

# **Sun Server X2-8 (formerly Sun Fire X4800 M2) Rackmounting Hardware Installation Guide**



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# Using This Documentation

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This section provides product information, documentation and feedback links, and a document change history.

- [“Sun Server X2-8 Name Change”](#) on page 5
- [“Product Downloads”](#) on page 5
- [“Documentation and Feedback”](#) on page 6
- [“About This Documentation”](#) on page 7
- [“Change History”](#) on page 7

## Sun Server X2-8 Name Change

The Sun Server X2-8 was formerly named the Sun Fire X4800 M2 server. This former name might still appear in the product. The name change does not indicate any change in system features or functionality.

The new name identifies the following:

- X identifies an x86 product.
- The first number, 2, identifies the generation of the server.
- The second number, 8, identifies the number of processors.

## Product Downloads

You can find downloads for all Oracle x86 servers and server modules (blades) on Support (MOS). On MOS you can find two type of downloads:

- Software release bundles specific to the rackmount server, server module, modular system (blade chassis), or NEM. These software release bundles include Oracle ILOM, Oracle Hardware Installation Assistant and other platform software and firmware.
- Standalone software common across multiple types of hardware. This includes the Hardware Management Pack and Hardware Management Connectors.

## ▼ Get Software and Firmware Downloads

- 1 Go to <http://support.oracle.com>.
- 2 Sign in to My Oracle Support.
- 3 At the top of the page, click the Patches and Updates tab.
- 4 In the Patch Search box, click Product or Family (Advanced Search).
- 5 In the Product ? is field, type a full or partial product name, for example, Sun Server X2-8 until a list of matches is displayed and select the product of interest.
- 6 In the Release ? is pull-down list, click the Down arrow.
- 7 In the window that appears, click the triangle (>) by the product folder icon to show the choices and then select the release of interest and click Close.
- 8 In the Patches Search box, click Search.  
A list of product downloads (listed as patches) appears.
- 9 Select the Patch name of interest, for example, 12684585, for the Sun Server X2-8 1.0 Firmware.
- 10 In the right-side pane that appears, click Download.

## Documentation and Feedback

Documentation	Link
All Oracle products	<a href="http://www.oracle.com/documentation">http://www.oracle.com/documentation</a>
Sun Server X2-8	<a href="http://docs.oracle.com/cd/E20815_01/index.html">http://docs.oracle.com/cd/E20815_01/index.html</a>
Oracle ILOM 3.0	<a href="http://www.oracle.com/technetwork/documentation/sys-mgmt-networking-190072.html#ilom">http://www.oracle.com/technetwork/documentation/sys-mgmt-networking-190072.html#ilom</a>

Provide feedback on this documentation at: <http://www.oracle.com/goto/docfeedback>.

## About This Documentation

This documentation set is available in both PDF and HTML. The information is presented in topic-based format (similar to online help) and therefore does not include chapters, appendices, or section numbering.

You can get a PDF that includes all information about a particular topic subject (such as hardware installation or product notes) by clicking the PDF button on the top of the page.

## Change History

The following lists the release history of this documentation set:

- July 2011 – Initial publication.
- October 2011 – Revised for SW1.1.
- January 2012 – Revised for SW1.2.
- April 2012 – Revised to add preinstalled Oracle VM, and additional rack mounting instructions.
- June 2012 – Revised to add the preinstalled Solaris 11 operating system.
- July 2012 – Revised to change name and to add 32 Gb DIMMs.





# Introduction to Rack Mounting Hardware Installation

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This document provides instructions for installing your server in a rack, and for installing and removing shipping brackets.

Shipping brackets must be installed if you plan to ship your server in a rack, and they must be removed if your server was shipped to you in a rack.

Your server includes one of two types of mounting hardware; the *standard* rack mounting kit, and the *universal* rack mounting kit. This document provides separate instructions for each.

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**Note** – The Sun Server X2-8 was formerly named the Sun Fire X4800 M2 server. This former name might still appear in the product. The name change does not indicate any change in system features or functionality.

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- To identify the rack mounting hardware and find the correct rack mounting instructions, see [“How to Identify Your Rack Mounting Kit”](#) on page 9.
- To unpack your server, see [“How to Unpack the Server”](#) on page 12.
- To install your server in the *standard* rack mounting kit, see [“Installing the Server In the Rack Using the Standard Rack Mounting Kit”](#) on page 15.
- To install and remove shipping brackets for a *standard* rack mounting kit, see [“Removing and Installing the Standard Rack Mounting Kit Shipping Brackets”](#) on page 33.
- To install your server in the *universal* rack mounting kit, see [“Installing the Server in the Rack Using the Universal Rack Mounting Kit”](#) on page 39.
- To install and remove shipping brackets for a *universal* rack mounting kit, see [“Installing and Removing the Universal Rack Mounting Kit Shipping Brackets”](#) on page 73.

For complete installation instructions, including how to remove the server from the rack, refer to the *Sun Server X2-8 (formerly Sun Fire X4800 M2) Installation Guide*.

## ▼ How to Identify Your Rack Mounting Kit

Your server might include one of two types of rack mounting hardware. These are:

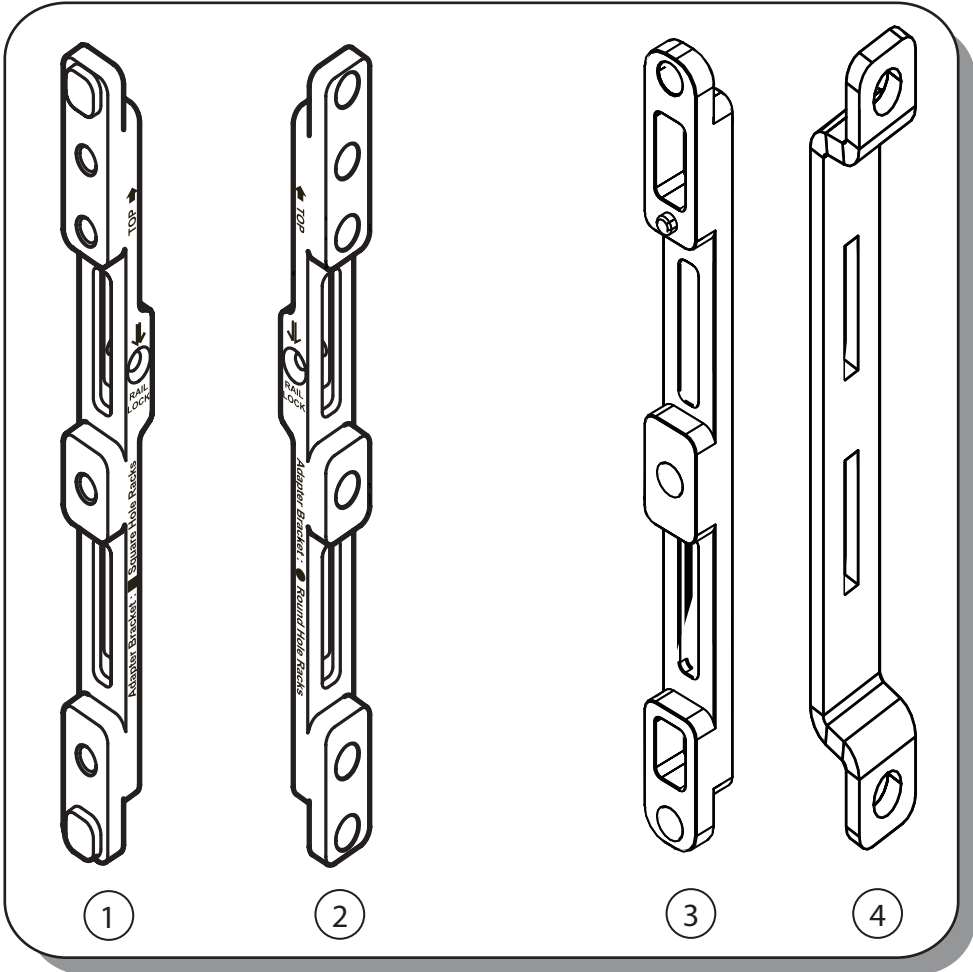
Name	Contents	See this section
Standard	<ul style="list-style-type: none"><li>▪ Rack mounting hardware (371–4742)</li><li>▪ Shipping bracket kit (371–4376–24)</li></ul>	<a href="#">“Installing the Server In the Rack Using the Standard Rack Mounting Kit” on page 15</a>
Universal	<ul style="list-style-type: none"><li>▪ Rack mounting hardware (350–1662)</li><li>▪ Shipping bracket kit (341–6410)</li></ul>	<a href="#">“Installing the Server in the Rack Using the Universal Rack Mounting Kit” on page 39</a>

**1 Unpack the server as described in “How to Unpack the Server” on page 12.**

The rack mounting hardware is in the accessory kit.

**2 Look for a part number on the containers that hold the rack mounting hardware.**

- 371–4742 identifies a *standard* rack mounting kit.
- 350–1662 identifies a *universal* rack mounting kit.
- If you cannot find a number, open the container and compare the adapter brackets with the following figure.



Legend	Description	See
1	Adapter bracket for round-hole racks in universal rack mounting kit	<a href="#">“How to Install the Universal Rack Mounting Hardware in a Round-Hole Rack” on page 59</a>
2	Adapter bracket for square-hole racks in universal rack mounting kit	<a href="#">“How to Install the Universal Rack Mounting Hardware in a Square-Hole Rack” on page 49</a>
3	Front adapter bracket for standard rack mounting kit	<a href="#">“Installing the Server In the Rack Using the Standard Rack Mounting Kit” on page 15</a>
4	Rear adapter bracket for standard rack mounting kit	<a href="#">“Installing the Server In the Rack Using the Standard Rack Mounting Kit” on page 15</a>

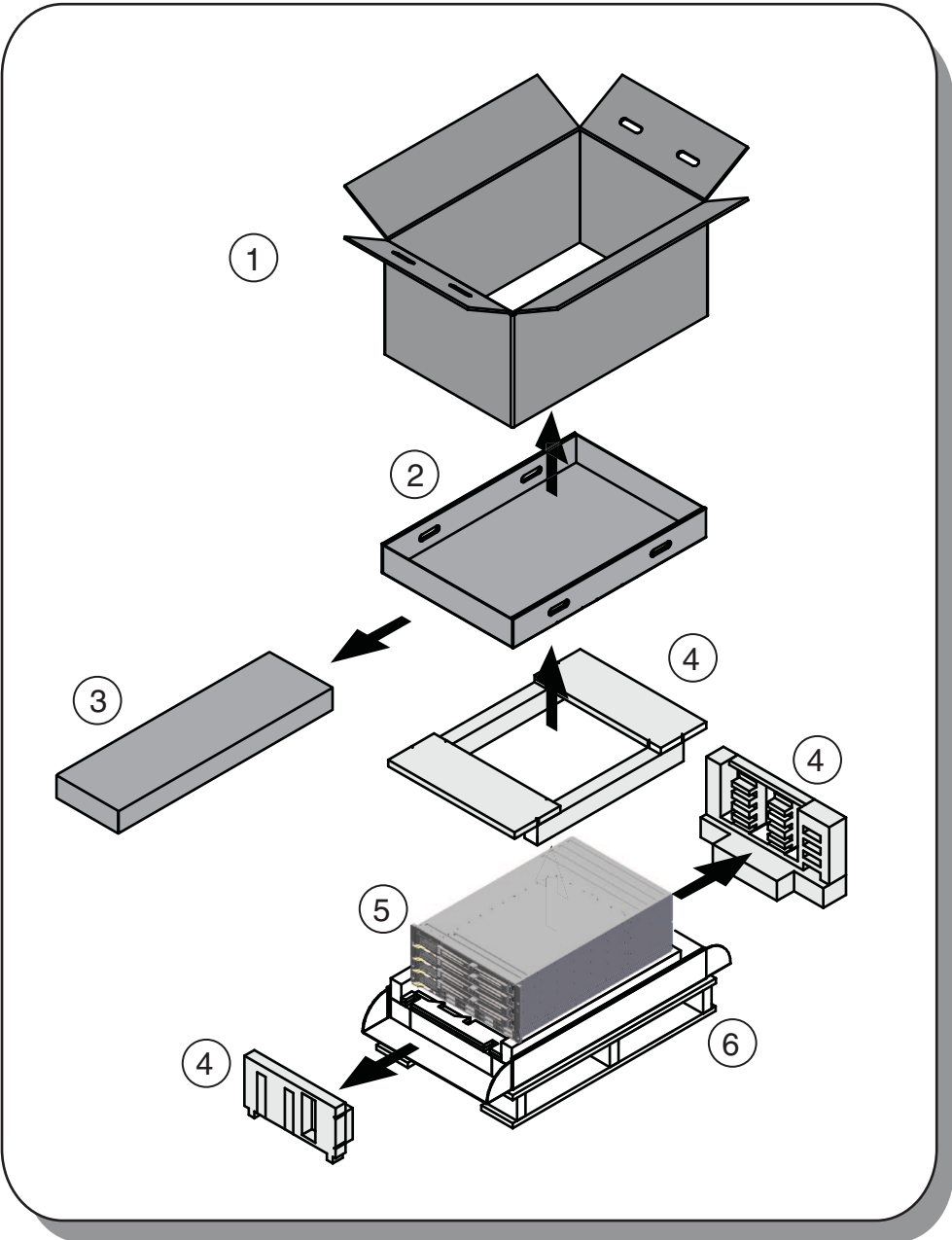
**See Also** [“Installing the Server in the Rack Using the Universal Rack Mounting Kit” on page 39](#)  
[“Installing the Server In the Rack Using the Standard Rack Mounting Kit” on page 15](#)

## ▼ **How to Unpack the Server**

The following figure shows the packaging components.

- 1 Open the top of the box (1).**
  - a. Cut the straps.**
  - b. Cut or remove the tape.**
  - c. Open the flaps.**
- 2 Lift the box (1) away from the server.**
- 3 Remove the accessory tray (2) and set it and its contents aside.**
- 4 Remove the foam inserts (4).**
- 5 When it is time to install the server (5) in the rack, either:**
  - Remove the server (5) from the pallet (6).
  - Use a mechanical lift to raise the pallet with the server on it to its location in the rack, then, slide the server off the pallet directly into the rack.

For rack mounting instructions, see one of the rack mounting sections as indicated in “How to Identify Your Rack Mounting Kit” on page 9.



Legend	Description
1	Box
2	Accessory tray, which contains rack mounting kit, shipping brackets, and other items
3	Rack mounting kit
4	Packaging foam inserts
5	Server
6	Pallet

**See Also** [“How to Identify Your Rack Mounting Kit” on page 9](#)

# Installing the Server In the Rack Using the Standard Rack Mounting Kit

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This topic describes how to install your server in a rack using the standard rack mounting hardware.

If you are not certain whether you have the standard rack mounting kit or the universal rack mounting kit, see [“How to Identify Your Rack Mounting Kit”](#) on page 9, then proceed to the corresponding section.

Note the following:

- If your server is shipped already installed in a rack, skip to [“How to Remove the Standard Rack Mounting Kit Shipping Brackets”](#) on page 33.
- If you are going to *ship* the server in a rack, you must install the shipping brackets as described in [“How to Install the Standard Rack Mounting Kit Shipping Brackets”](#) on page 35.

This section contains the following topics:

- [“Tools and Staff Required”](#) on page 16
- [“Installing Optional Equipment”](#) on page 16
- [“Compatible Racks”](#) on page 17
- [“Contents of the Standard Rack Mounting Kit”](#) on page 17
- [“Location of the Rack Mounting Kit and the Shipping Bracket Kit”](#) on page 19
- [“Installing the Server In a Rack Using the Standard Rack Mounting Kit”](#) on page 20
- [“Removing and Installing the Standard Rack Mounting Kit Shipping Brackets”](#) on page 33

## Tools and Staff Required



**Caution** – The server weighs about 180 pounds (100 kg) when fully loaded with components. To reduce the risk of serious personal injury or equipment damage, use a mechanical lift to install the server into the rack. If a lift is not available, remove components as described in [“How to Remove Components to Reduce Weight”](#) on page 20. This reduces the weight of the server to 80 pounds (45 kg).

Always load equipment into a rack from the bottom up so that it does not become top-heavy and tip over. Deploy your rack’s anti-tilt bar to prevent the rack from tipping during equipment installation.

Before installing the server into a rack, gather the tools, equipment, and staff required.

Tools, Equipment, and Staffing Required	Notes
Two trained staff	Two people are needed to install the server and operate the lift.
No. 2 10-inch Phillips screwdriver (magnetic tip recommended).	
Mechanical lift	Strongly recommended. If not available, reduce the weight of the server. See <a href="#">“How to Remove Components to Reduce Weight”</a> on page 20.
Compatible rack	See <a href="#">“Compatible Racks”</a> on page 17.
Rack mounting kit	See <a href="#">“Installing the Server In a Rack Using the Standard Rack Mounting Kit”</a> on page 20.
Shipping brackets	See <a href="#">“Removing and Installing the Standard Rack Mounting Kit Shipping Brackets”</a> on page 33. <ul style="list-style-type: none"> <li>■ You must remove the shipping brackets if your server was shipped in a rack.</li> <li>■ You must install the shipping brackets if you plan to ship your server in a rack.</li> </ul>

## Installing Optional Equipment

For information about how to install options such as DIMMs, PCIe EMs, and NEMs, power supplies, and CPU modules, refer to the [Sun Server X2-8 \(formerly Sun Fire X4800 M2\) Service Manual](#).

For information about issues and known workarounds, refer to the [Sun Server X2-8 \(formerly Sun Fire X4800 M2\) Product Notes](#).



## Compatible Racks

The rack mounting hardware is compatible with a wide range of equipment racks that meet the following standards:

- Four-post rack (mounting at both front and rear).

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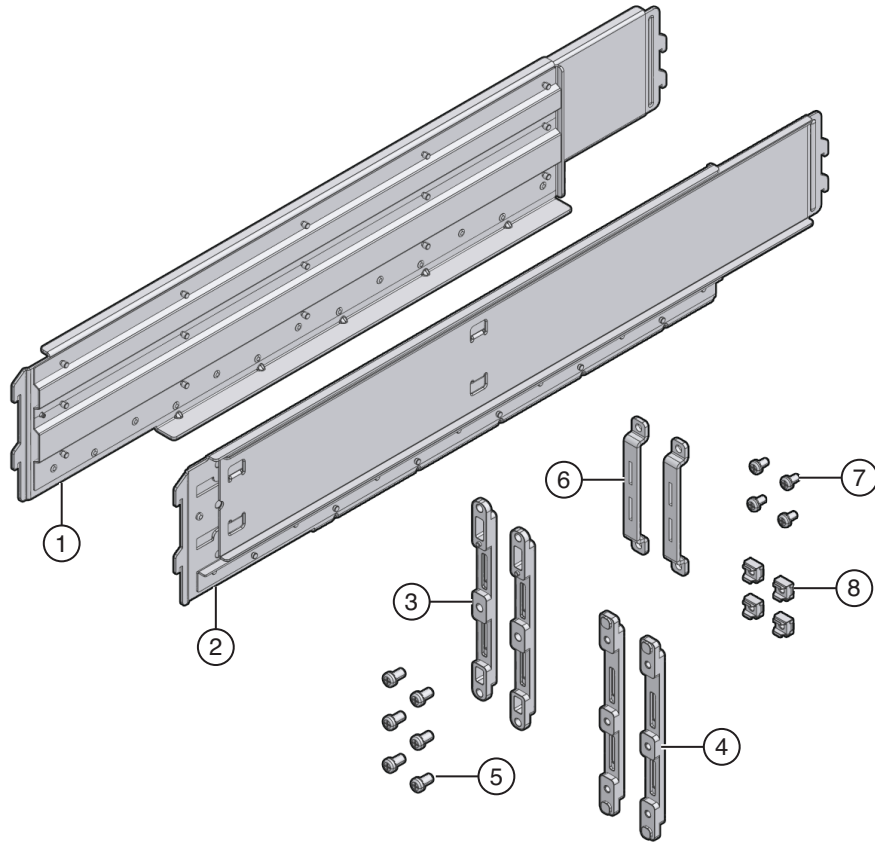
**Note** – Two-post racks are not compatible.

---

- Rack *must* have 5RU space available.
- Rack should have a horizontal opening and unit vertical pitch conforming to ANSI/EIA 310-D-1992 or IEC 60927 standards.
- Distance between front and rear mounting planes between approximately 26 and 34.5 inches (660.4 mm and 876.3 mm).
- Minimum clearance depth (to front cabinet door) in front of front rack mounting plane: 1 inch (25.4 mm).
- Minimum clearance depth (to rear cabinet door) behind front rack mounting plane: 27.5 inches (700 mm).
- Minimum clearance width (between structural supports and cable troughs) between front and rear mounting planes: 18 inches (456 mm).

## Contents of the Standard Rack Mounting Kit

The standard rack mounting kit comes with the following hardware:



**Figure Legend**

1, 2	Left (1) and right (2) shelf rails	<p>Once the front and rear adapter brackets are installed on the rack, the shelf rails drop into place. The hooks on the front and rear rails hook into the slots on the adapter brackets.</p> <p>The shelf rails expand to match the depth of the rack.</p> <p>These are <i>not</i> slide rails. Once the server is mounted in the chassis, it does not move.</p>
3, 4	Front mounting adapter brackets (2 pair)	<p>These attach to the rack and support the shelf rails.</p> <p>There are two types of front adapter brackets; one for round-hole racks (3), and another for square-hole racks (4). Use the one that matches your rack.</p>
5 and 7	An assortment of M6 and 10-32 screws	<p>Oracle provides extra screws to support different configurations. Unused hardware can be discarded or recycled when you have completed the installation.</p>

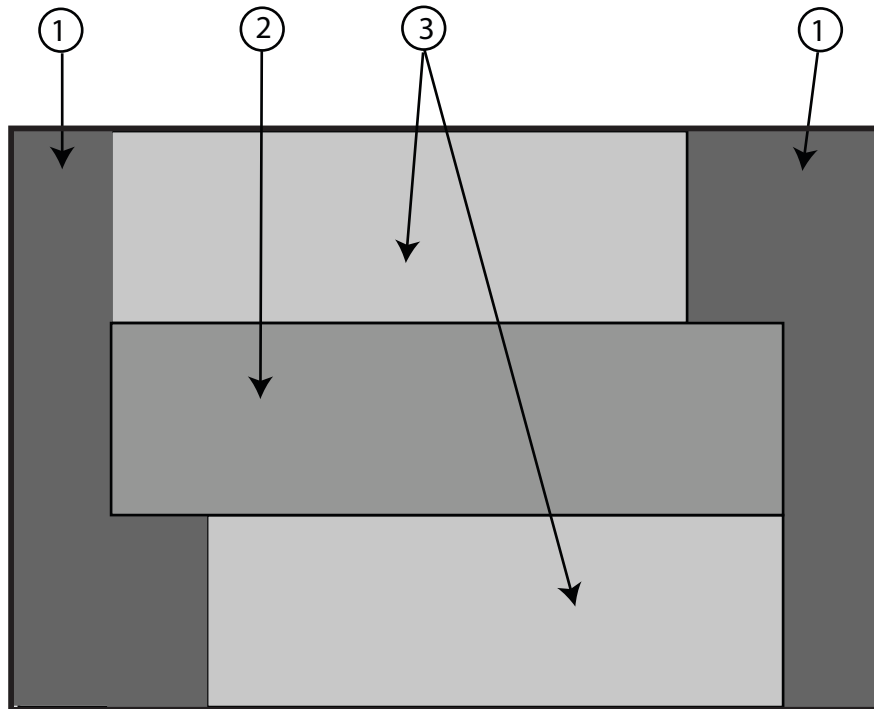
**Figure Legend**

6	Rear adapter brackets (1 pair)	These attach to the rack and support the shelf rails.
8	M6 cage nuts	Used to adapt the rear adapter bracket to the back of square-hole racks.

## Location of the Rack Mounting Kit and the Shipping Bracket Kit

The accessory kit that contains the rack mounting kit also contains the shipping bracket kit.

The following figure shows the location of the contents in the box:



Legend	Description
1	Foam packaging material
2	Rack mounting hardware

Legend	Description
3	Shipping brackets

## Installing the Server In a Rack Using the Standard Rack Mounting Kit

This section provides instructions for installing your server in a rack. It includes:

- [“How to Remove Components to Reduce Weight”](#) on page 20
- [“How to Install the Standard Rack Mounting Hardware in a Rack”](#) on page 25
- [“How to Insert the Server Into the Rack”](#) on page 29

The rack mounting kit does *not* include slide rails. Once the server is installed, it does not slide in or out of the rack.

The rack mounting kit shares a box with the shipping bracket kit.

- See [“Removing and Installing the Standard Rack Mounting Kit Shipping Brackets”](#) on page 33 for information about the shipping brackets.
- See [“Contents of the Standard Rack Mounting Kit”](#) on page 17 for a description of the contents of the rack mounting kit.

### ▼ How to Remove Components to Reduce Weight

This procedure describes how to remove components from your server so that two persons can lift it into the rack. If you are going to use a mechanical lift, you do not need to perform this procedure.

#### Before You Begin



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**Caution** – Circuit boards and hard drives contain electronic components that are extremely sensitive to static electricity. Ordinary amounts of static electricity from clothing or the work environment can destroy the components located on these devices. Do not touch the components without antistatic precautions, especially along the connector edges. For more information, refer to [“Antistatic Precautions and Procedures”](#) in *Sun Server X2-8 (formerly Sun Fire X4800 M2) Service Manual*.

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**Note** – This procedure assumes that the server is powered off and all cables are disconnected.

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- 1 **Mark all CPU modules with their slot numbers.**



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**Caution** – To prevent system failure, you must return CPU modules to their original locations. Mark CPU module slot locations carefully before removing them from the chassis.

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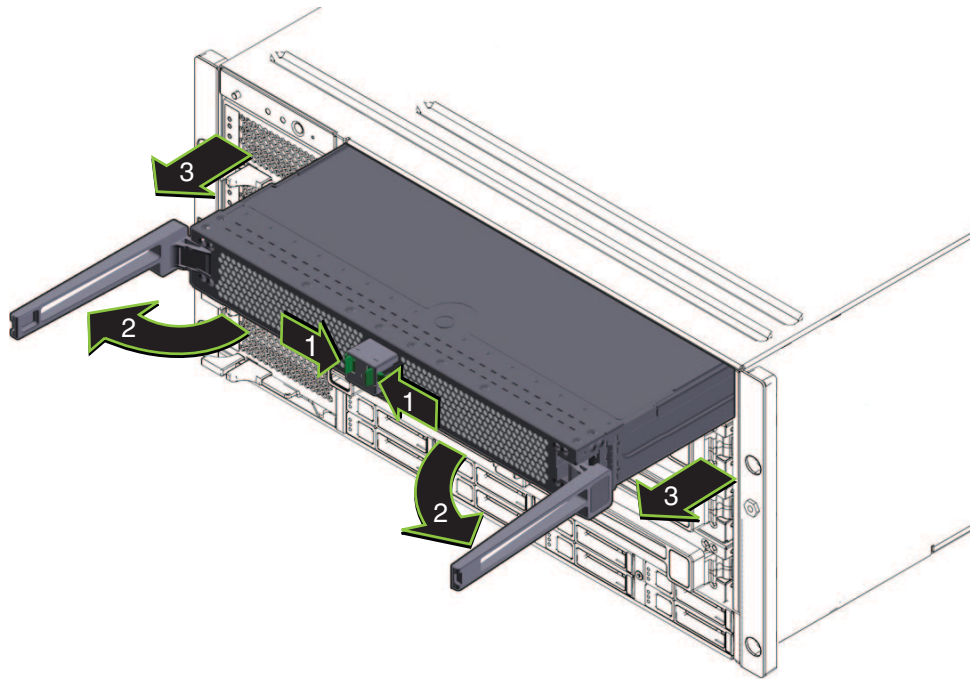
**2 Remove the CPU modules from the front of the chassis.**

The chassis contains four CPU module slots; each must have a CPU module or a filler panel.

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**Note** – Because of their light weight, there is no need to remove filler panels.

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For each CPU module:

- a. Pinch the green tabs to release the ejectors (1).
- b. Pull both ejectors out to release the module (2).



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**Caution** – When the module is partway out of the chassis, close the ejectors, and grasp the module. Do not handle the module by the ejectors.

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- c. Gently slide the module forward until it is clear of the chassis (3).

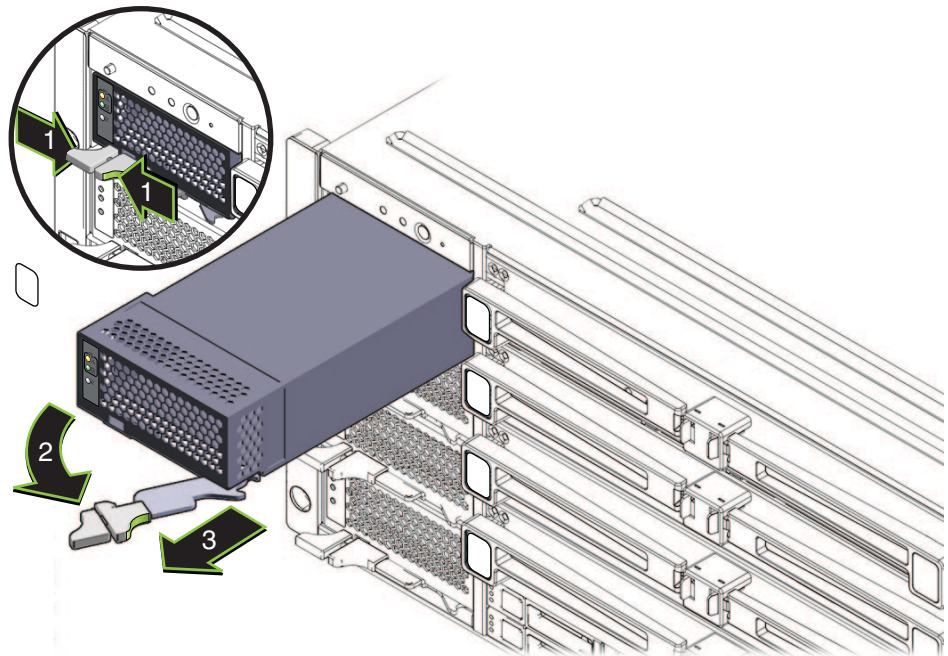


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Caution – The CPU module is heavy. Use two hands.

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- d. Close the ejectors on the CPU module.
  - e. Place the CPU module on an antistatic mat.
- 3 Remove the four power supplies from the front of the chassis.
    - a. Pinch the handle to release the lever (1).
    - b. Pull the lever (2) to release the power supply.
    - c. Slide the power supply out of the chassis (3).



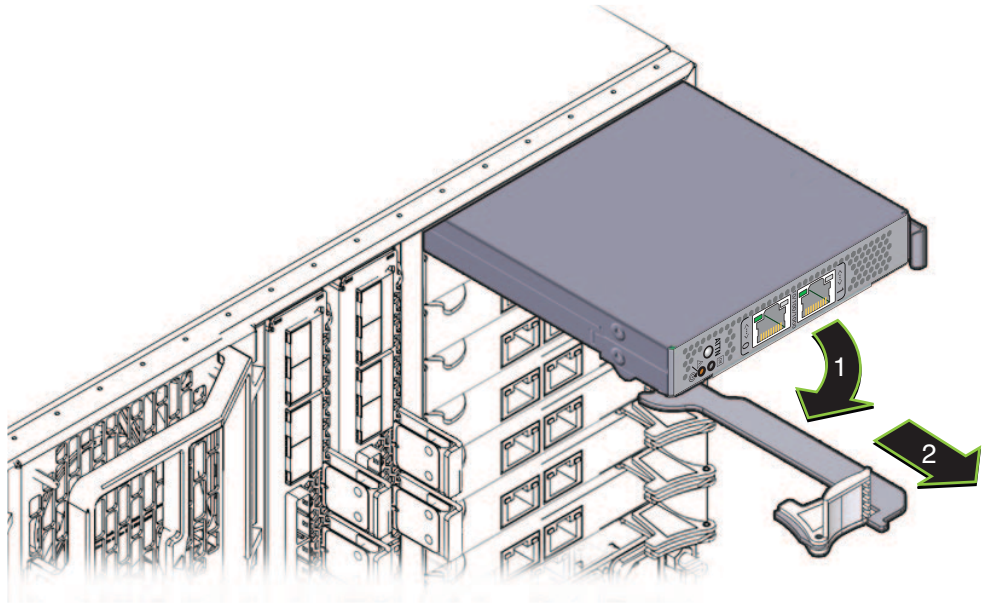
- 4 Remove the PCIe express modules from the back of the chassis.  
The upper bays can be used as a hand hold when moving the chassis.



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**Caution** – Do not insert forks from a lift device into these open bays, as this causes severe and non-repairable damage.

---



a. **Mark all PCIe EM cards with their slot locations.**



---

**Caution** – To prevent system failure, you must return PCIe EM cards to their original locations. Mark PCIe EM slot locations carefully before removing them from the chassis.

---

b. **Rotate the lever (1) to release the module.**

c. **Slide the module out of the chassis (2).**

5 **Remove the upper left fan module (FM2) if necessary.**

Squeeze the clamp (1) to release the fan module (2), then pull it from the chassis (3).

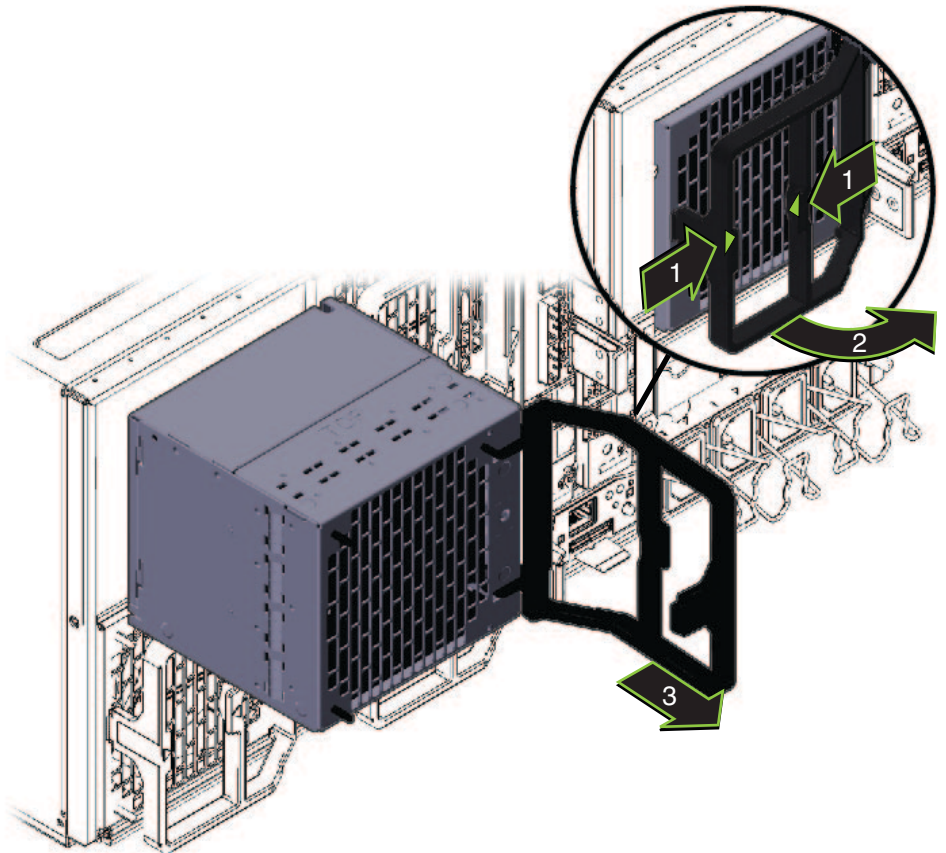
You can use the recess as a hand-hold when moving the chassis.



---

**Caution** – Do not insert forks from a lift device into this open bay, as this causes severe and non-repairable damage.

---



**See Also** [“How to Replace the Components in the Server” on page 24](#)

### ▼ **How to Replace the Components in the Server**

The procedure [“How to Remove Components to Reduce Weight” on page 20](#) describes how to remove components from the server. After the server is installed in the rack, you must replace the components.

- **Reverse the steps in [“How to Remove Components to Reduce Weight” on page 20](#).**





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**Caution** – All CPU modules and PCIe EM modules must be returned to their original locations. Failure to do so can result in system failure.

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## ▼ How to Install the Standard Rack Mounting Hardware in a Rack

The rack mounting hardware consists of front and rear adapter brackets with cage nuts, screws, and shelf rails.



---

**Caution** – The server weighs about 180 pounds (100 kg) when fully loaded with components. To reduce the risk of serious personal injury or equipment damage, use a mechanical lift to install the server into the rack. If a lift is not available, remove components as described in [“How to Remove Components to Reduce Weight” on page 20](#). This reduces the weight of the server to 80 pounds (45 kg).

Always load equipment into a rack from the bottom up so that it does not become top-heavy and tip over. Deploy your rack’s anti-tilt bar to prevent the rack from tipping during equipment installation.

---

### 1 Verify that you have a 5RU space in your rack.

### 2 Select the two front adapter brackets that match your rack.

See the following figure.

The server ships with two sets of front adapter brackets: one (1) for racks with square holes and one (2) for racks with round holes. Select the adapter brackets that match your rack.

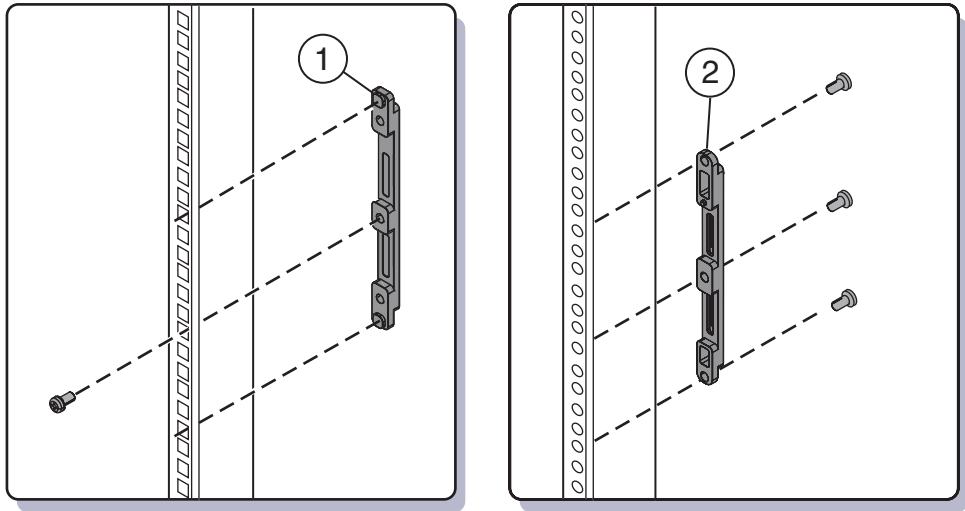
### 3 Attach the front adapter brackets to the rack.

Make sure you orient the adapter brackets correctly, with the arrow pointing up.

Select the screws that match your rack.

- Use one M6 per side for a square-hole rack.
- Use three M6 or three 10-32 per side for a threaded round-hole rack.

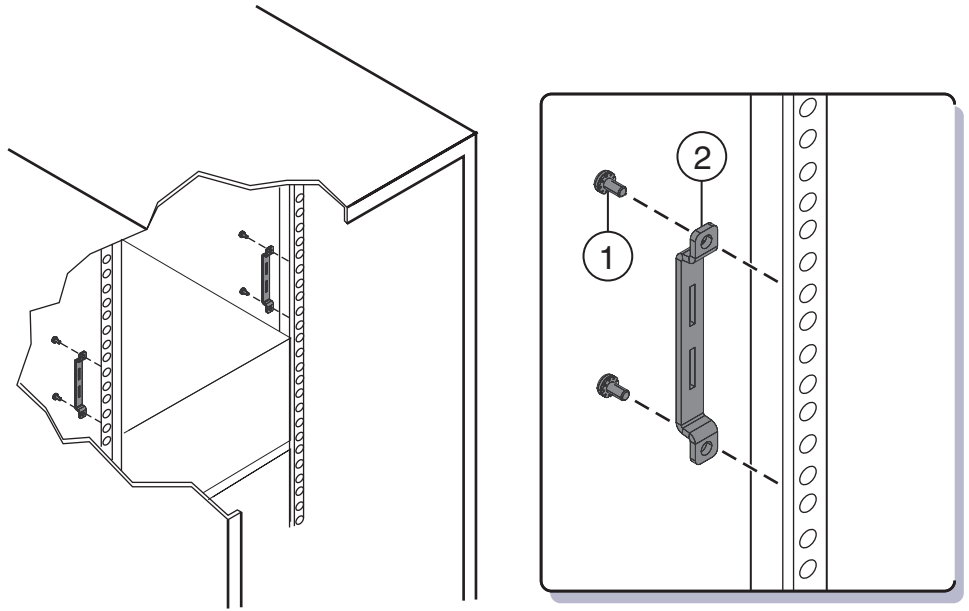
The following figure shows the front adapter brackets being attached to a square-hole rack (1) and a round-hole rack (2).



- 4 If your rack has round holes, use two screws each (1) to fasten the two rear adapter brackets (2) to the rack.**

The top of the rear bracket should sit 1 RU (three holes) lower than the top of the front bracket.

If your rack has square holes, skip this step.



**5 If your rack has square holes:**

**a. Insert the cage nuts (1) for the rear adapter brackets in the holes on the rack.**

The top of the rear bracket should sit 1 RU (three holes) lower than the top of the front bracket.

**b. If you are going to install shipping brackets, insert the cage nuts for the shipping brackets (2) in the holes in the rear of the rack.**

Note the orientation of the cage nuts for the shipping bracket.

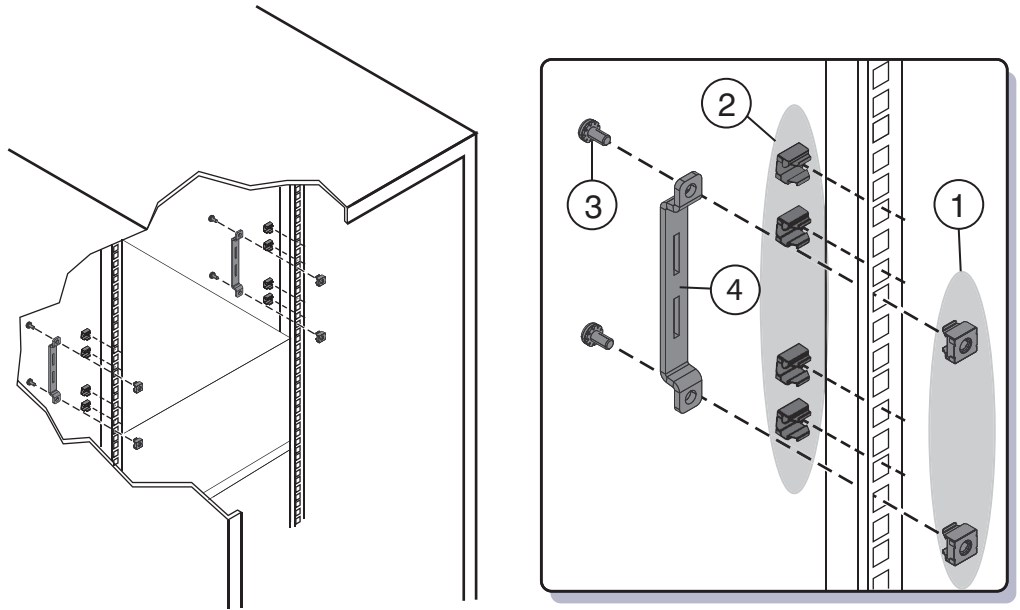
- They face outside the rack, in the opposite direction of the cage nuts for the adapter brackets.
- They are located in the first and third holes above the cage nuts for the adapter brackets.

---

**Note** – If you are going to install shipping brackets so you can ship your system in a rack, and your system has a square-hole rack, you must install the rear cage nuts for the shipping bracket on the rack now, *before* installing the rear adapter bracket. You cannot add the cage nuts for the rear shipping bracket when the rear adapter brackets are in place. See [“Removing and Installing the Standard Rack Mounting Kit Shipping Brackets”](#) on page 33 for instructions to install the shipping brackets.

---

- c. Use two screws (3) to fasten each rear adapter bracket (4) to the rack.



**6 Place the shelf rails into the rack.**

The following figure shows a square-hole rack.

The shelf rails expand (1) to fit the rack, then slip into the slots on the adapter brackets (2), and drop into place (3).

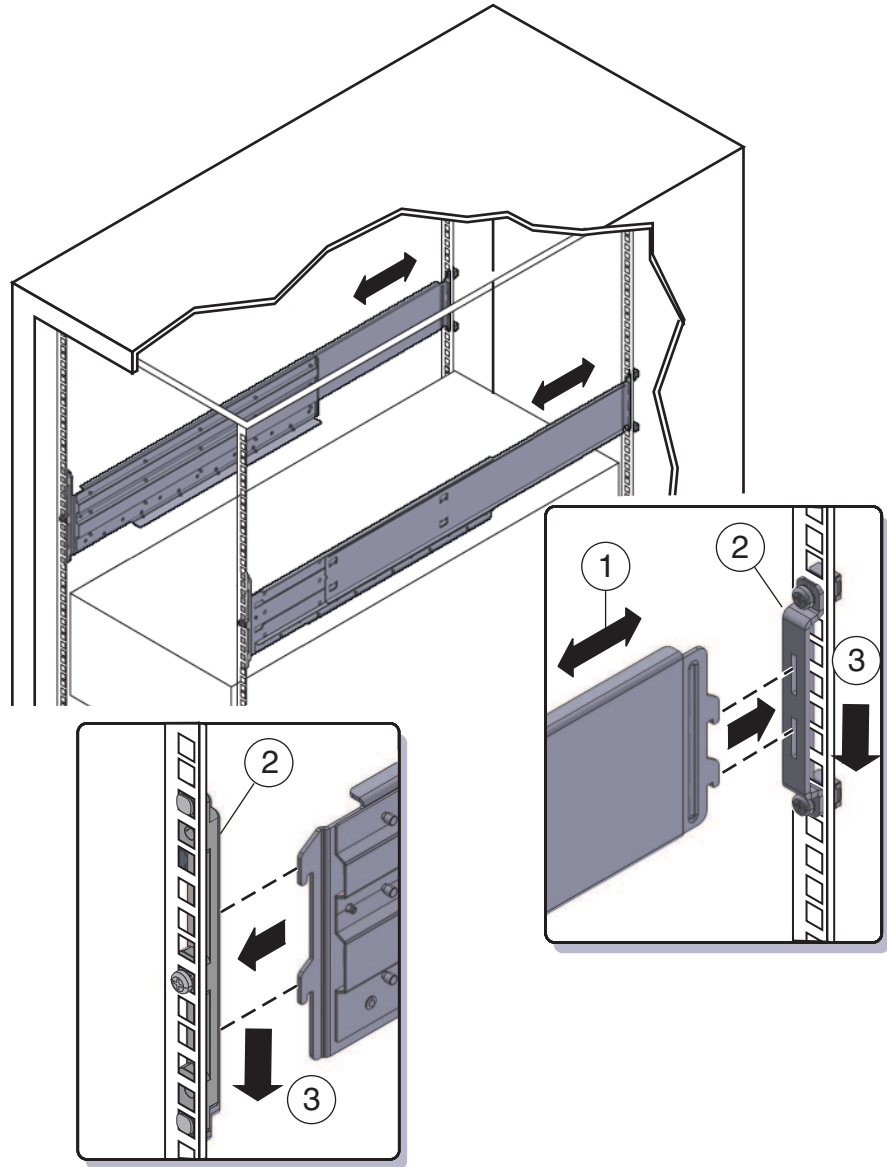
Be certain to place the shelf rails in the proper orientation, with the shelf facing inward and the gap towards the front of the rack.



---

**Caution** – Drop Hazard! Be certain that the rails are firmly seated in the brackets before proceeding.

---



**Next Steps** [“How to Insert the Server Into the Rack” on page 29](#)

### ▼ **How to Insert the Server Into the Rack**

The following procedure explains how to insert the server into the rack and on to the shelf rail assemblies on the rack.

**Before You Begin** Perform the steps in [“How to Install the Standard Rack Mounting Hardware in a Rack”](#) on page 25.

**1 Lift the server to its position on the rack.**

The use of a lift is recommended.



**Caution** – The server weighs 180 pounds (82 kg). To reduce the risk of serious personal injury or equipment damage, use a mechanical lift to install the server into the rack. If a lift is not available, remove components as instructed in [“How to Remove Components to Reduce Weight”](#) on page 20 and use two persons to lift the server into place.

---

**2 Slide the server onto the shelf rails.**



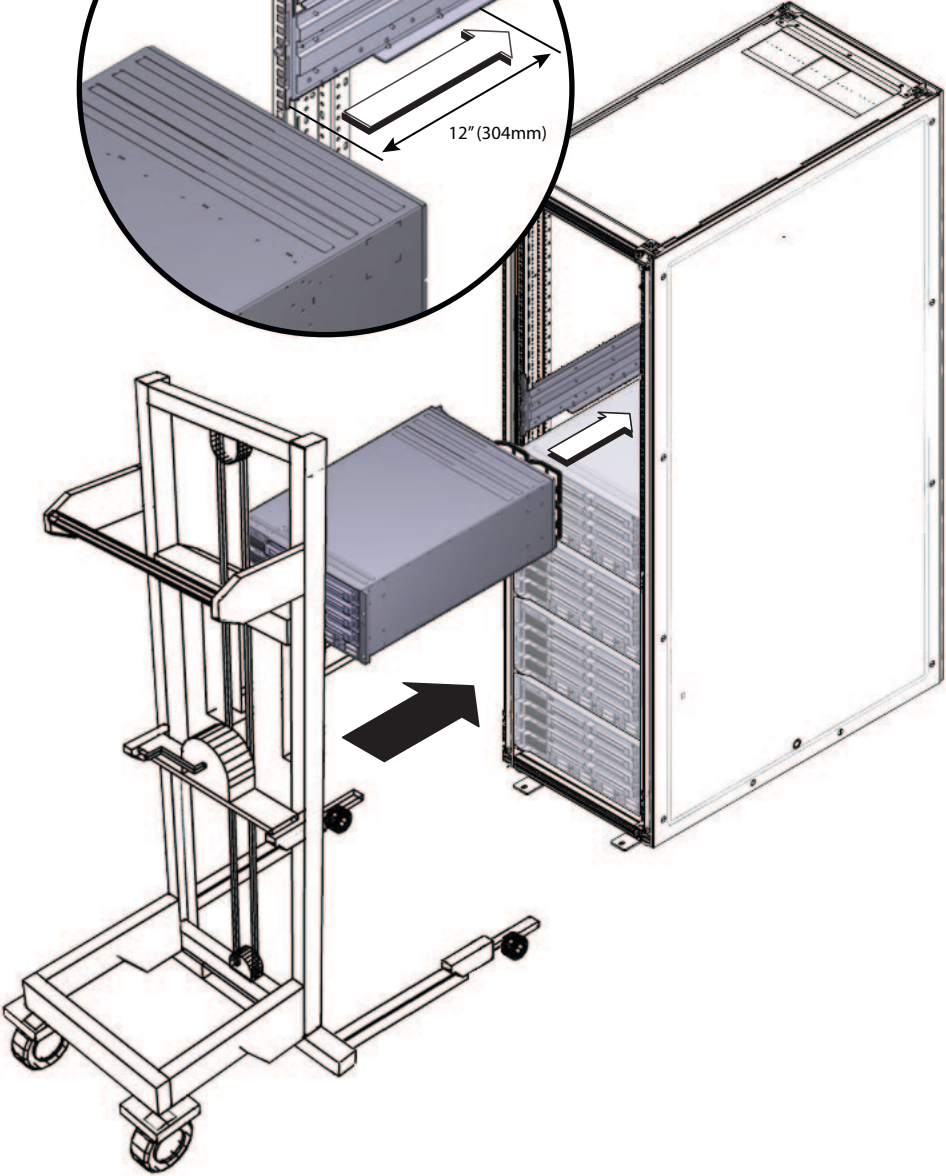
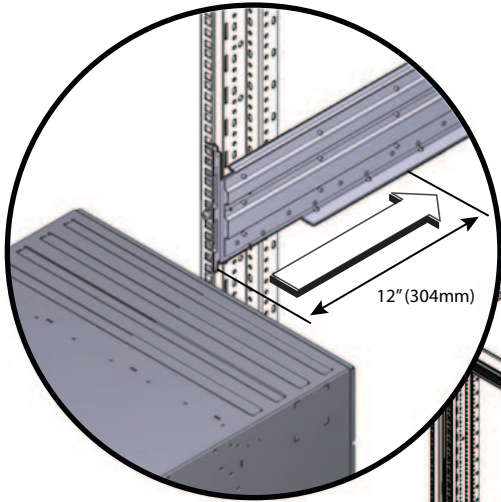
**Caution** – Drop Hazard! Do not release the server until it is 12 inches (304 mm) into the rack, and is firmly supported by the shelf rails. The shelf rails can not support the server until it is 12 inches (304 mm) inside the rack.

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---

**Note** – If the server is still on a pallet, you can leave it on the pallet and lift both the server and the pallet with the mechanical lift, and slide the server off the pallet and onto the shelf rails.

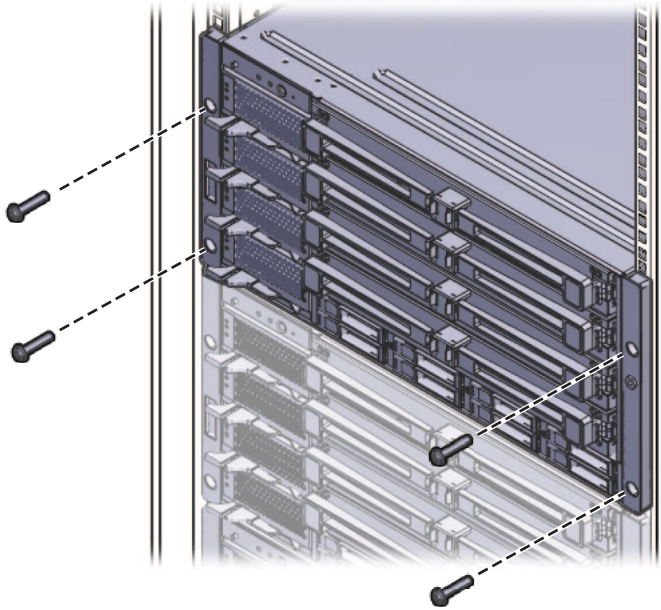
---



**3 Use four screws to attach the front of the server to the front of the rack.**

Use either the M6 x 25, or the 10-32 x 1 screws.

- On a threaded rack, use four M6 x 25, or four 10-32 x 1 screws.
- On a square-hole rack, use four M6 x 25 screws.



**4 If you removed components from the server, replace them after it is mounted in the rack. See [“How to Remove Components to Reduce Weight”](#) on page 20.**

- See Also**
- [“Cabling and Power”](#) in *Sun Server X2-8 (formerly Sun Fire X4800 M2) Installation Guide*
  - [“How to Remove Components to Reduce Weight”](#) on page 20



# Removing and Installing the Standard Rack Mounting Kit Shipping Brackets

If the server is shipped in a rack, it must be supported by shipping brackets.

- If the server is shipped to you in a rack, you must remove the shipping brackets before placing it in service. See [“How to Remove the Standard Rack Mounting Kit Shipping Brackets”](#) on page 33.
- If you plan to ship the server in a rack, see [“How to Install the Standard Rack Mounting Kit Shipping Brackets”](#) on page 35.

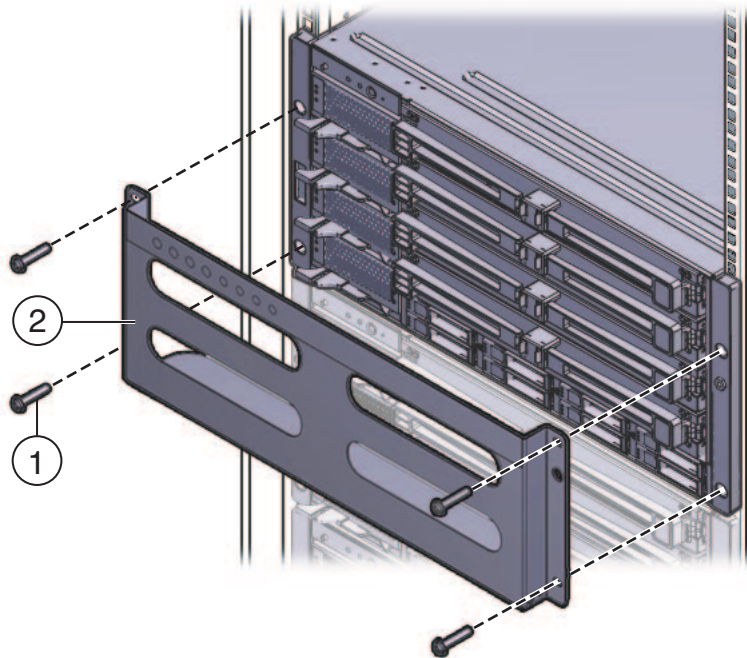
The shipping bracket parts are in the accessory tray with the rack mounting hardware. See [“Location of the Rack Mounting Kit and the Shipping Bracket Kit”](#) on page 19 for details.

## ▼ **How to Remove the Standard Rack Mounting Kit Shipping Brackets**

This procedure describes how to remove brackets from a system equipped with the standard rack mounting kit.

The standard shipping bracket kit consists of a front bracket, a rear bottom bracket, a rear top bracket, screws to connect them to the rack, and cage nuts to be used with the rear brackets on racks with square holes. These appear in [“How to Install the Standard Rack Mounting Kit Shipping Brackets”](#) on page 35.

- 1 Remove the four screws (1) that fasten the front shipping bracket (2) to the front of the server and remove it.**

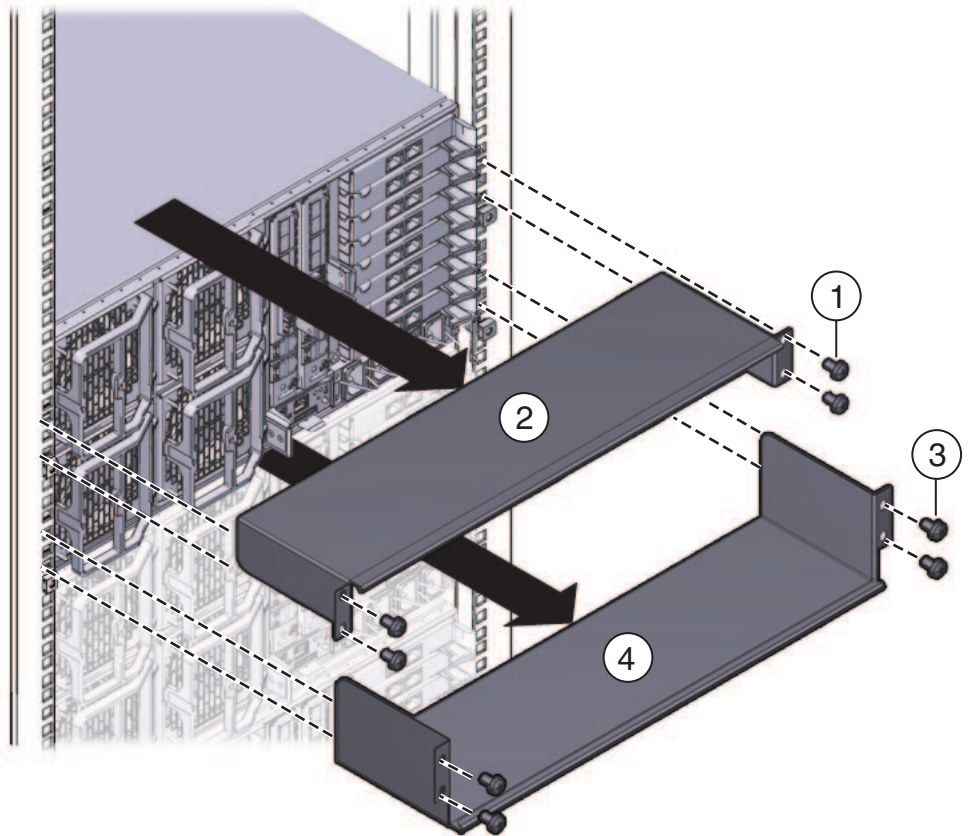


- 2 The front shipping bracket contains eight threaded holes used for storing unused screws (four M6 and four 10–32). Remove the screws that match the threads on your rack and use them to secure the server to the rack.**

There might be two sets of screws stored on the front of the shipping bracket. Use the set that matches the threading on your rack.
- 3 Thread the long screws that you removed in Step 1 into the four empty holes on the shipping bracket.**

They will be stored there in case you need to reinstall the shipping bracket.
- 4 Remove the four screws (1) that fasten the rear top shipping bracket (2) over the back of the server and remove it.**

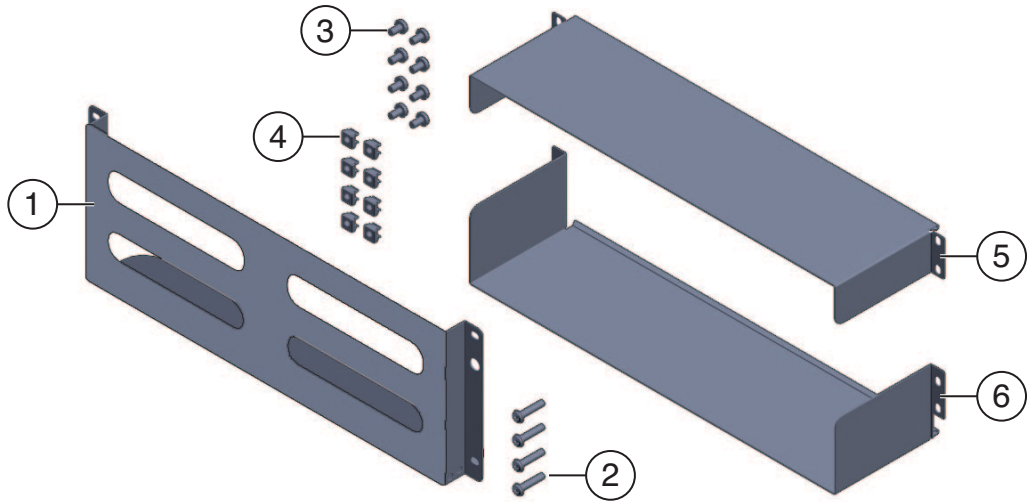
- 5 Remove the four screws (3) that fasten the rear bottom shipping bracket (4) under the back of the server and remove it.



### ▼ How to Install the Standard Rack Mounting Kit Shipping Brackets

This procedure describes how to install brackets into a system equipped with the standard rack mounting kit.

The shipping bracket kit contains the following parts:



---

Figure Legend

1	Front shipping bracket
2, 3	Two sets of screws (M6 and 10-32). Each set contains four screws for the front shipping bracket (2) and eight screws for the rear shipping brackets (5 and 6)
4	Eight M6 cage nuts for rear shipping bracket in square-hole racks
5	Top rear shipping bracket
6	Bottom rear shipping bracket

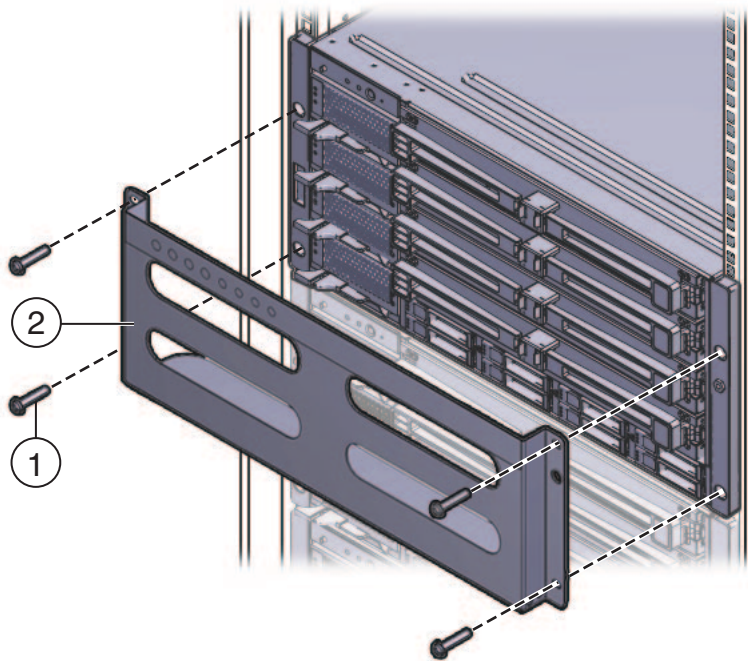
---

**Note** – The shipping bracket kit is shipped in the accessory tray with the rack mounting kit. See [“Location of the Rack Mounting Kit and the Shipping Bracket Kit”](#) on page 19 for details.

---

- 1 Remove the four (short) screws that fasten the front of the server to the rack.**
- 2 Insert the front shipping bracket (1) into the front of the server with the supporting flange underneath the server.**
- 3 The front shipping bracket contains eight threaded holes used for storing unused screws (four M6 and four 10–32). Remove the long screws that match the threads on your rack.**

- 4 Use the four long screws (M6 or 10–32) (1) to fasten the shipping bracket (2) to the front of the server.



- 5 Insert the short screws into the four empty storage holes on the shipping bracket. They will be stored there to be used when you remove the shipping bracket.
- 6 If you are installing the shipping brackets in a rack with square holes, check to ensure that the cage nuts are installed in the rear.
- Note the orientation and location of the cage nuts for the shipping bracket.
- There are four cage nuts per side (eight total).
  - They are installed on the inside of the rack, facing outward. This is the opposite direction from the cage nuts for the shelf adapter brackets.
  - For each shipping bracket, there should be two shipping bracket cage nuts; one in the hole directly above the shipping bracket cage nut, and one in the third hole above the shipping bracket cage nut.

If the cage nuts are not in place, you must:

- a. Remove the server and the mounting hardware from the rack, as described in [“Removing the Server from the Rack” in Sun Server X2-8 \(formerly Sun Fire X4800 M2\) Installation Guide](#).

b. Reinstall the adapter brackets and the server, and install the rear shipping bracket cage nuts as you install the rear adapter brackets. This is included in the rack mounting procedure.

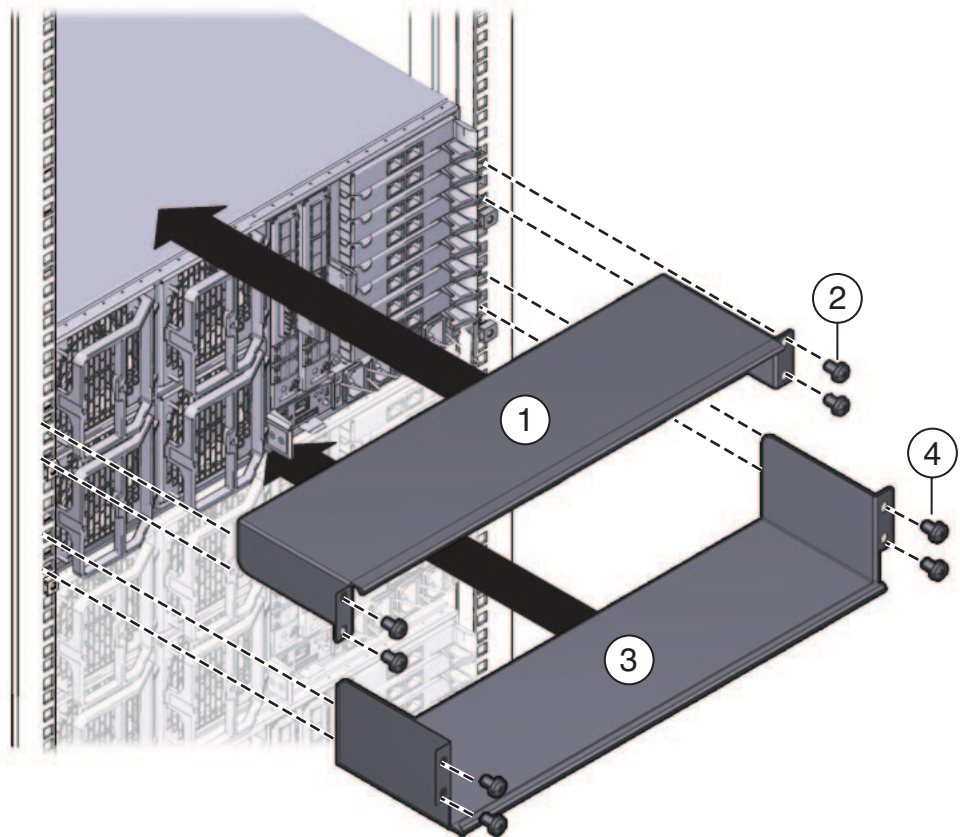
See [“How to Install the Standard Rack Mounting Hardware in a Rack”](#) on page 25.

**7 Insert the rear top shipping bracket (1) over the back of the server with the side panels facing down.**

Use four screws (2) to fasten it to the rack (4).

**8 Insert the rear bottom shipping bracket (3) under the back of the server with the side panels facing up.**

Use four screws (4) to fasten it to the rack.



# Installing the Server in the Rack Using the Universal Rack Mounting Kit

---

This section describes how to install your server in a rack.

If you are not certain whether you have the standard rack mounting kit or the universal rack mounting kit, see [“How to Identify Your Rack Mounting Kit”](#) on page 9, then proceed to the corresponding section.

Note the following:

- If your server is shipped already installed in a rack, skip to [“How to Remove the Universal Rack Mounting Kit Shipping Brackets”](#) on page 77.
- If you are going to *ship* the server in a rack, you must install the shipping brackets as described in [“How to Install the Universal Rack Mounting Kit Shipping Brackets”](#) on page 73.

This section contains the following topics:

- [“Tools and Staff Required”](#) on page 40
- [“Installing Optional Equipment”](#) on page 40
- [“Compatible Racks”](#) on page 41
- [“Contents of the Universal Rack Mounting Kit”](#) on page 41
- [“Installing the Server in a Rack Using the Universal Rack Mounting Kit”](#) on page 43
- [“Installing and Removing the Universal Rack Mounting Kit Shipping Brackets”](#) on page 73

## Tools and Staff Required



**Caution** – The server weighs about 180 pounds (100 kg) when fully loaded with components. To reduce the risk of serious personal injury or equipment damage, use a mechanical lift to install the server into the rack. If a lift is not available, remove components as described in [“How to Remove Components to Reduce Weight”](#) on page 43. This reduces the weight of the server to 80 pounds (45 kg).

Always load equipment into a rack from the bottom up so that it does not become top-heavy and tip over. Deploy your rack’s anti-tilt bar to prevent the rack from tipping during equipment installation.

Before installing the server into a rack, gather the tools, equipment, and staff required.

Tools, Equipment, and Staffing Required	Notes
Two trained staff	Two people are needed to install the server and operate the lift.
No. 2 10-inch Phillips screwdriver (magnetic tip recommended)	
Mechanical lift	Strongly recommended. If not available, reduce the weight of the server. See <a href="#">“How to Remove Components to Reduce Weight”</a> on page 43.
Compatible racks	See <a href="#">“Compatible Racks”</a> on page 41.
Rack mounting kit	See <a href="#">“Installing the Server in a Rack Using the Universal Rack Mounting Kit”</a> on page 43.
Shipping brackets	See <a href="#">“Installing and Removing the Universal Rack Mounting Kit Shipping Brackets”</a> on page 73. <ul style="list-style-type: none"> <li>■ You must remove the shipping brackets if your server was shipped in a rack.</li> <li>■ You must install the shipping brackets if you plan to ship your server in a rack.</li> </ul>

## Installing Optional Equipment

For information about how to install options such as DIMMs, PCIe EMs, and NEMs, power supplies, and CPU modules, refer to the [Sun Server X2-8 \(formerly Sun Fire X4800 M2\) Service Manual](#).

For information about issues and known workarounds, refer to the [Sun Server X2-8 \(formerly Sun Fire X4800 M2\) Product Notes](#).



## Compatible Racks

The rack mounting hardware is compatible with a wide range of equipment racks that meet the following standards:

- Four-post rack (mounting at both front and rear).

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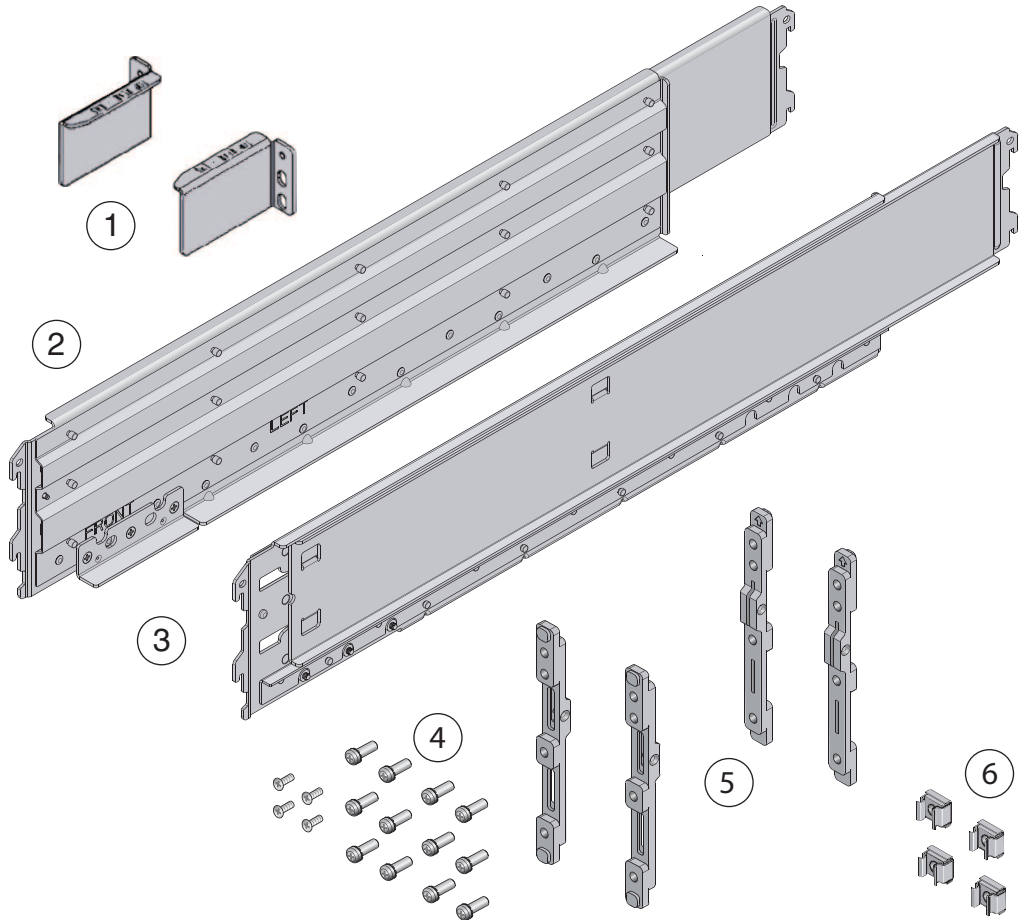
**Note** – Two-post racks are not compatible.

---

- Rack *must* have 5RU space available.
- Rack should have a horizontal opening and unit vertical pitch conforming to ANSI/EIA 310-D-1992 or IEC 60927 standards.
- Distance between front and rear mounting planes between approximately 26 and 34.5 inches (660.4 mm and 876.3 mm).
- Minimum clearance depth (to front cabinet door) in front of front rack mounting plane: 1 inch (25.4 mm).
- Minimum clearance depth (to rear cabinet door) behind front rack mounting plane: 27.5 inches (700 mm).
- Minimum clearance width (between structural supports and cable troughs) between front and rear mounting planes: 18 inches (456 mm).

## Contents of the Universal Rack Mounting Kit

The universal rack mounting kit comes with the following hardware:




---

**Figure Legend**

1	Top rear braces	These attach to the posts at the upper back of the server.
2, 3	Left (2) and right (3) shelf rails	Once the front and rear adapter brackets are installed on the rack, the shelf rails drop into place. The hooks on the rails hook into the slots on the front and rear brackets.  The shelf rails expand to match the depth of the rack.  These are <i>not</i> slide rails. Once the server is mounted in the chassis, it does not move.

---

---

**Figure Legend**

4	<p>An assortment of M6 and 10-32 screws</p> <p>The screws are packaged by size and type. They include:</p> <ul style="list-style-type: none"> <li>▪ 12 – M6 X 16</li> <li>▪ 12 – M6 X 12</li> <li>▪ 4 – M6 X 4 flathead</li> <li>▪ 4 – 10-32 X 10</li> <li>▪ 12 – 10-32 shoulder screws</li> </ul>	<p>Oracle provides extra screws to support different configurations. Unused hardware can be discarded or recycled when you have completed the installation.</p>
5	<p>Adapter brackets (2 sets of four each)</p>	<p>These attach to the rack and support the shelf rails.</p> <p>There are two sets of adapter brackets: one for round-hole racks, and another for square-hole racks. Use the set that matches your rack.</p>
6	<p>M6 cage nuts</p>	<p>Used to attach the top rear braces to square-hole racks.</p>

---

## Installing the Server in a Rack Using the Universal Rack Mounting Kit

This section provides instructions for installing your server in a rack. It includes:

- [“How to Remove Components to Reduce Weight” on page 43](#)
- [“How to Replace the Components in the Server” on page 48](#)
- [“How to Install the Universal Rack Mounting Hardware in a Square-Hole Rack” on page 49](#)
- [“How to Install the Universal Rack Mounting Hardware in a Round-Hole Rack” on page 59](#)
- [“How to Insert the Server Into the Rack” on page 69](#)

---

**Note** – The rack mounting kit does *not* include slide rails. Once the server is installed, it does not slide into or out of the rack.

---

### ▼ How to Remove Components to Reduce Weight

This procedure describes how to remove components from your server so that two persons can lift it into the rack. If you are going to use a mechanical lift, you do not need to perform this procedure.

## Before You Begin



**Caution** – Circuit boards and hard drives contain electronic components that are extremely sensitive to static electricity. Ordinary amounts of static electricity from clothing or the work environment can destroy the components located on these devices. Do not touch the components without antistatic precautions, especially along the connector edges. For more information, refer to “[Antistatic Precautions and Procedures](#)” in *Sun Server X2-8 (formerly Sun Fire X4800 M2) Service Manual*.

---

**Note** – This procedure assumes that the server is powered off and all cables are disconnected.

---

### 1 Mark all CPU modules with their slot numbers.



**Caution** – To prevent system failure, you must return CPU modules to their original locations. Mark CPU module slot locations carefully before removing them from the chassis.

---

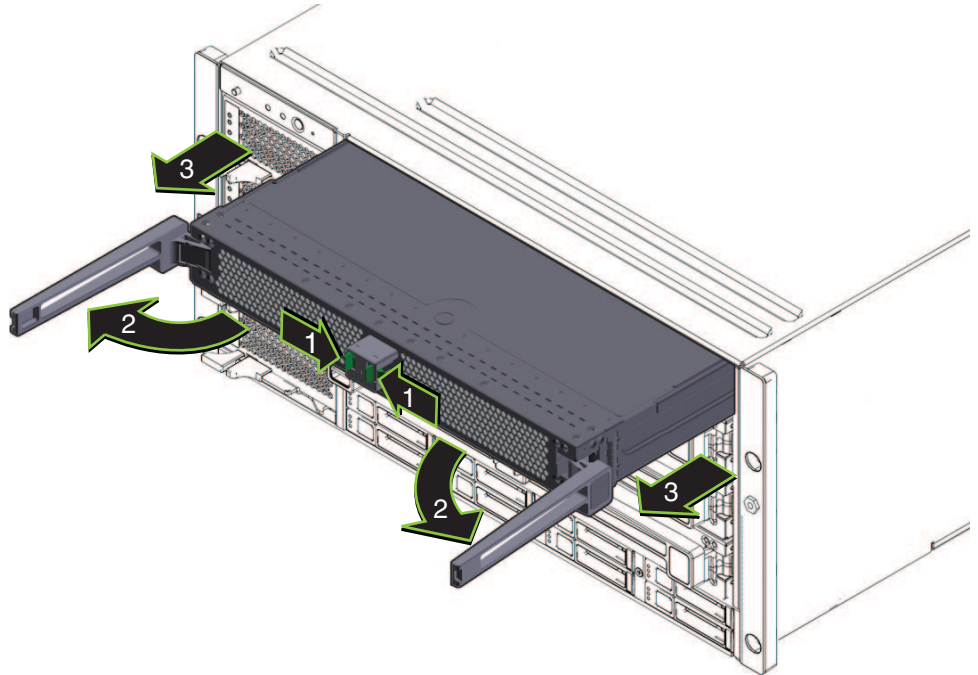
### 2 Remove the CPU modules from the front of the chassis.

The chassis contains four CPU module slots; each must have a CPU module or a filler panel.

---

**Note** – Because of their light weight, there is no need to remove filler panels.

---



For each CPU module:

- a. Pinch the green tabs to release the ejectors (1).
- b. Pull both ejectors out to release the module (2).



---

**Caution** – When the module is partway out of the chassis, close the ejectors, and grasp the module. Do not handle the module by the ejectors.

---

- c. Gently slide the module forward until it is clear of the chassis (3).



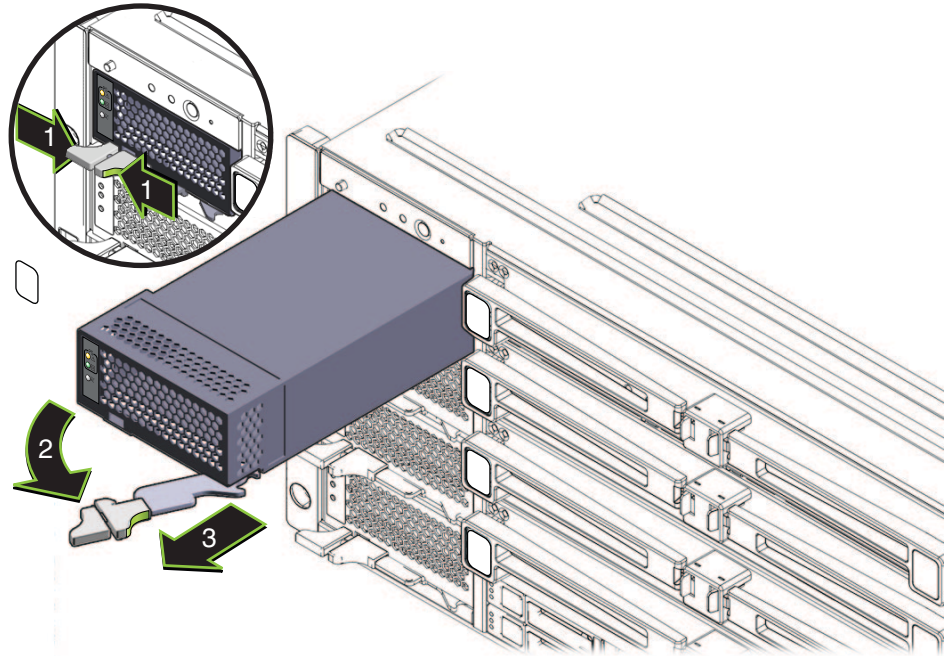
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**Caution** – The CPU module is heavy. Use two hands.

---

- d. Close the ejectors on the CPU module.
- e. Place the CPU module on an antistatic mat.

- 3 Remove the four power supplies from the front of the chassis.
  - a. Pinch the handle to release the lever (1).
  - b. Pull the lever to release the power supply (2).
  - c. Slide the power supply out of the chassis (3).



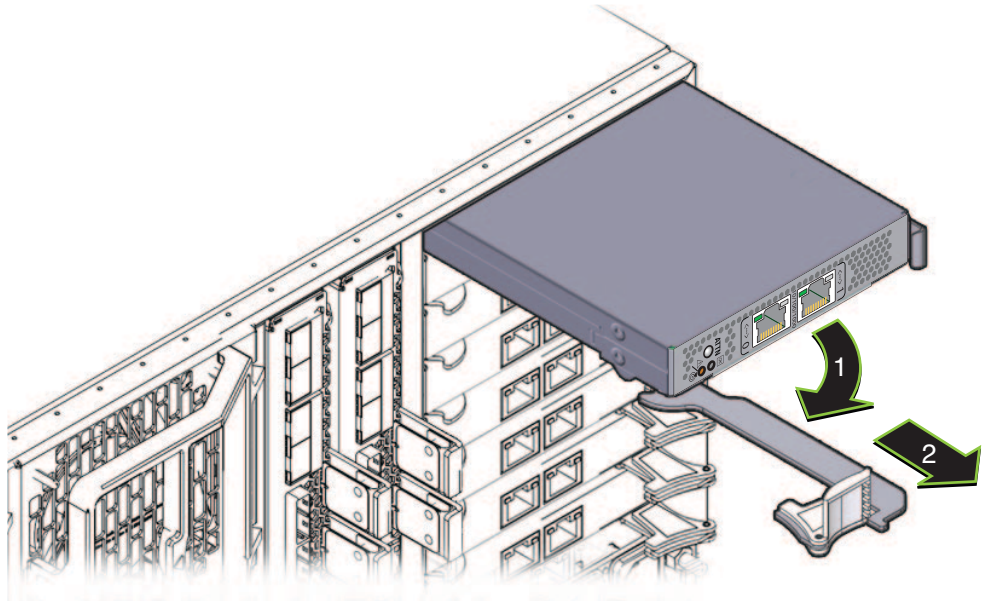
- 4 Remove the PCIe Express Modules from the back of the chassis.

The upper bays can be used as a hand-hold when you are moving the chassis.



**Caution** – Do not insert forks from a lift device into these open bays, as this causes severe and non-repairable damage.

---



- a. **Mark all PCIe EM cards with their slot locations.**



---

**Caution** – To prevent system failure, you must return PCIe EM cards to their original locations. Mark PCIe EM slot locations carefully before removing them from the chassis.

---

- b. **Rotate the lever to release the module (1).**

- c. **Slide the module out of the chassis (2).**

- 5 Remove the upper left fan module (FM2) if necessary.**

Squeeze the clamp (1) to release the fan module (2), and then pull it from the chassis (3).

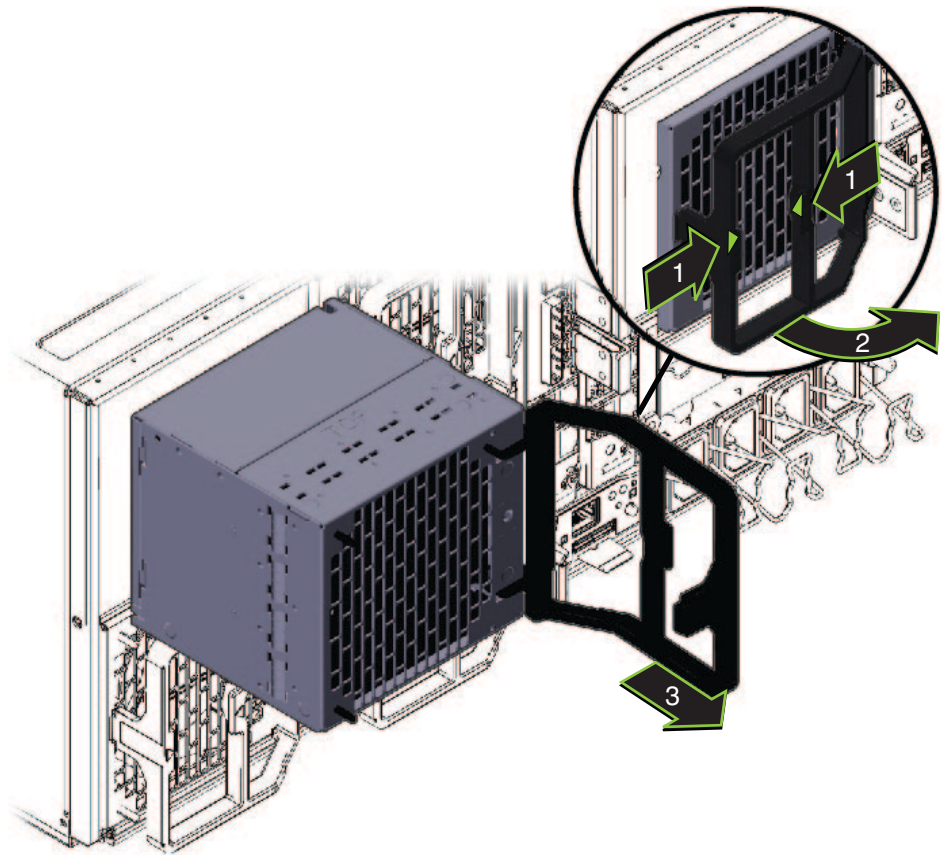
You can use the recess as a hand-hold when moving the chassis.



---

**Caution** – Do not insert forks from a lift device into this open bay, as this causes severe and non-repairable damage.

---



**See Also** [“How to Install the Universal Rack Mounting Hardware in a Square-Hole Rack” on page 49](#)

[“How to Install the Universal Rack Mounting Hardware in a Round-Hole Rack” on page 59](#)

[“How to Replace the Components in the Server” on page 48](#)

### ▼ **How to Replace the Components in the Server**

The procedure [“How to Remove Components to Reduce Weight” on page 43](#) describes how to remove components from the server. After the server is installed in the rack, you must replace the components.

- **Reverse the steps in [“How to Remove Components to Reduce Weight” on page 43](#).**





**Caution** – All CPU modules and PCIe EM modules must be returned to their original locations. Failure to do so can result in system failure.

## ▼ How to Install the Universal Rack Mounting Hardware in a Square-Hole Rack

The rack mounting kit consists of adapter brackets, rear braces, shelf rails, cage nuts, and screws.



**Caution** – The server weighs about 180 pounds (100 kg) when fully loaded with components. To reduce the risk of serious personal injury or equipment damage, use a mechanical lift to install the server into the rack. If a lift is not available, remove components as described in [“How to Remove Components to Reduce Weight” on page 43](#). This reduces the weight of the server to 80 pounds (45 kg).

Always load equipment into a rack from the bottom up so that it does not become top-heavy and tip over. Deploy your rack’s anti-tilt bar to prevent the rack from tipping during equipment installation.

**Note** – To install rack mounting hardware in round-hole racks, see [“How to Install the Universal Rack Mounting Hardware in a Round-Hole Rack” on page 59](#).

This task requires the following screws and connectors:

Function	Description
Attach adapter brackets to front rack posts	Four M6 x 12
Attach adapter brackets to rear rack posts	Four M6 x 12
Attach braces to rear rack posts	Four M6 x 10 and four M6 cage nuts
Locking screws for rails	Four M4 x 10 flathead

- 1 Gather the necessary screws and connectors.**
- 2 Verify that you have a 5RU space in your rack.**

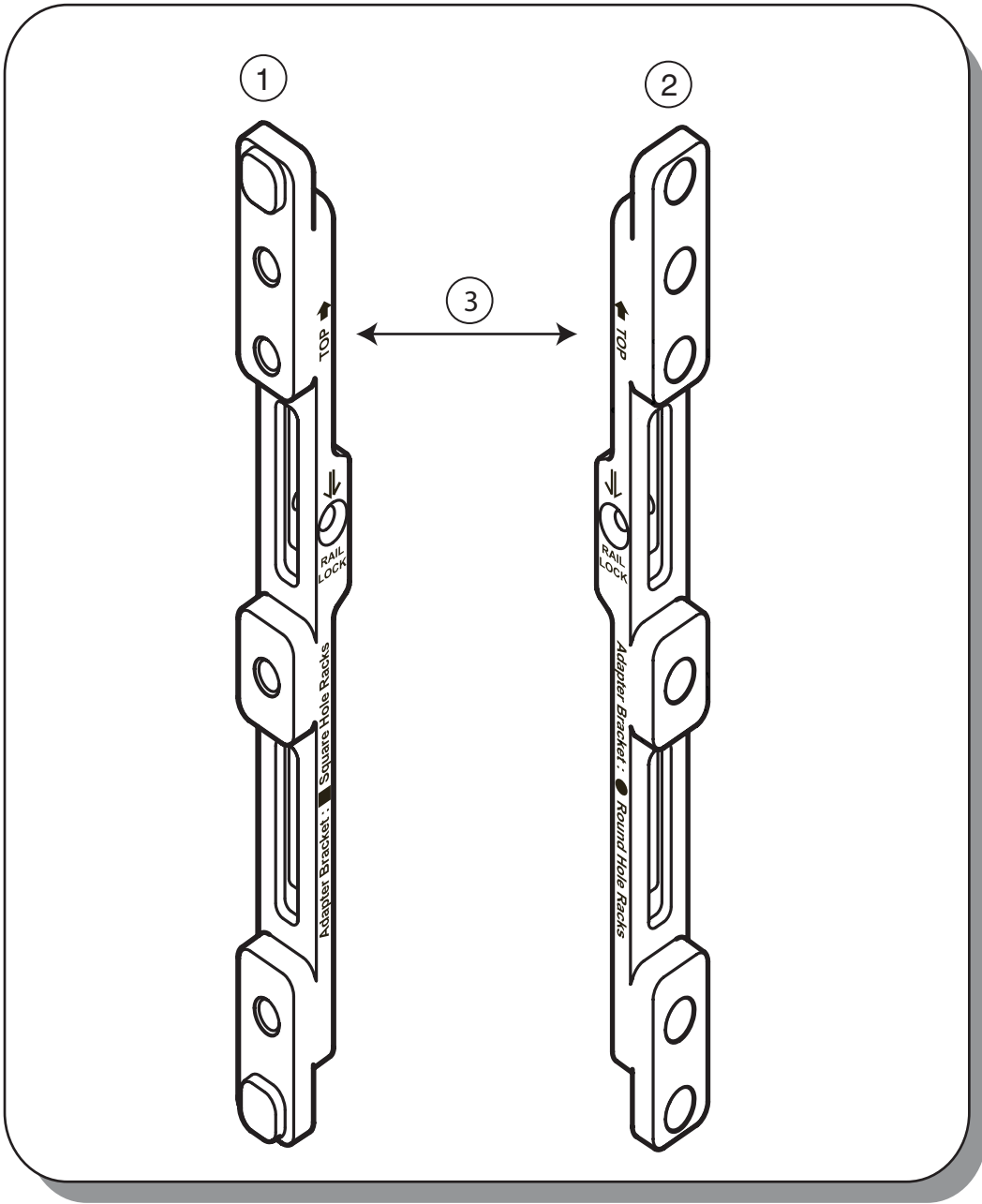
**3 Select the set of adapter brackets for square-hole racks.**

The server ships with two sets of adapter brackets: one for racks with square holes (1) and one for racks with round holes (2). The brackets for square-hole racks (1) have threads. See the following figure.

---

**Note** – Arrows on the brackets (3) indicate how the bracket should be oriented. Be sure to install all brackets with the “Top” arrow (3) pointing up.

---



**4 Attach the brackets to the front posts.**

Place the brackets so that the bottom of the bracket is aligned with the bottom of the (5RU) space where the server will go, and that the arrow labeled “Top” points up.

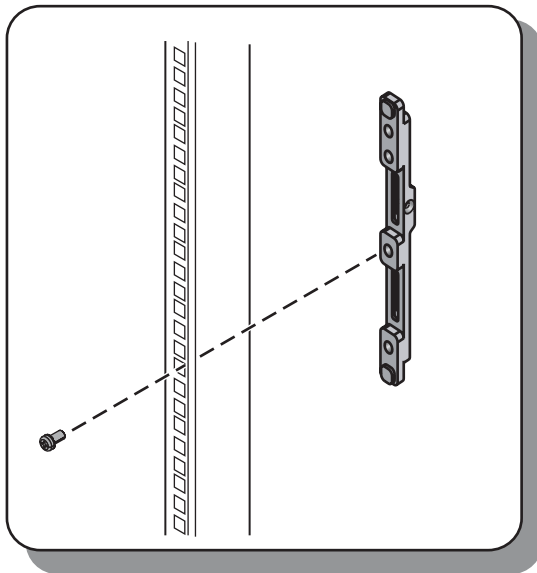
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**Note** – The accessory tray includes a printed template that you can use to help align the adapter brackets.

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Use one M6 x 16 screw per side. Pass the screw from the outside of the rack, through the holes in the post, and into the threads on the adapter brackets.

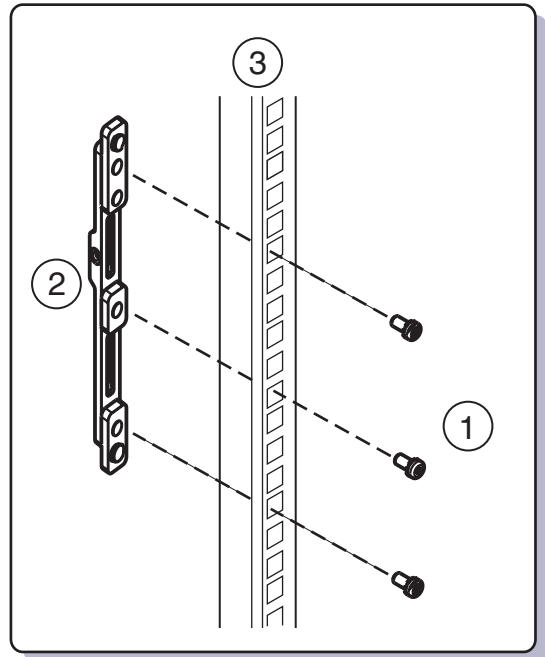
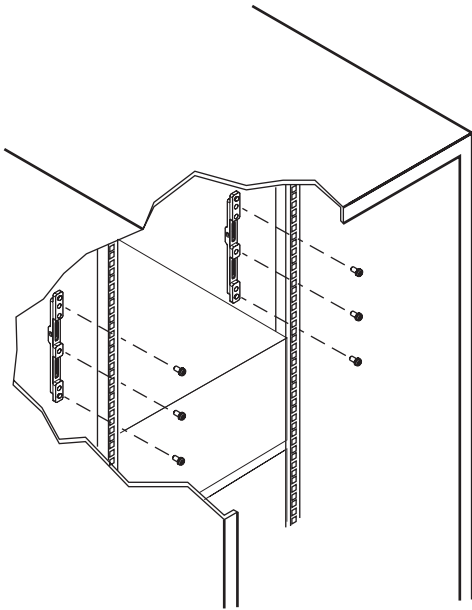
The other two holes (per side) are used later, to attach the bezel of the server to the rack.



**5 Attach the brackets to the rear posts.**

Place the brackets so that the bottom of the bracket is aligned with the bottom of the (5RU) space where the server will go, and that the arrow labeled “Top” points up.

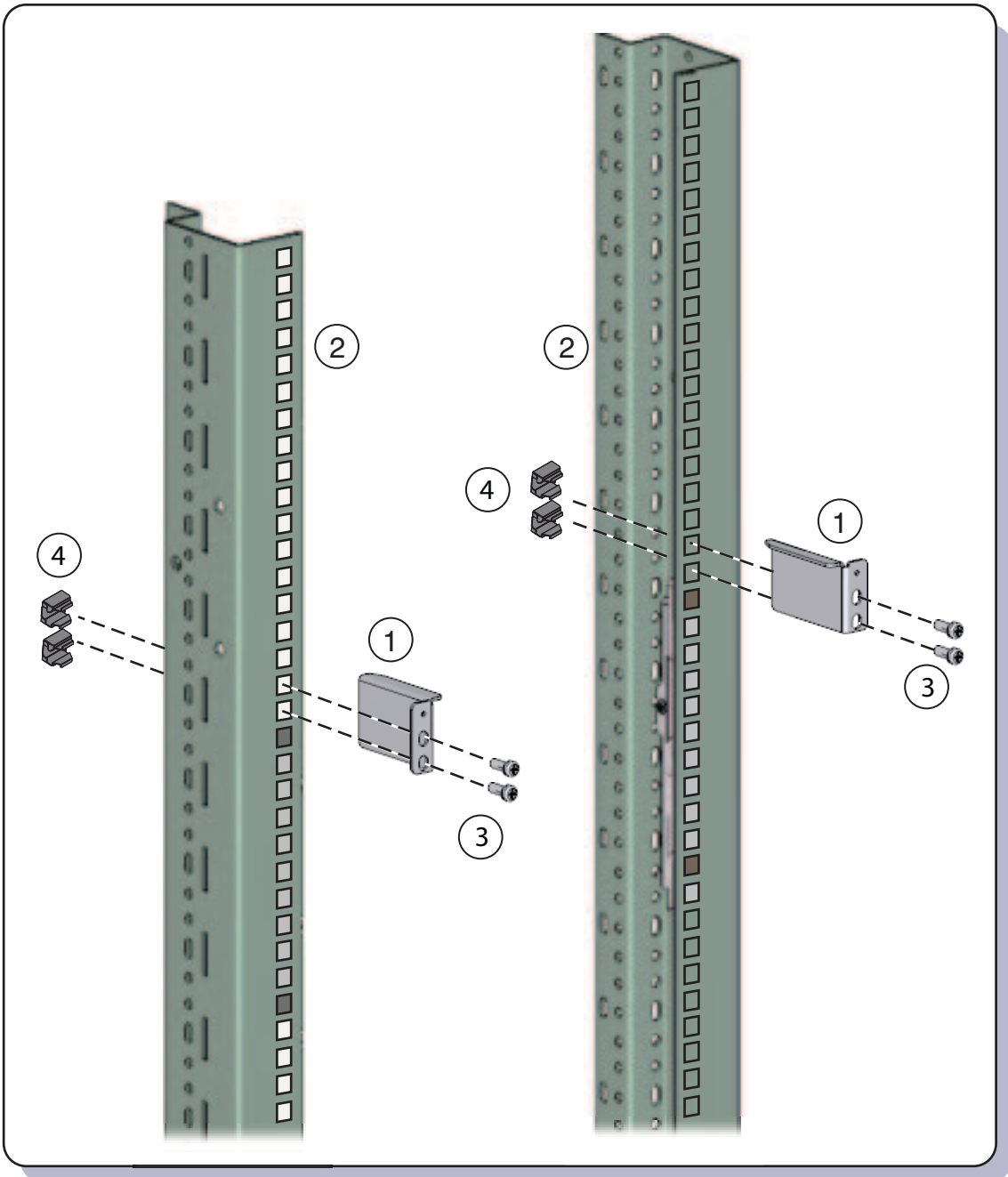
Use three M6 X 16 screws per side (1) to fasten the bracket (2) to the posts (3).



- 6 Attach upper rear braces (1) to the rack posts (2) directly above the adapter brackets, as shown in the following figure.**

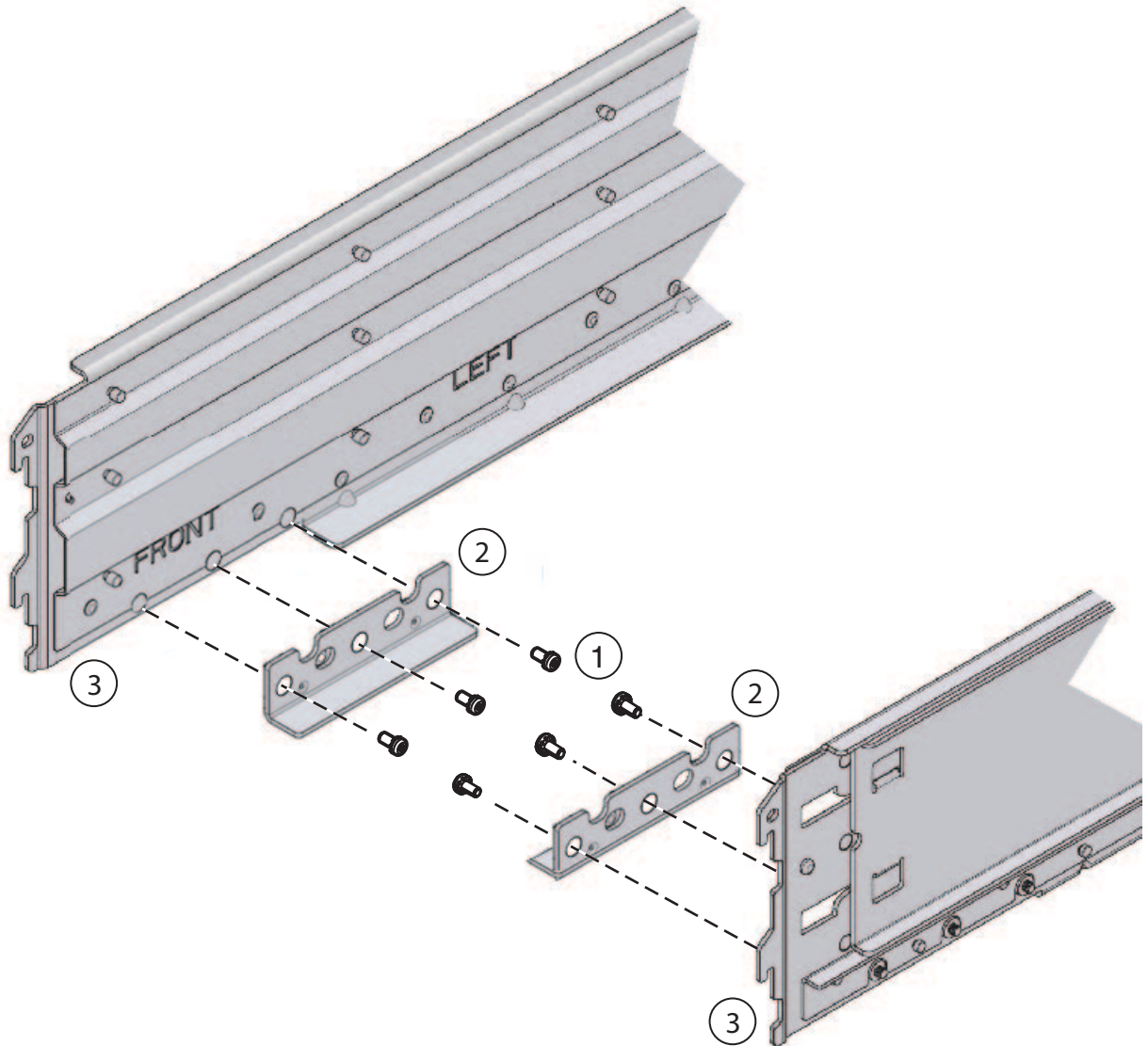
Install two M6 cage nuts (4) per side, and then use two M6 x 16 screws (3).

Before tightening the screws, slide the braces (1) up as far as they will go. The holes on the braces are oval shaped so they can move a little up and down when the screws are loose.



- 7 Remove the six screws (1) that hold the left and right shelf extenders (2) on the shelf rails (3), and then remove the shelf extenders.

You must remove the shelf extenders before installing the server in the rack. They are used for other products.



**8 Place the shelf rails into the rack.**

The shelf rails expand (1) to fit the rack, then slip into the slots on the adapter brackets (2), and drop into place (3).

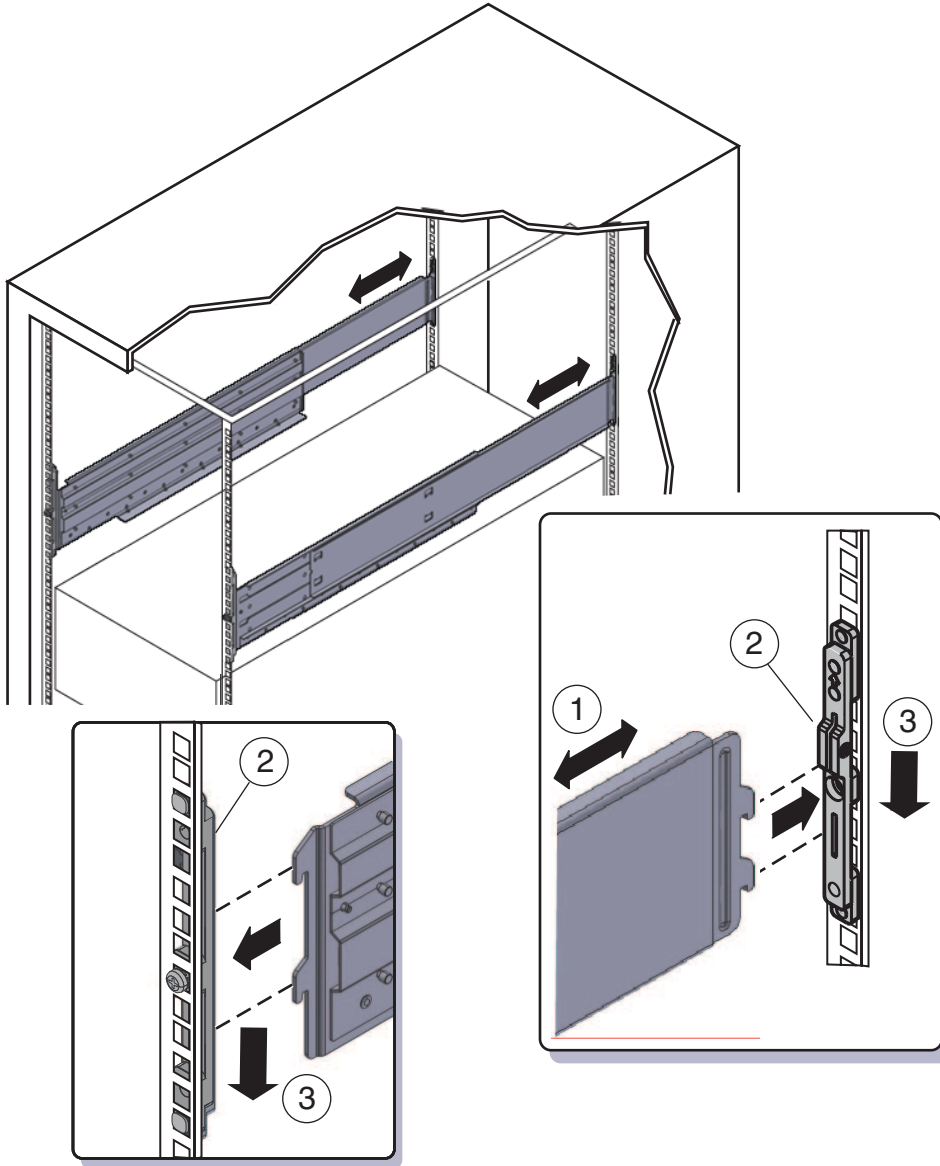
Be certain to place the shelf rails in the proper orientation. They are labeled “FRONT LEFT” and “FRONT RIGHT.”



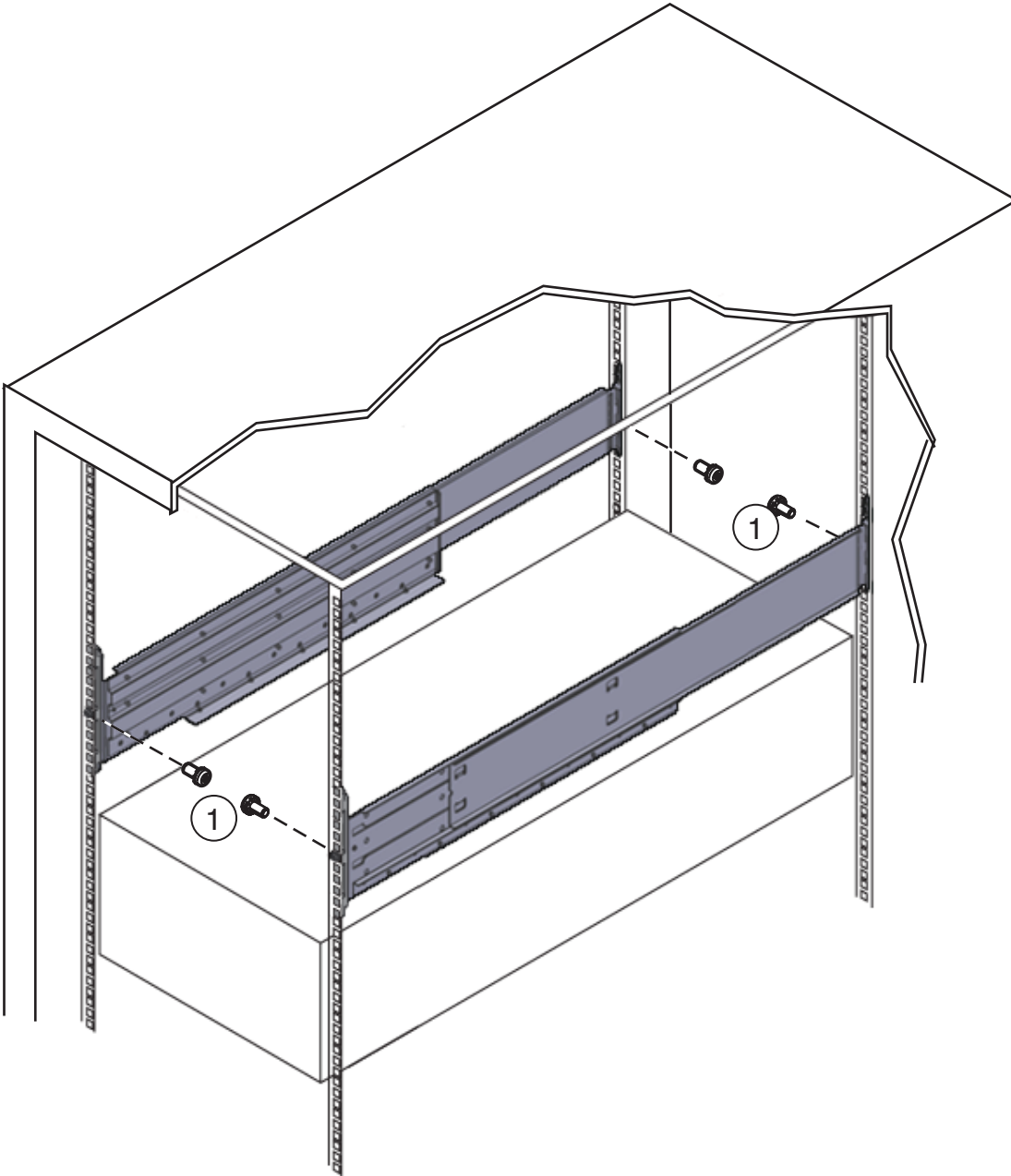
**Caution** – Drop Hazard! Be certain that the rails are firmly seated in the brackets before proceeding.

---





- 9 Thread the four M4 X 10 flathead locking screws (1) into the adapter brackets.**  
These prevent the shelf rails from accidentally lifting out of the adapter brackets.



**Next Steps** [“How to Insert the Server Into the Rack” on page 69](#)

## ▼ **How to Install the Universal Rack Mounting Hardware in a Round-Hole Rack**

The rack mounting kit consists of adapter brackets, rear braces, shelf rails, cage nuts, and screws.



**Caution** – The server weighs about 180 pounds (100 kg) when fully loaded with components. To reduce the risk of serious personal injury or equipment damage, use a mechanical lift to install the server into the rack. If a lift is not available, remove components as described in [“How to Remove Components to Reduce Weight” on page 43](#). This reduces the weight of the server to 80 pounds (45 kg).

Always load equipment into a rack from the bottom up so that it does not become top-heavy and tip over. Deploy your rack’s anti-tilt bar to prevent the rack from tipping during equipment installation.

**Note** – To install rack mounting hardware in square-hole racks, see [“How to Install the Universal Rack Mounting Hardware in a Square-Hole Rack” on page 49](#).

This task uses the following screws and connectors:

Function	Description for M6 Racks	Description for 10-32 Racks
Attach adapter brackets to front rack posts	Four M6 x 12	Four 10-32 x 10
Attach adapter brackets to rear rack posts	Four M6 x 12	Four 10-32 shoulder screws
Attach braces to rear rack posts	Four M6 x 10	Four 10-32 x 10
Locking screws for rails	Four M4 x 10 flathead	Four M4 x 10 flathead

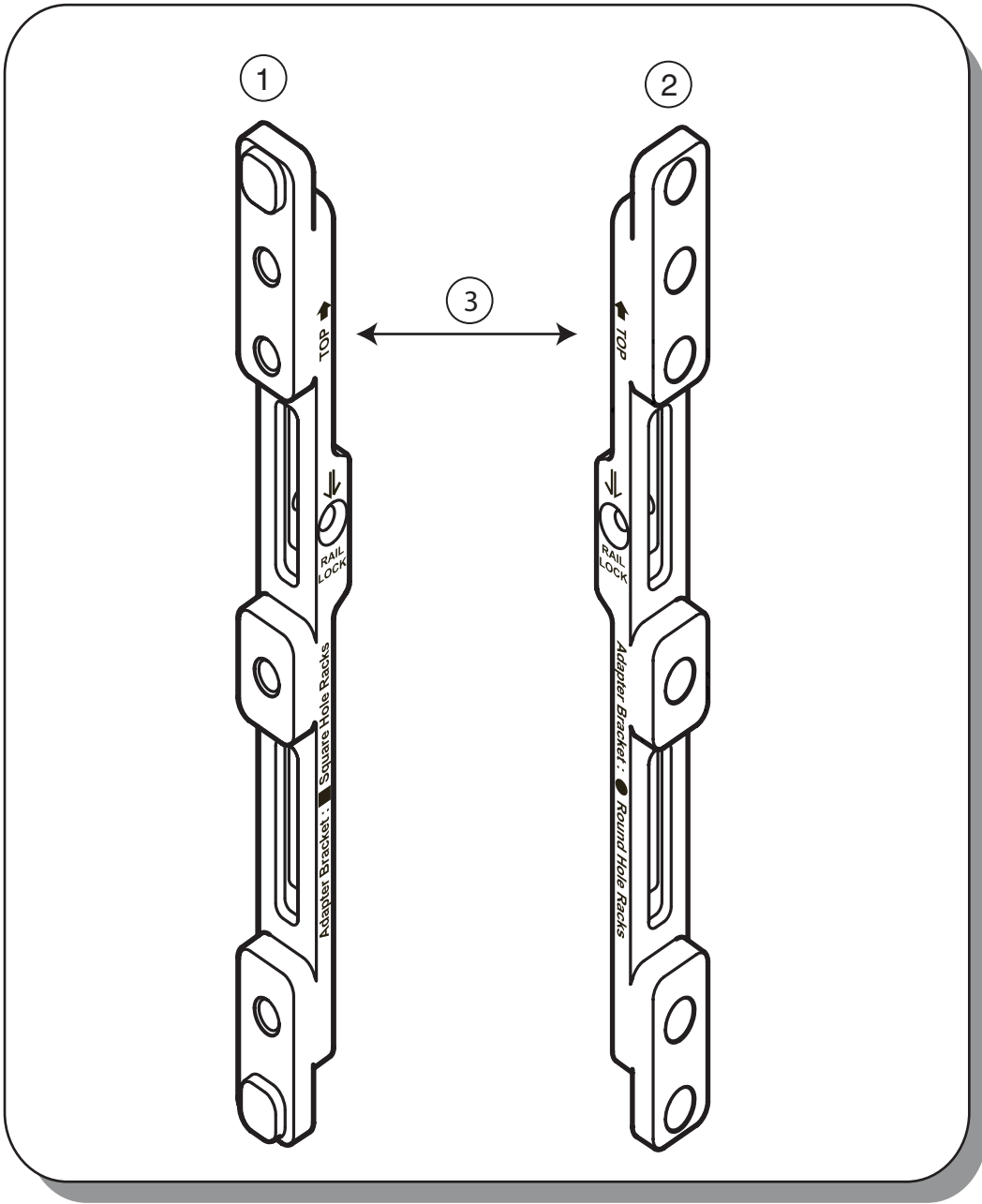
- 1 Gather the necessary screws and connectors.**
- 2 Verify that you have a 5RU space in your rack.**
- 3 Select the set of adapter brackets for round-hole racks.**

The server ships with two sets of adapter brackets: one for racks with square holes (1), and one for racks with round holes (2). The adapter brackets for square-hole racks (1) have threads. The adapter brackets for round-hole (tapped) racks (2) do not. See the following figure.

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**Note** – Arrows on the adapter brackets (3) indicate how they should be oriented. Be sure to install all brackets with the “Top” arrow (3) pointing up.

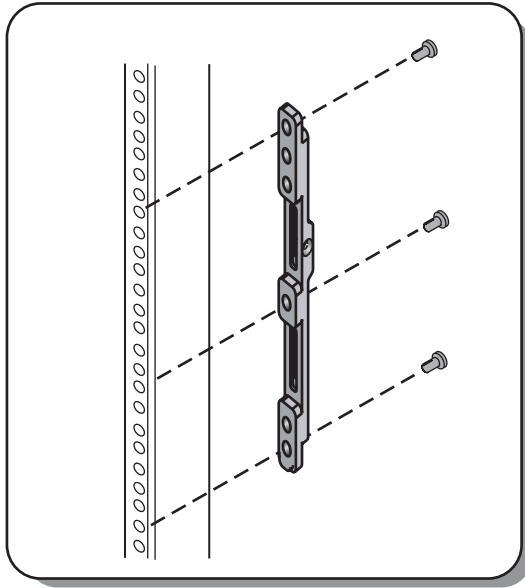
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#### 4 Attach the adapter brackets to the front posts.

Place the adapter brackets so that the bottom of the adapter bracket is aligned with the bottom of the (5RU) space where the server will go, and that the arrow labeled “Top” points up.

Use three M6 x 12 or 10-32 x 10 screws for each side. Pass the screws from the inside of the rack, through the adapter bracket, and into the threads on the post.



---

**Note** – The accessory box includes a printed template that you can use to help align the adapter brackets.

---

#### 5 Attach the adapter brackets to the rear posts.

Place the adapter brackets so that the bottom of the adapter bracket is aligned with the bottom of the (5RU) space where the server will go, and that the arrow labeled “Top” points up.

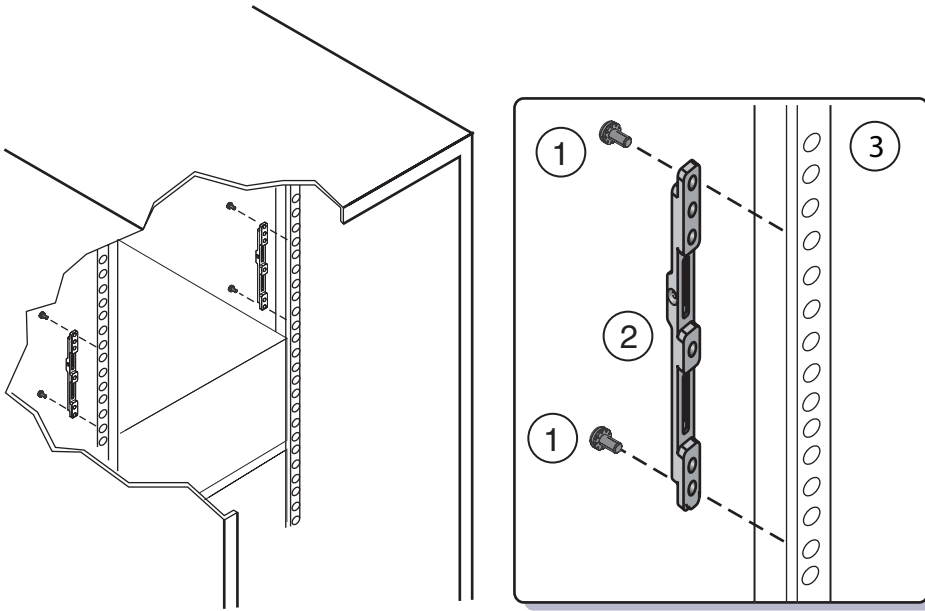
Pass two screws (1) from the inside of the rack, *through the top and bottom holes in the adapter bracket* (2), and thread them into the post (3).

---

**Note** – Do not use the center screw in the adapter bracket. It is reserved for the optional shipping bracket kit described in [“Installing and Removing the Universal Rack Mounting Kit Shipping Brackets”](#) on page 73.

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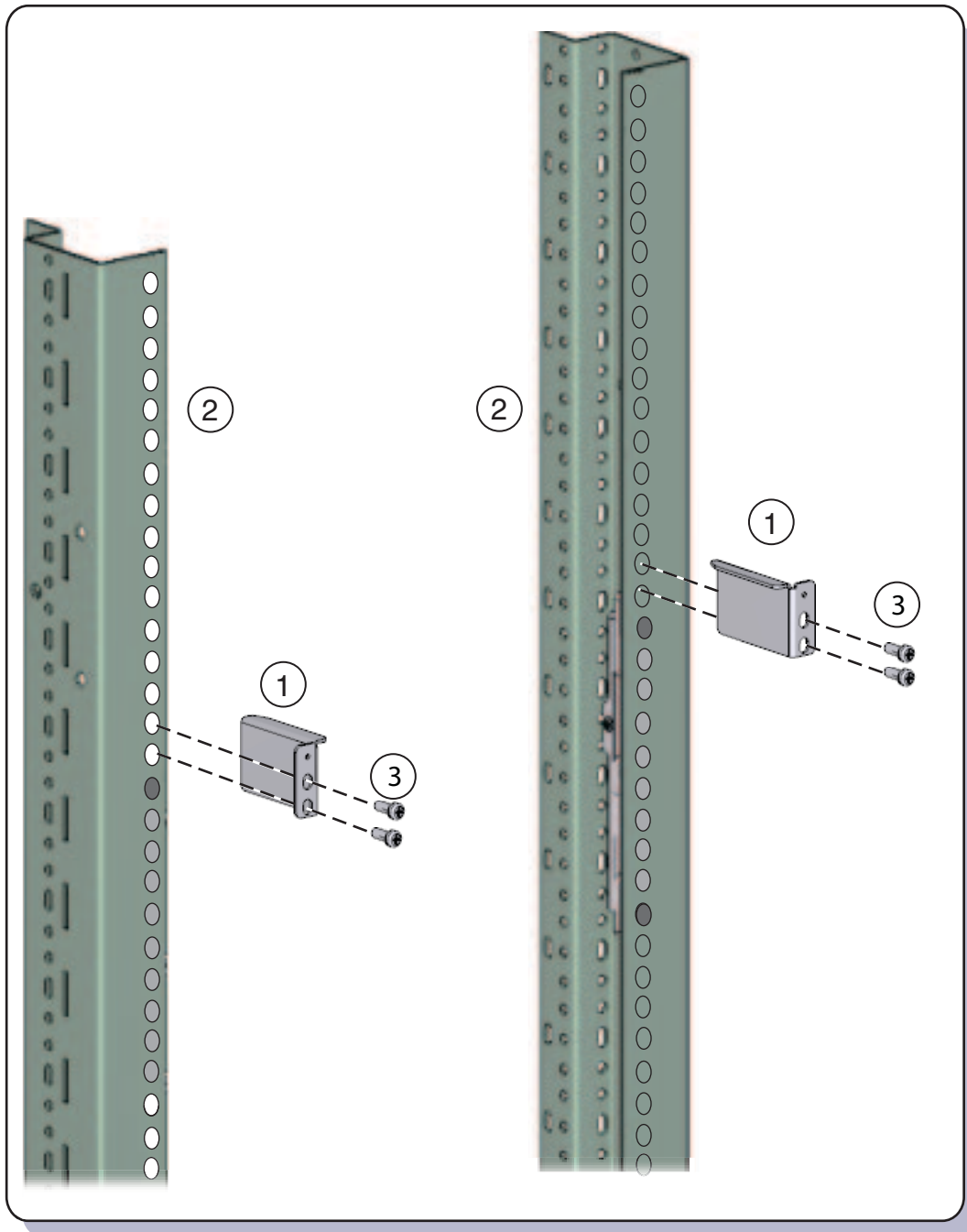
- For M6 racks, use two M6 x 12 screws per side.
- For 10-32 racks, use two 10-32 shoulder screws per side.



- 6 Attach upper rear braces (1) to the rack posts (2) directly above the adapter brackets, as shown in the following figure.**

Use either two M6 x 16 or two 10-32 x 10mm screws (3) per side.

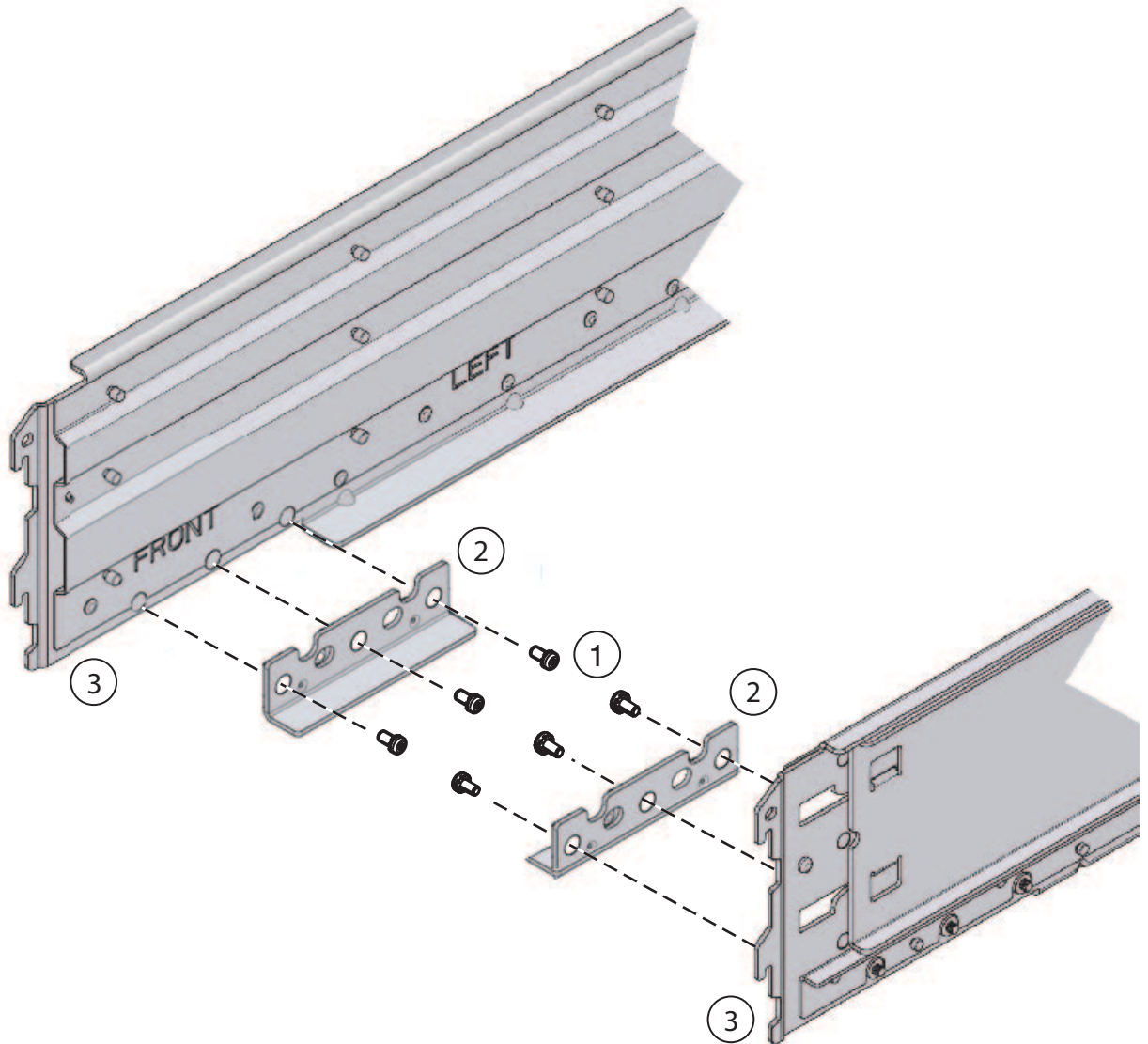
Before tightening the screws, slide the braces (1) up as far as they will go. The holes on the braces are oval shaped so they can move a little up and down when the screws are loose.





- 7 Remove the six screws (1) that hold the left and right shelf extenders (2) on the shelf rails (3), and then remove the shelf extenders.

You must remove the shelf extenders before installing the server in the rack. They are used for other products.



**8 Place the shelf rails into the rack.**

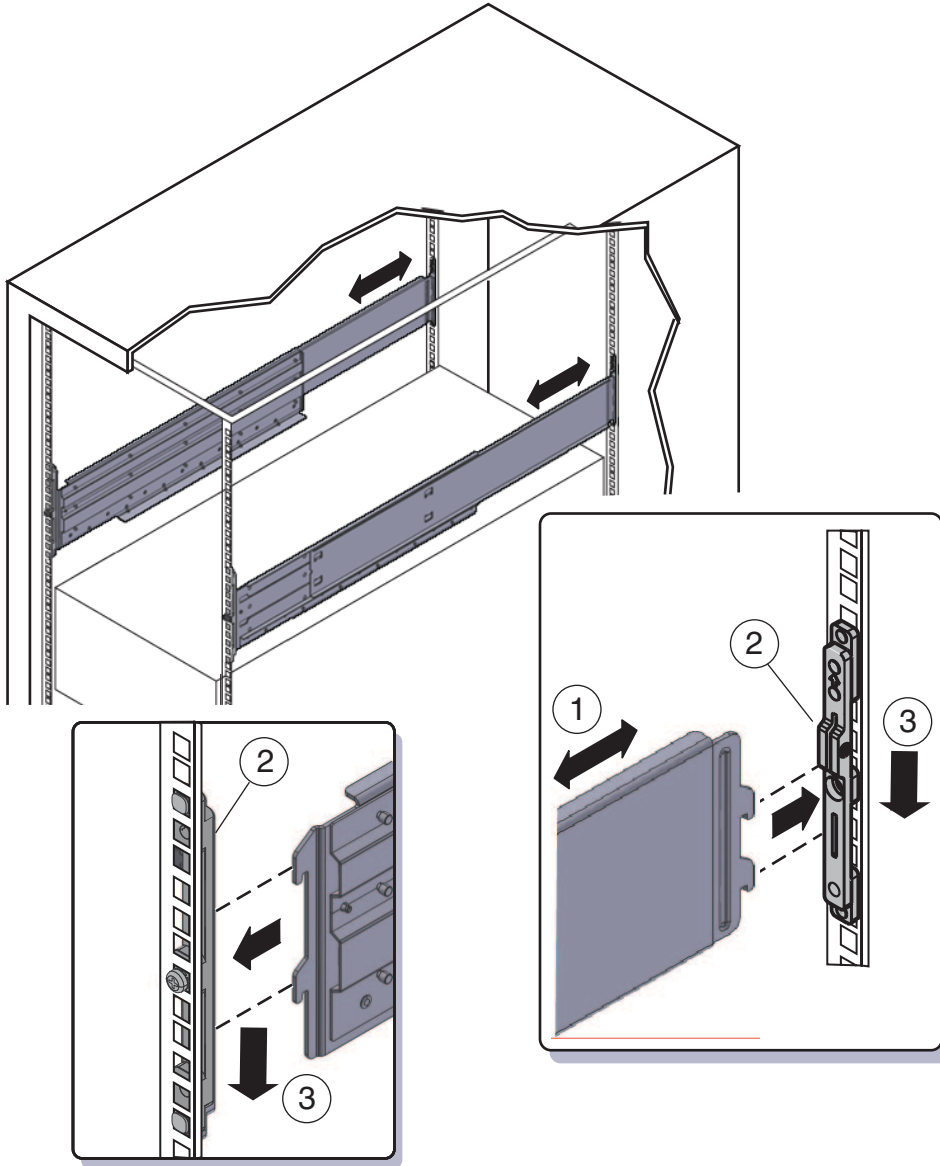
The shelf rails expand (1) to fit the rack, then slip into the slots on the adapter brackets (2), and drop into place (3).

Be certain to place the shelf rails in the proper orientation. They are labeled “FRONT LEFT” and “FRONT RIGHT.”

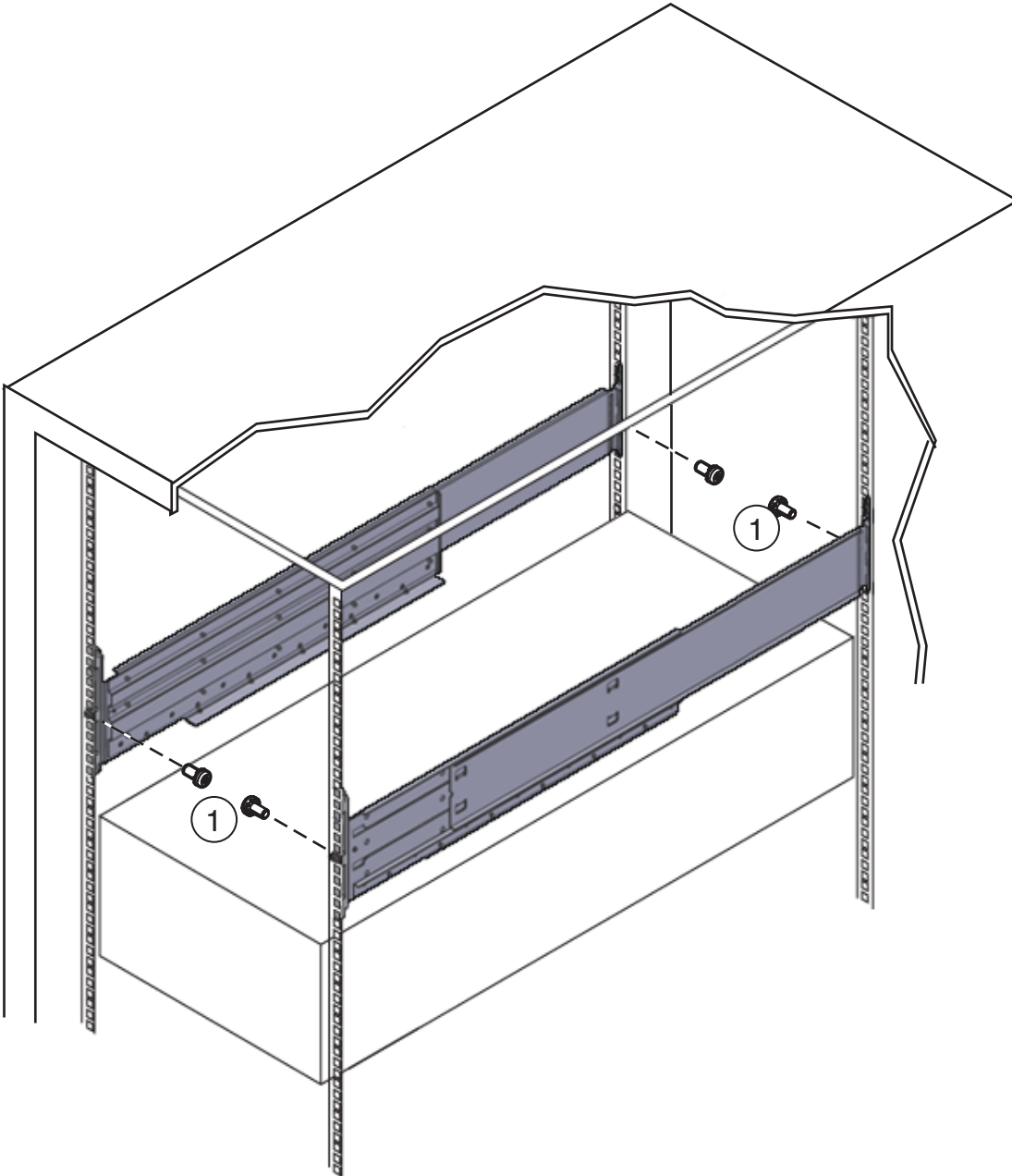


**Caution** – Drop Hazard! Be certain that the rails are firmly seated in the brackets before proceeding.

---



- 9 Thread the four M4 X 10 flathead locking screws (1) into the adapter brackets.**  
These prevent the shelf rails from accidentally lifting out of the adapter brackets.



**Next Steps** [“How to Insert the Server Into the Rack” on page 69](#)

## ▼ **How to Insert the Server Into the Rack**

**Before You Begin** Perform the steps in [“How to Install the Universal Rack Mounting Hardware in a Round-Hole Rack” on page 59.](#)

### **1 Lift the server to its position in the rack.**

The use of a mechanical lift is recommended.



**Caution** – The server weighs 180 pounds (82 kg). To reduce the risk of serious personal injury or equipment damage, use a mechanical lift to install the server into the rack. If a lift is not available, remove components as instructed in [“How to Remove Components to Reduce Weight” on page 43,](#) and use two persons to lift the server into place.

---

### **2 Slide the server onto the shelf rails.**

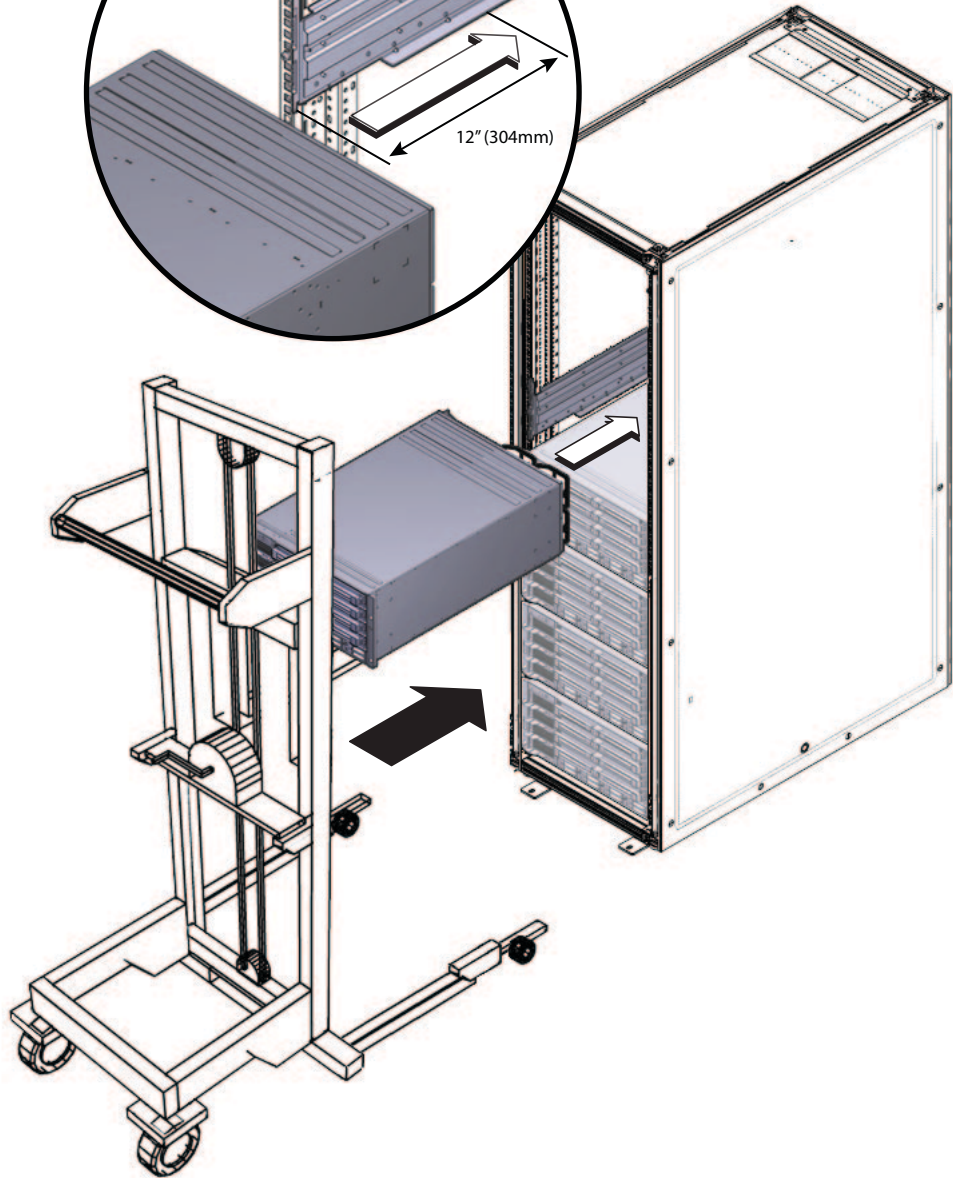
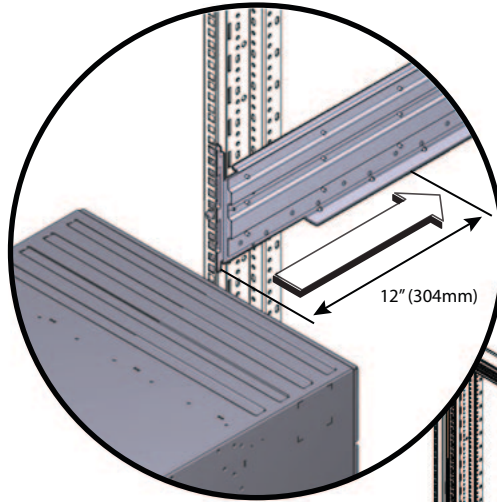


**Caution** – Drop Hazard! Do not release the server until it is 12 inches (304 mm) into the rack, and is firmly supported by the shelf rails. The shelf rails can not support the server until it is 12 inches (304 mm) inside the rack.

---

**Note** – If the server is still on a pallet, you can leave it on the pallet and lift both the server and the pallet with the mechanical lift, and slide the server off the pallet and onto the shelf rails.

---

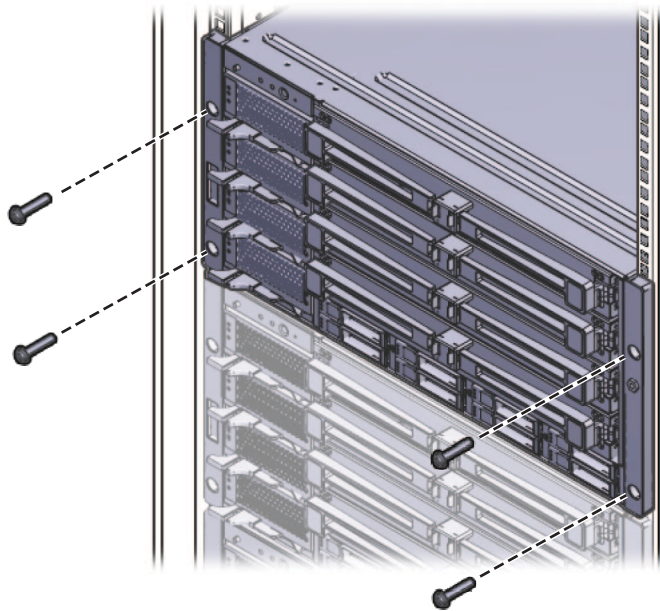


- 3 Use four screws to attach the front bezel of the server to the front of the rack, as shown in the following figure.
  - For square-hole racks, use four M6 x 16 screws.
  - For round-hole racks, use four M6 x 12, or four 10-32 x 10 screws.

---

**Note** – On square-hole racks, the screws pass through the rack and thread into the adapter bracket. On round-hole racks, the screws thread into the rack rails.

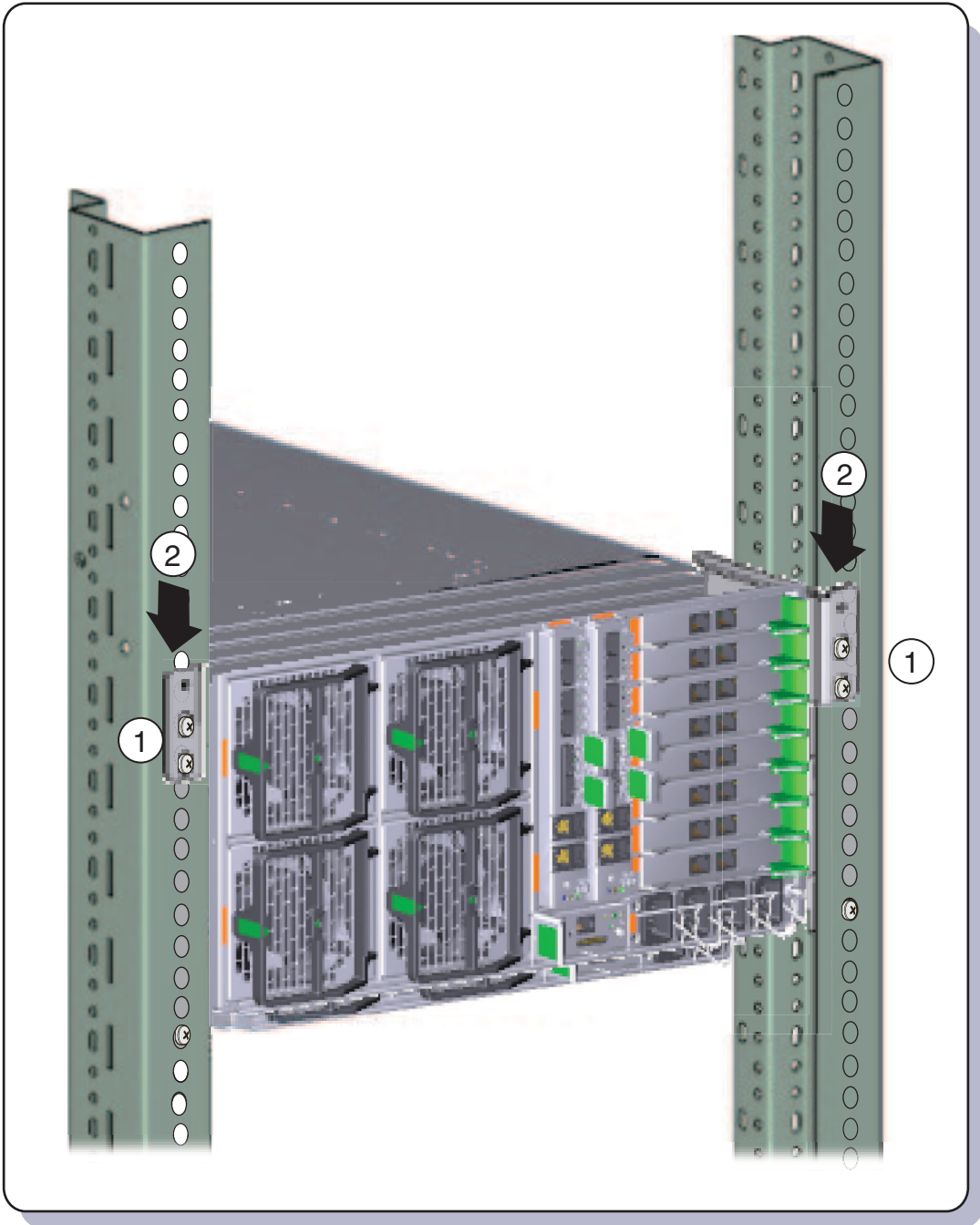
---



- 4 Move the rear braces so they are snug against the server chassis. See the following figure.

From the rear of the system:

  - a. Loosen the screws (1).
  - b. Slide the braces down (2).
  - c. Tighten the screws (1).





- 5 If you removed components from the server, replace them after the server is mounted in the rack. See [“How to Remove Components to Reduce Weight” on page 43](#).

**See Also** [“How to Remove Components to Reduce Weight” on page 43](#)

## Installing and Removing the Universal Rack Mounting Kit Shipping Brackets

If the server is shipped in a rack, it must be supported by shipping brackets.

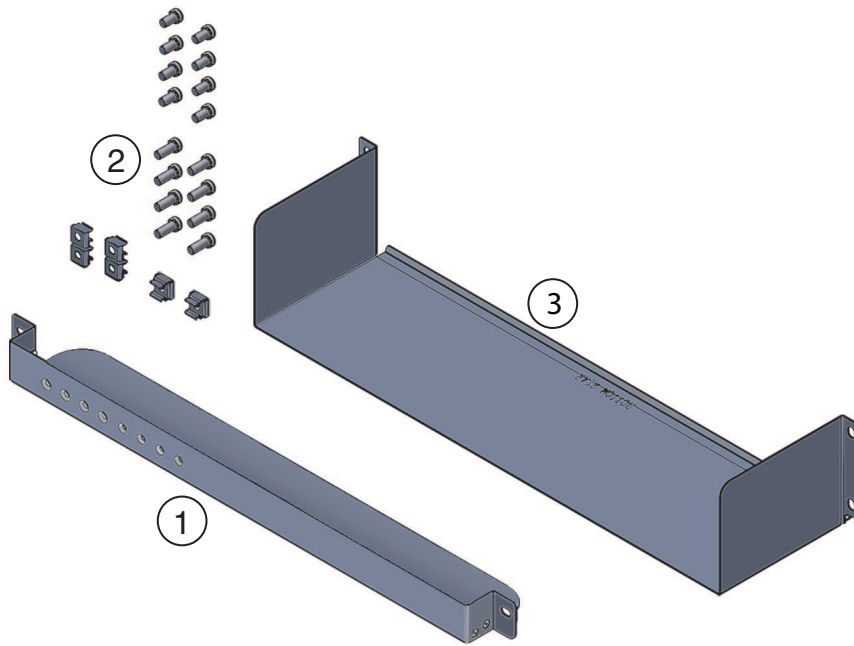
- If the server is shipped to you in a rack, you must remove the front brackets before placing it in service. Removing the rear brackets is optional. See [“How to Remove the Universal Rack Mounting Kit Shipping Brackets” on page 77](#).
- If you plan to ship the server in a rack, see [“How to Install the Universal Rack Mounting Kit Shipping Brackets” on page 73](#).

If you have ordered a server with shipping brackets, they are shipped in the accessory tray.

### ▼ **How to Install the Universal Rack Mounting Kit Shipping Brackets**

This procedure describes how to install brackets into a system equipped with the universal rack mounting kit.

The following picture shows the shipping bracket kit.



---

**Figure Legend**

1	Front shipping bracket.
2	Screws and cage nuts. The kit contains two sets of screws (M6 and 10-32), plus cage nuts. The cage nuts are not used for the Sun Server X2-8.
3	Bottom rear shipping bracket.

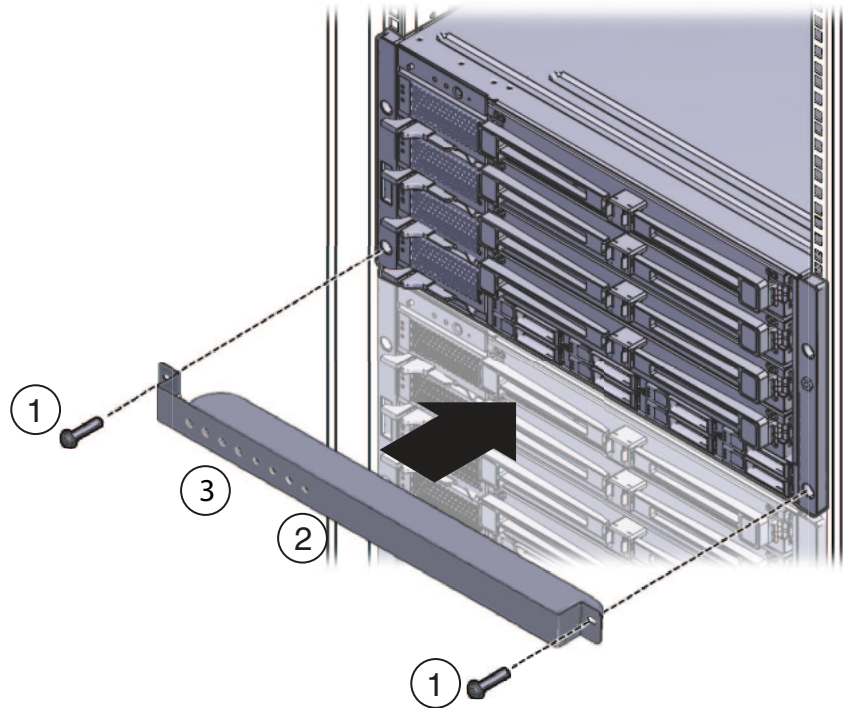
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- 1 Remove the two (short) screws that fasten the bottom of the bezel to the rack.**
- 2 Insert the front bracket (2) into the front of the server with the supporting flange underneath the server.**  
See the following figure.
- 3 Use the two long screws (M6 x 25 or 10-32 x 1) (1) to fasten the shipping bracket (2) to the front of the server.**

---

**Note** – The front shipping bracket includes eight threaded holes (3) used for storing unused screws. When the shipping brackets are not installed, the bracket holds the long screws used to install them. When the shipping brackets are installed, it stores the short screws that were used before the shipping brackets were installed.

---



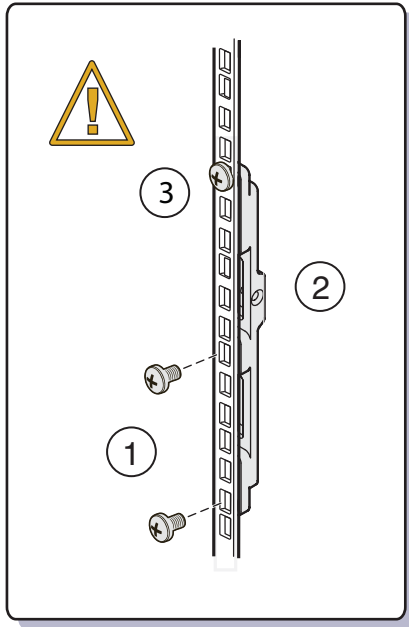
- 4 Insert the short screws into the empty storage holes on the shipping bracket.**  
They will be stored there to be used when you remove the shipping bracket.
- 5 For square-hole racks, remove the bottom screws (1) that hold the rear adapter brackets (2) in place. See the following figure.**



---

**Caution** – Do not remove the bottom screws unless you are certain that the upper screw (3) is in place. Otherwise, the server could fall.

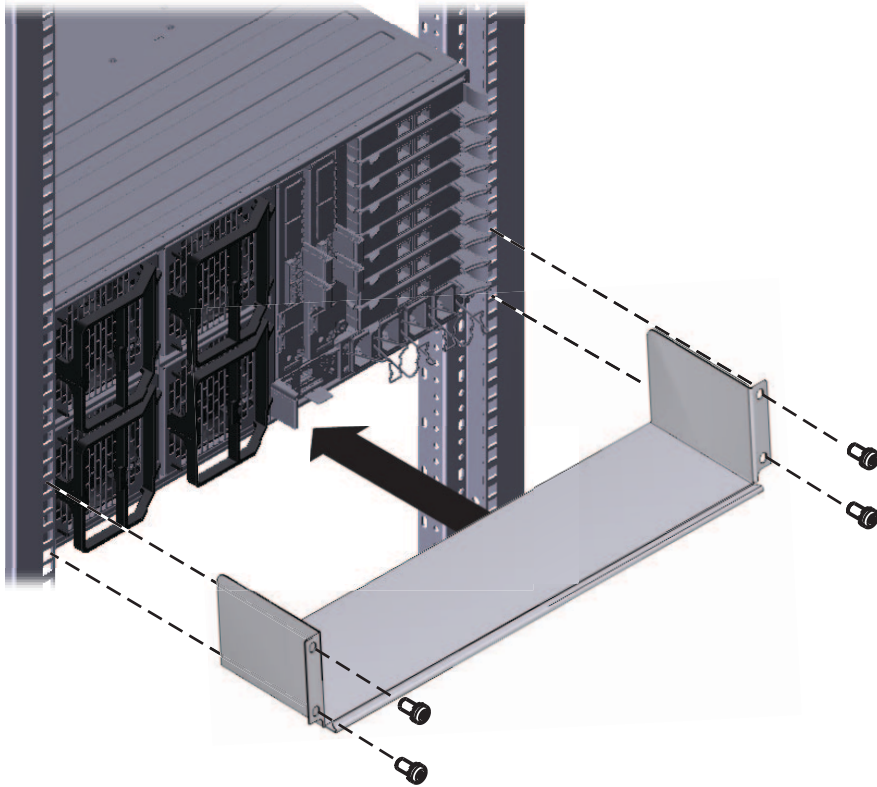
---



**6 Insert the rear bottom bracket (1) under the back of the server with the side panels facing up, as shown in the following figure.**

Use four screws (2) to fasten it to the rack. *Do not finish tightening these screws.* They should be tight enough to hold the bracket in place, but you should still be able to move the bracket slightly.

- For square-hole racks, use the two screws that you removed in Step 5.
- For round-hole racks, use either 10-32 x 10 or M6 x 12.



The bracket should be fastened to the posts, but loose enough to move slightly.

- 7 **Push the bracket up so that it rests firmly against the bottom of the server, and then finish tightening the screws that hold the bracket in place.**

If necessary, loosen the screws enough so that you can move the bracket, and then tighten them after pushing it against the bottom of the server.




---

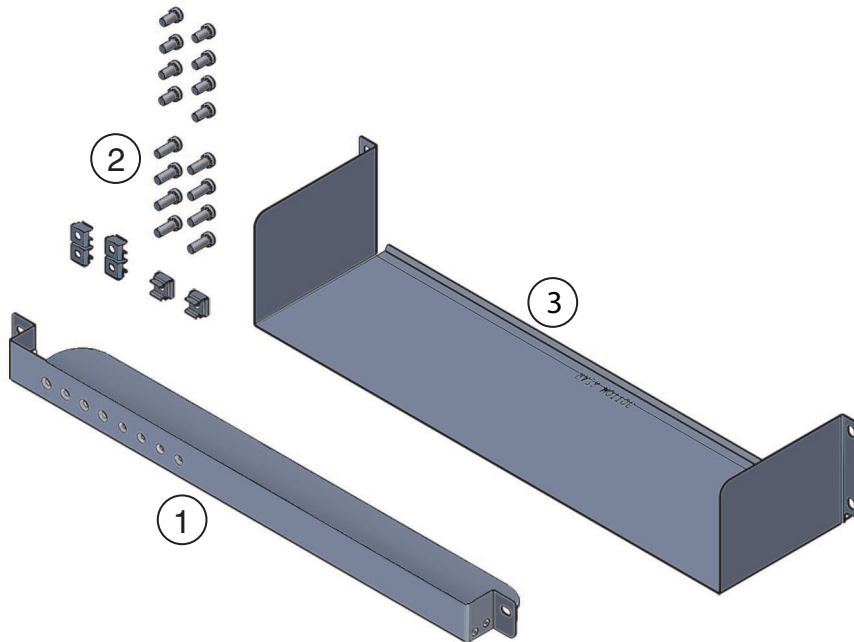
**Caution** – To prevent damage to the server during shipping, the bottom shipping bracket must rest firmly against the bottom of the server.

---

### ▼ **How to Remove the Universal Rack Mounting Kit Shipping Brackets**

This procedure describes how to remove shipping brackets from a system equipped with a universal rack mounting kit.

The shipping bracket kit consists of a front bracket, a rear bottom bracket, and screws to connect them to the rack.

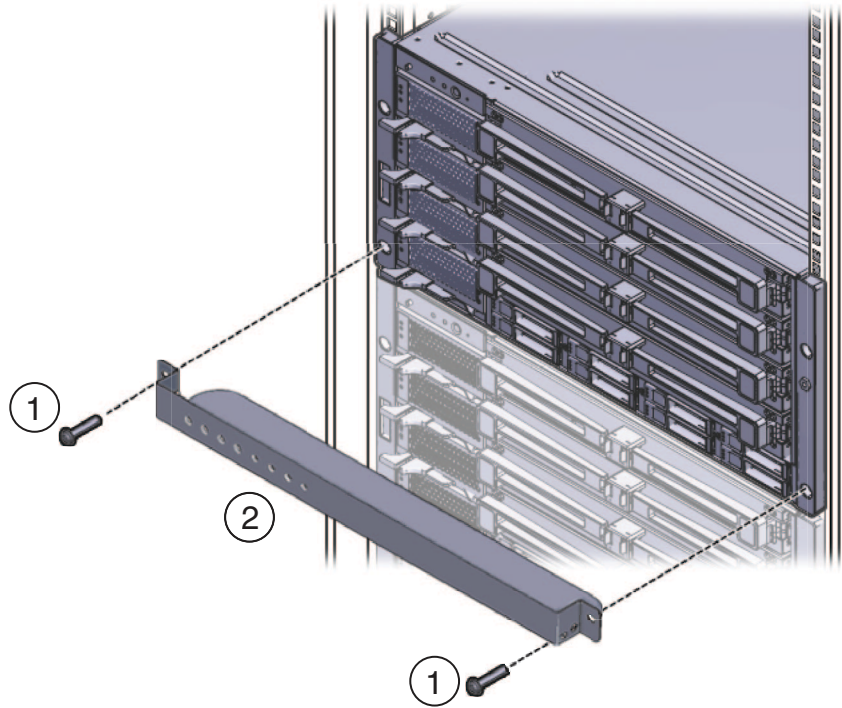


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**Figure Legend**

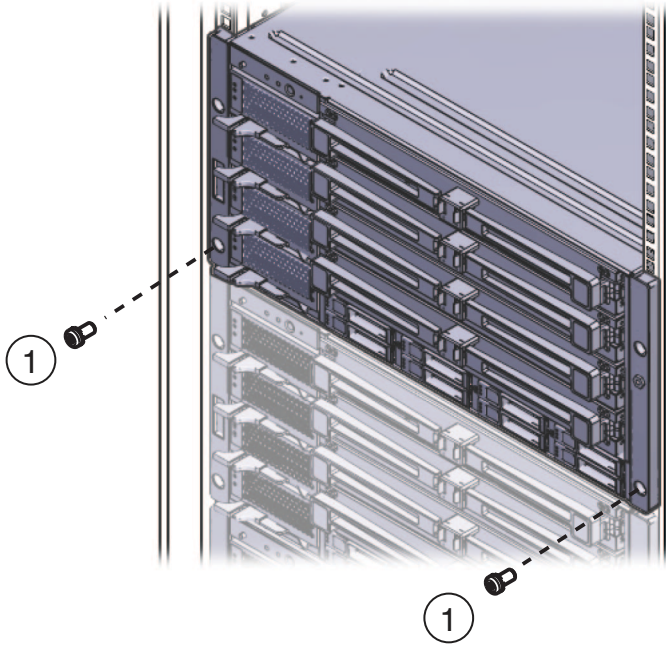
- |   |   |
|---|---|
| 1 | Front shipping bracket  |
| 2 | Screws and cage nuts. The kit contains two sets of screws (M6 and 10-32), plus cage nuts. The cage nuts are not used for the Sun Server X2-8. |
| 3 | Bottom rear shipping bracket  |
-

- 1 Remove the two screws (1) that fasten the front bracket (2) to the front of the server and remove it.



- 2 Find the screws from the front of shipping bracket that match your rack and use them to fasten the bezel into the rack.**

The front shipping bracket contains eight threaded holes used for storing unused screws (four M6 and four 10-32). Remove the screws that match the threads on your rack and use them to secure the server to the rack.

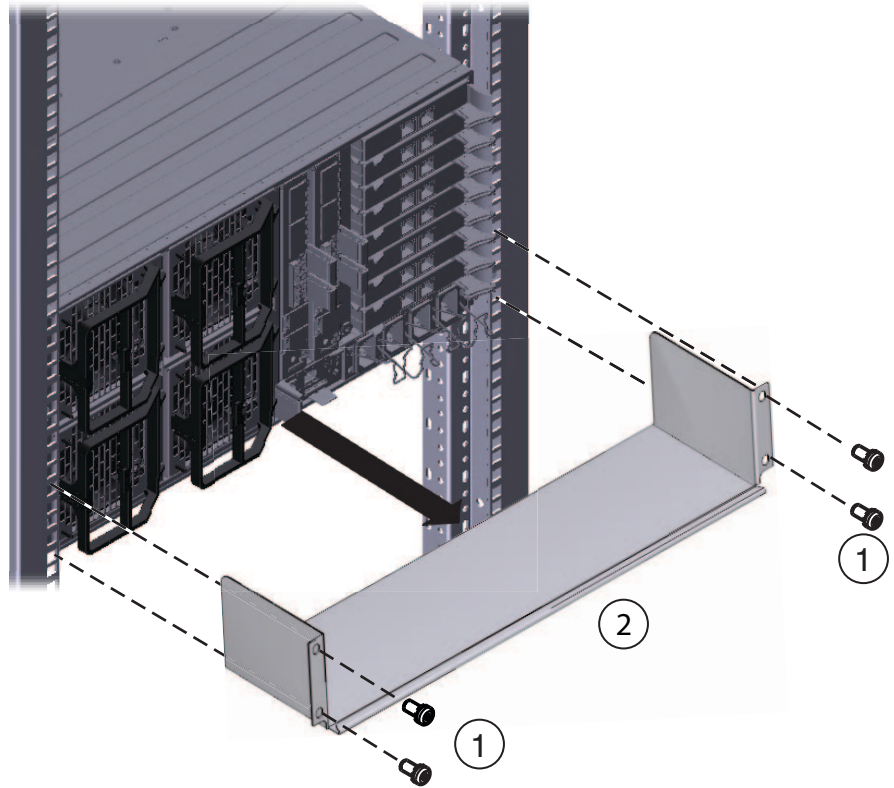


- 3 Thread the long screws that you removed in Step 1 into the matching empty holes on the shipping bracket.**

They will be stored there in case you need to reinstall the shipping bracket.



- 4 Remove the four screws (1) that fasten the rear bottom bracket (2) under the back of the server and remove it.



- 5 Replace the four screws that you removed in Step 4.

