slot just behind the back (green) latch first, followed by the middle shoulder nut in the slot near the middle (yellow) latch. Finally, engage the front shoulder nut in the front slot.
- 7 Push the system inward on the slide assemblies until the middle (yellow) latch clicks into place, locking the slide to the middle shoulder nut (see Figure 1-14).
- 8 Release the locking latch at the back of the slide, and slide the system completely into the rack and secure it using the captive fasteners at the lower edge of the front panel (see Figure 1-15).

Figure 1-15. Securing the System in the Rack (Flush-Mount Configuration)

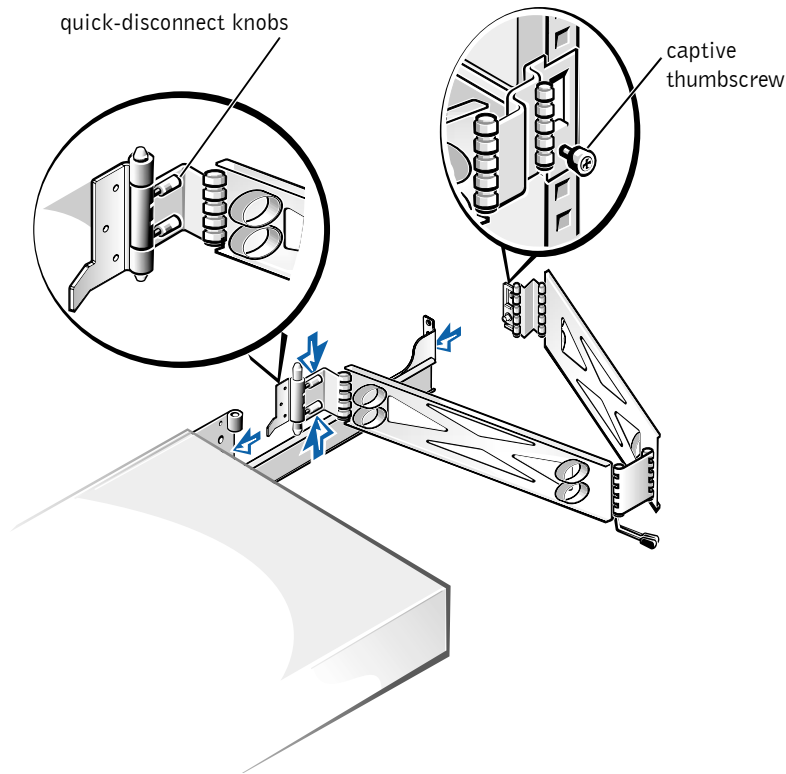


- 9 Attach the front bezel, if you removed it.


Installing the Cable Management Arm

- 1 Facing the back of the two-post rack, locate the two slots and the threaded hole on the back right side of the system.
- 2 Insert the bracket on the end of the cable management arm to the mating slots and threaded hole, and secure the arm using the captive thumbscrew.

Figure 1-16. Installing the Cable Management Arm

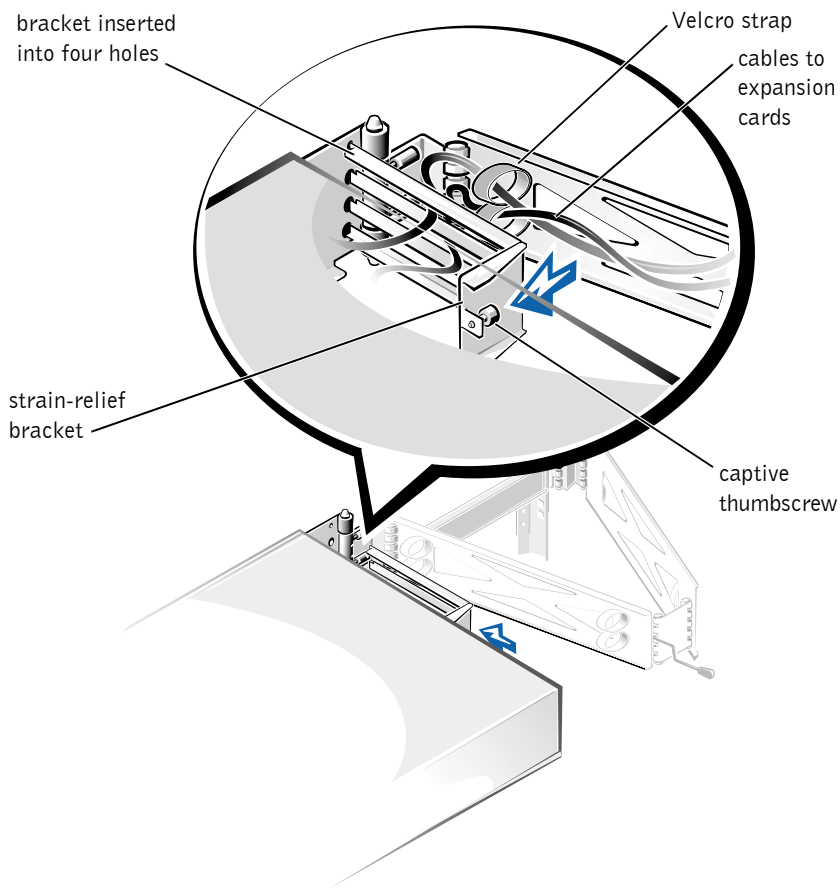


- 3 Align the free end of the cable-management arm (the end with the half-hinge) to the hinge-half mate on the back-right side (as viewed from the back) of the system (see Figure 1-16).
- 4 Squeeze the quick-disconnect knobs on the free end of the cable-management arm and align the two hinge halves to attach the arm to the bracket on the back of the system chassis (see Figure 1-16).
- 5 Attach the input/output (I/O) cables to their respective expansion cards on the back of the system.

 **NOTE:** If your kit does not have a strain-relief bracket, skip to step 6.

- 6 Install the strain-relief bracket to the back of the system (see Figure 1-17):
 - a Thread the I/O cables you connected in step 4 through the slots of the strain-relief bracket.
 - b Insert the ends of the four long portions of the strain-relief bracket into the four matching holes beside the hinge bracket.
 - c Secure the captive thumbscrew to the back of the system.


Figure 1-17. Attaching the Strain Relief Bracket



- 7 Connect the remaining cables to the system.

For details, see your system's *Installation and Troubleshooting Guide* or the *User's Guide*.

- 8 Secure the cables to the cable-management arm:
 - a After connecting the cables to the system, unscrew the thumbscrews that secure the front of the server to the front vertical rail.
 - b Slide the system forward to the fully extended position.
 - c Route the cables along the cable-management arm, allowing some additional cable slack at the hinge positions, and secure the cables to the cable-management arm with the Velcro straps attached to the cable-management arm.
- 9 Slide the system in and out of the rack to verify that the cables are routed correctly and do not bind, stretch, or pinch with the movement of the cable-management arm.

 **NOTE:** As you pull the system out to its furthest extension, the slide assemblies lock in the extended position. To push the system back into the rack, press the green locking latch on the side of the slide to release the locks, and then slide the system completely into the rack.

You have completed the installation of the RapidRails kit in a two-post rack.

Four-Post Installation

You can install the four-post RapidRails rack kit in any Dell rack cabinet and in most industry-standard rack cabinets.

Four-Post RapidRails Rack Kit

This procedure provides instructions for trained service providers to install one or more systems into a Dell rack. One four-post RapidRails kit is required for each system to be installed in the rack.

Rack Kit Contents

The rack kit includes (see Figure 1-17):

- One pair of RapidRails slide assemblies
- One cable-management arm
- One strain-relief bracket
- One template


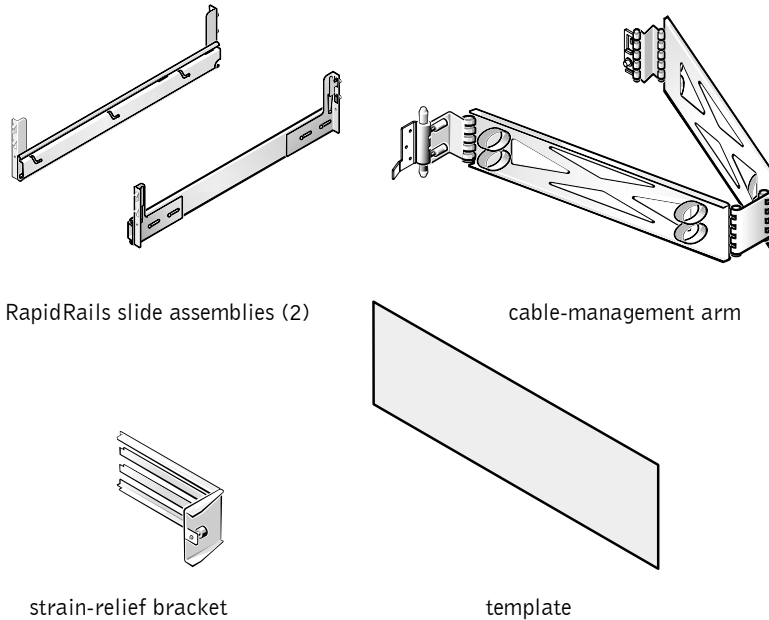
 **NOTE:** If you purchased a Dell rack along with your system, the slide assemblies may already be installed in the rack.

Figure 1-18. Four-Post RapidRails Rack Kit Contents



Before You Begin

Before you begin installing your system in the rack, carefully read the safety instructions found earlier in this guide.

If you have a Dell PowerEdge™ 4210 rack, see the procedures in the *Dell PowerEdge 4210 Rack Installation Guide*.

Recommended Tools

Although no tools are required to install the rack kit, the following items make the installation easier:

- An installation template, helpful in slide assembly placement and alignment
- Masking tape or a felt-tip pen, for use in marking the mounting holes

Four-Post RapidRails Rack Installation Tasks

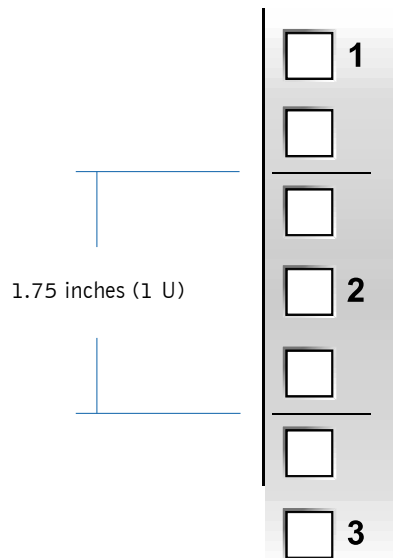
Installing a four-post RapidRails rack kit includes the following tasks:

- 1 Marking the rack
- 2 Installing the slide assemblies in the rack
- 3 Installing the system in the rack
- 4 Installing the cable management arm

Marking the Rack

You must allow 2 U (3.5 inches) of vertical space for each system you install in the rack.

Figure 1-19. One Rack Unit



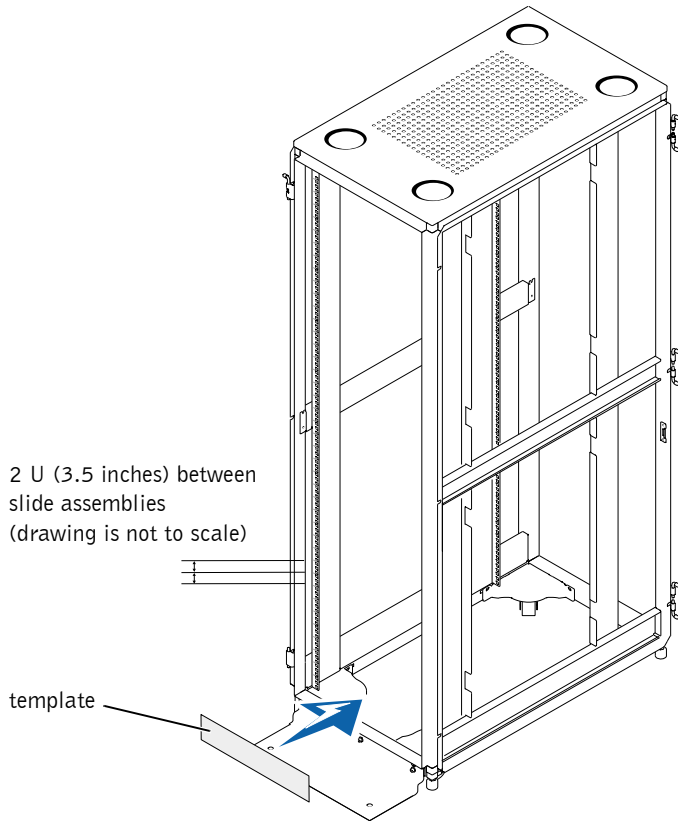
For more information about requirements for installing components in a Dell rack, see the Dell Rack Advisor software available on the Dell Web site at <http://support.dell.com>.

⚠ CAUTION: If you are installing more than one system, install the slide assemblies so that the first system is installed in the lowest available position in the rack.


To install the slide assemblies in the rack, perform the following steps:

- 1 Place the front of the template on the vertical rails at the front of the rack where you want to install the system.
Ensure that the printing on the template identifies the side facing outward as the template front.
- 2 Mark the rack's front vertical rails with a felt-tipped marker or place self-adhesive masking tape where the system's upper and lower edges will be located (see Figure 1-19).
- 3 Make a mark or place tape on the vertical rails next to the template's V-shaped notches that are marked in red.

Figure 1-20. Using the Template to Mark Vertical Rails

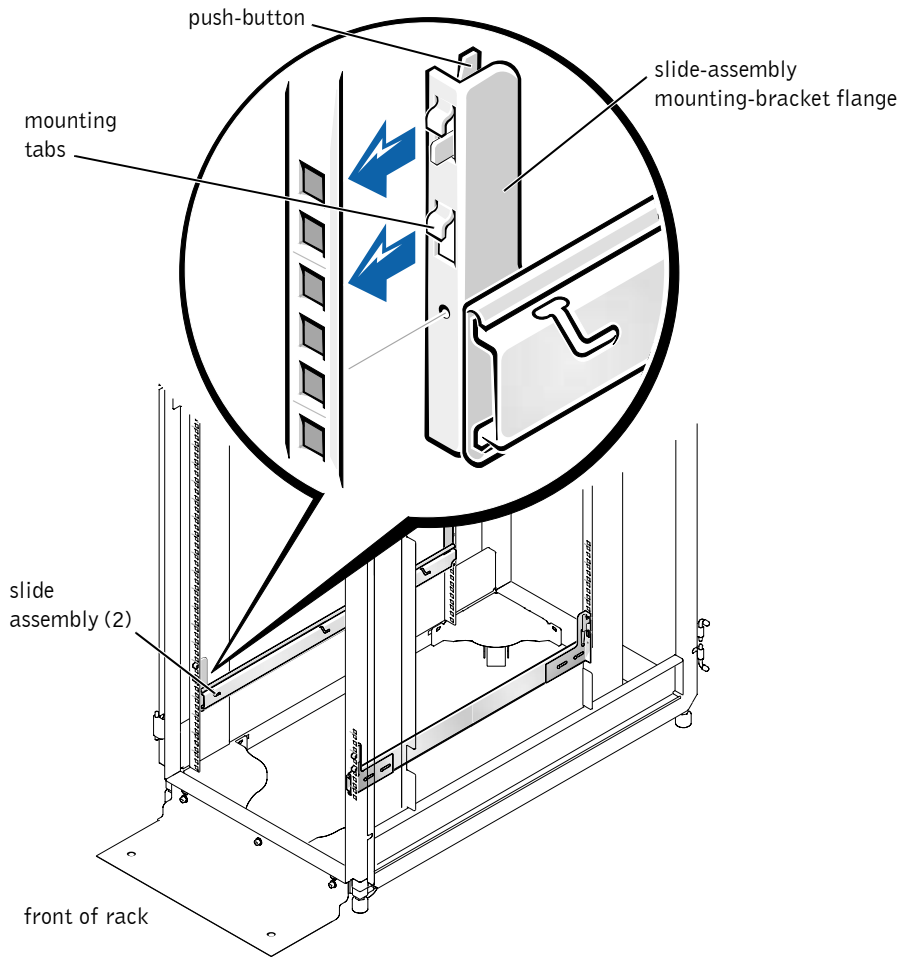


Installing the Slide Assemblies in the Rack

 **NOTE:** If Dell installed the slide assemblies, you can skip this section.

- 1** At the front of the rack cabinet, position one of the slide assemblies so that its mounting bracket flange fits between the marks or tape you placed on the rack, marking the upper and lower edges of the template (see Figure 1-19).
- 2** The hooks on the mounting bracket should align with the marks you made from the V-shaped notches in the template.
- 3** Align the slide-assembly mounting-bracket flange (on the front of the slide assembly) with the square holes in the front vertical rail (see Figure 1-20).
- 4** Push forward until the mounting tabs are secure in the square holes on the vertical rail and the push-button clicks and pops out.
- 5** Push back on the back slide assembly mounting bracket flange until the mounting tabs lock into the square holes on the back vertical rail.
- 6** Repeat steps 1 through 7 for the remaining slide assembly on the other side of the rack.

Figure 1-21. Installing the Slide Assemblies



Installing the System in the Rack

The subsections that follow include instructions for installing the system in the rack.



CAUTION: If you are installing more than one system, install the first system in the lowest available position in the rack. Never pull more than one component out of the rack at a time.

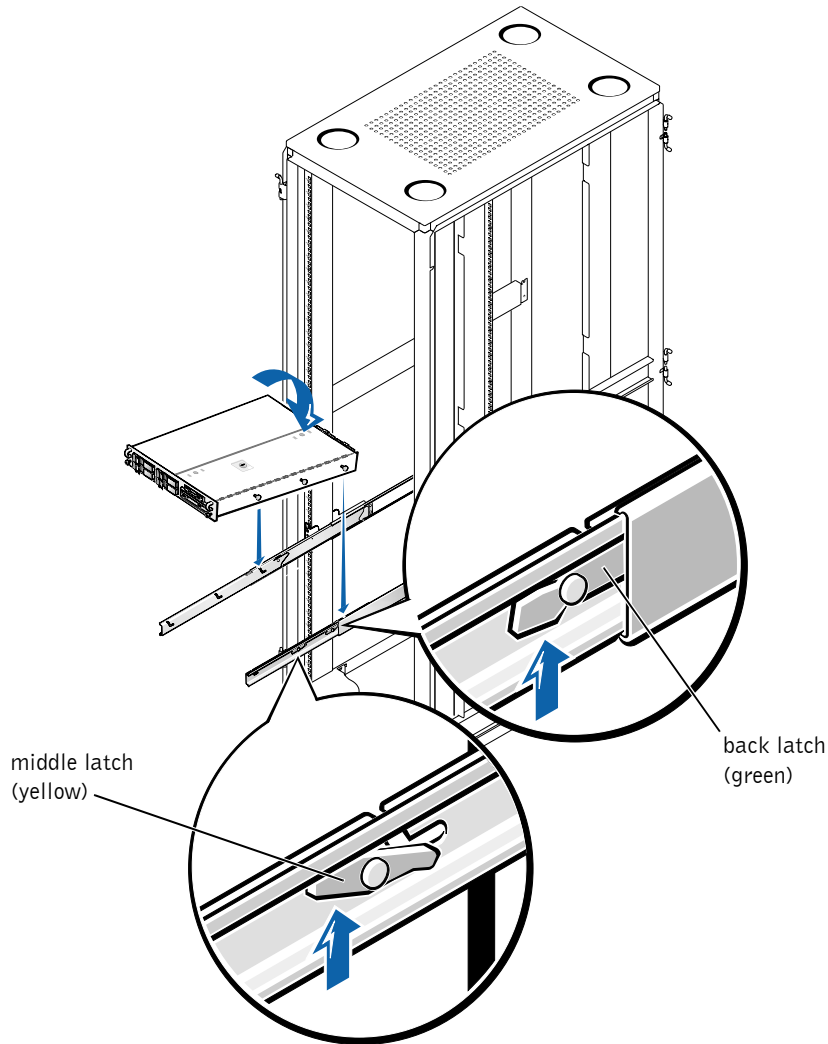
- 1 Pull the two interior slide assemblies out of the rack until they lock in the fully extended position.



CAUTION: Because of the size and weight of the system, never attempt to install the system in the slide assemblies by yourself.

- 2 Lift the system into position.
- 3 Place one hand on the front-bottom of the system and the other hand on the back-bottom of the system.
- 4 Tilt the system while aligning the back shoulder nuts on the sides of the system with the back slots on the slide assemblies (see Figure 1-21).
- 5 Engage the back shoulder nuts in the slot just behind the back (green) latch first, followed by the middle shoulder nut in the slot near the middle (yellow) latch. Finally, engage the front shoulder nut in the front slot.
- 6 Push the system inward on the slide assemblies until the middle (yellow) latch clicks into place, locking the slide to the middle shoulder nut (see Figure 1-21).

Figure 1-22. Installing the System in the Rack



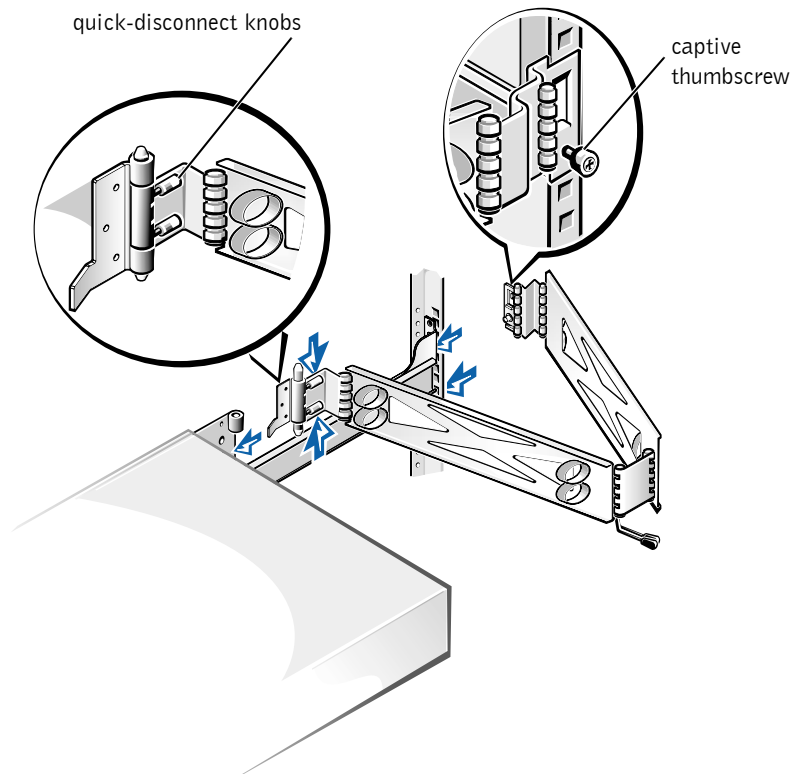
- 7 Press up on the green latches and push the chassis into the rack.
- 8 Tighten the captive thumbscrews on each side of the front chassis panel.
- 9 If available, install the optional front bezel.

Installing the Cable-Management Arm

- 1 Facing the back of the rack cabinet, locate the threaded hole on the back of the slide assembly and secure the end of the cable-management arm (the end having a bracket and thumbscrew) to the right side vertical rail (see Figure 1-22).


The bracket snaps into the square mounting holes on the vertical rail and is secured with the captive thumbscrew.

Figure 1-23. Installing the Cable Management Arm



- 2 Align the free end of the cable-management arm (the end with the half-hinge) to the hinge-half mate on the back-right side (as viewed from the back) of the system.
- 3 Squeeze the quick-disconnect knobs on the free end of the cable-management arm and align the two hinge halves to attach the arm to the bracket on the back of the system chassis (see Figure 1-22).

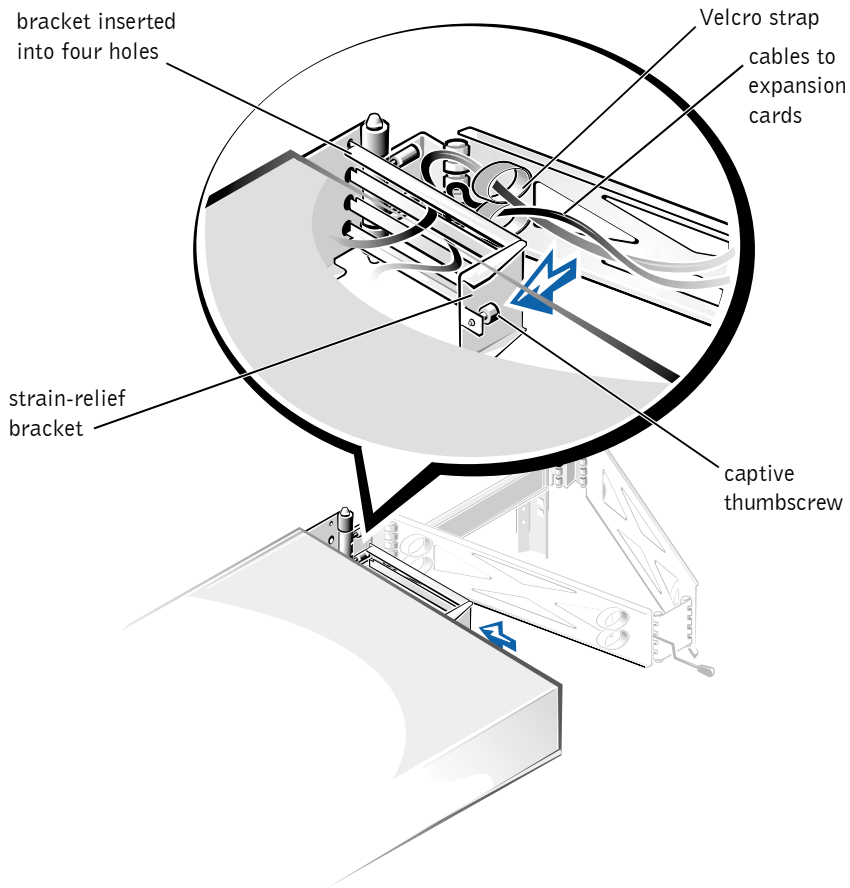
4 Attach the input/output (I/O) cables to their respective expansion cards on the back of the system.

 **NOTE:** If your kit does not have a strain-relief bracket, skip to step 6.

5 Install the strain-relief bracket to the back of the system (see Figure 1-23):

- a Thread the I/O cables you connected in step 4 through the slots of the strain-relief bracket.
- b Insert the ends of the four long portions of the strain-relief bracket into the four matching holes beside the hinge bracket.
- c Secure the captive thumbscrew to the back of the system.

Figure 1-24. Attaching the Strain Relief Bracket




- 6 Connect the remaining cables to the system.

For details, see your system's *Installation and Troubleshooting Guide* or the *User's Guide*.

- 7 Secure the cables to the cable-management arm:

- a After connecting the cables to the system, unscrew the thumbscrews that secure the front of the server to the front vertical rail.
- b Slide the system forward to the fully extended position.
- c Route the cables along the cable-management arm, allowing some additional cable slack at the hinge positions, and secure the cables to the cable-management arm with the Velcro straps attached to the cable-management arm.

- 8 Slide the system in and out of the rack to verify that the cables are routed correctly and do not bind, stretch, or pinch with the movement of the cable-management arm.

 **NOTE:** As you pull the system out to its furthest extension, the slide assemblies lock in the extended position. To push the system back into the rack, press the green locking latch on the side of the slide to release the locks, and then slide the system completely into the rack.

You have completed the installation of the RapidRails kit in a four-post rack cabinet.

Index

C

- cable management arm, 1-30
 - routing cables, 1-22
- cables, 1-22, 1-32
 - routing, 1-32

D

- Dell Web site, 1-24

F

- four-post RapidRails kit
 - contents, 1-22
 - installing cable management arm, 1-30
 - installing slide assemblies, 1-26
 - marking the rack, 1-24
 - tasks, 1-24
 - tools, 1-23
- four-post RapidRails rack kit
 - installing system, 1-28

I

- installing
 - cable management arm, 1-20, 1-30
 - slide assemblies, 1-14, 1-26
 - system in four-post rack, 1-28
 - system in support tray, 1-10
- installing system
 - four-post rack, 1-28
 - support tray rack, 1-10
 - two-post rack, 1-17

K

- kit contents
 - four-post RapidRails, 1-22
 - support tray kit, 1-2
 - two-post RapidRails kit, 1-12

M

- marking rack
 - four-post RapidRails kit, 1-24
 - support tray kit, 1-3
 - two-post RapidRails kit, 1-13

R

- routing, 1-22
- routing cables, 1-22, 1-32

T

- tasks
 - four-post RapidRails kit, 1-24
 - support tray kit, 1-3
 - two-post RapidRails kit, 1-13
- tools
 - four-post RapidRails kit, 1-23
 - two-post RapidRails kit, 1-13
 - two-post support tray kit, 1-3
- two-post
 - RapidRails kit, 1-11
 - support tray kit, 1-1
- two-post rack kit
 - types, 1-1
- two-post RapidRails kit
 - contents, 1-12
 - installing cable management arm, 1-20
 - installing slide assemblies, 1-14
 - installing system, 1-17
 - marking rack, 1-13
 - tasks, 1-13
 - tools, 1-13

- two-post support tray kit
 - contents, 1-2
 - installing system, 1-10
 - marking the rack, 1-3
 - tasks, 1-3
 - tools, 1-3