

# **SR1200, SR1300, SR2200, and SR2300 Bracket Kit Installation Guide**

---

Order Number: A61346-004

## **Disclaimer**

Information in this document is provided in connection with Intel® products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not designed, intended or authorized for use in any medical, life saving, or life sustaining applications or for any other application in which the failure of the Intel product could create a situation where personal injury or death may occur. Intel may make changes to specifications and product descriptions at any time, without notice.

Intel is a registered trademark of Intel Corporation or its subsidiaries in the United States and other countries.

† Other names and brands may be claimed as the property of others.

Copyright © 2001, 2002 Intel Corporation. All Rights Reserved.

# Contents

---

## Safety Guidelines

Installation Precautions ..... 5

## Bracket Kit Installation Procedures

Required Tools ..... 7  
Kit Contents ..... 7  
Mounting in a Four-Post Rack System ..... 8  
    Remove the Chassis Handles ..... 8  
    Attach Brackets to Chassis ..... 9  
    Attach Disks to Chassis ..... 10  
    Attach Brackets to Rear Posts ..... 11  
    Install Chassis in Rack ..... 12  
    Install Chassis Handles ..... 14  
Mid-Mounting in a Two-Post Rack System ..... 15  
    Attach Brackets to Chassis ..... 15  
    Attach L Brackets to Center Posts ..... 16  
    Install Chassis in Rack ..... 17  
Front-Mount-Only in a Two-Post Rack System ..... 19  
    Remove the Chassis Handles ..... 19  
    Attach Brackets to Chassis ..... 20  
    Attach L Brackets to Center Posts ..... 21  
    Install Chassis in Rack ..... 22  
    Install Chassis Handles ..... 24

## Figures

1. Fastener Pack Contents ..... 7  
2. Removing a Handle from the Chassis ..... 8  
3. Installing a Chassis Bracket in the Front-mount Position ..... 9  
4. Attaching a Chassis Disk to the Chassis ..... 10  
5. Attaching a Rear Bracket to a Rear Post ..... 11  
6. Installing the Chassis in the Rear Brackets ..... 12  
7. Attaching a Front Bracket to a Front Post ..... 13  
8. Attaching a Chassis Handle to a Front Post ..... 14  
9. Installing a Chassis Bracket in the Mid-mount Position ..... 15  
10. Attaching an L Bracket to a Center Post ..... 16  
11. L Brackets Inserted into Chassis Mounting Brackets (Rear View) ..... 17  
12. Installing the Chassis in the Rack ..... 18  
13. Removing a Handle from the Chassis ..... 19  
14. Installing a Chassis Bracket in the Front-mount Position ..... 20  
15. Attaching an L Bracket to a Center Post ..... 21  
16. L Brackets Inserted into Chassis Mounting Brackets (Rear View) ..... 22  
17. Installing the Chassis in the Rack ..... 23  
18. Attaching a Chassis Handle to a Front Post ..... 24



# Safety Guidelines

---

## Installation Precautions

### WARNINGS

**SERVER POWER ON/OFF:** The push-button on/off power switch on the front panel of the server does not turn off the AC power. To remove AC power from the server, you must unplug the AC power cord from either the power supply or wall outlet.

**HAZARDOUS CONDITIONS—POWER SUPPLY:** Hazardous voltage, current, and energy levels are present inside the power supply enclosure. There are no user-serviceable parts inside it; servicing should only be done by technically qualified personnel.

**HAZARDOUS CONDITIONS—DEVICES AND CABLES:** Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the server and disconnect telecommunications systems, networks, modems, and the power cord attached to the server before opening it. Otherwise, personal injury or equipment damage can result.

**AVOID INJURY:** Lifting the server chassis and attaching it to the rack is a two-person job. If needed, use an appropriate lifting device. A fully loaded SR1200 or SR1300 server weighs approximately 13.6 kg (30 lbs.) and a fully loaded SR2200 or SR2300 server weighs approximately 23.1 kg (51 lbs.).

### CAUTIONS

**Temperature:** The operating temperature of the server, when installed in an equipment rack, must not go below 5 °C (41 °F) or rise above 35 °C (95 °F). Extreme fluctuations in temperature can cause a variety of problems in your server.

**Ventilation:** The equipment rack must provide sufficient airflow to the front of the server to maintain proper cooling. It must also include ventilation sufficient to exhaust:

- A maximum of 1200 Btu's per hour for a fully loaded SR1200 or SR1300 server
- A maximum of 1840 Btu's per hour for a fully loaded SR2200 or SR2300 server

It is important to note that this is the maximum, and a minimum or typical system your configuration. An extra 500 BTU/hr over many systems would translate into a large error calculating air conditioning capacity.



# Bracket Kit Installation Procedures

---

This bracket kit allows you to install the SR1200 1U chassis, SR1300 1U chassis, SR2200 2U chassis, and the SR2300 2U chassis into most two- and four-post rack and cabinet systems.

## NOTE

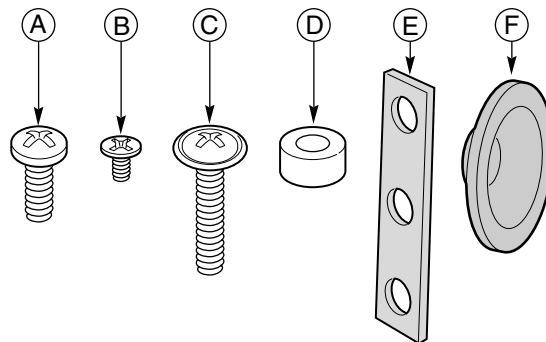
The illustrations show an SR1200 1U chassis, but the instructions also apply to all chassis.

## Required Tools

- Cross (Phillips†) screwdriver

## Kit Contents

- Chassis brackets—qty. 2
- Rear brackets—qty. 2
- L brackets—qty. 2
- Fastener pack—qty. 1



OM13950

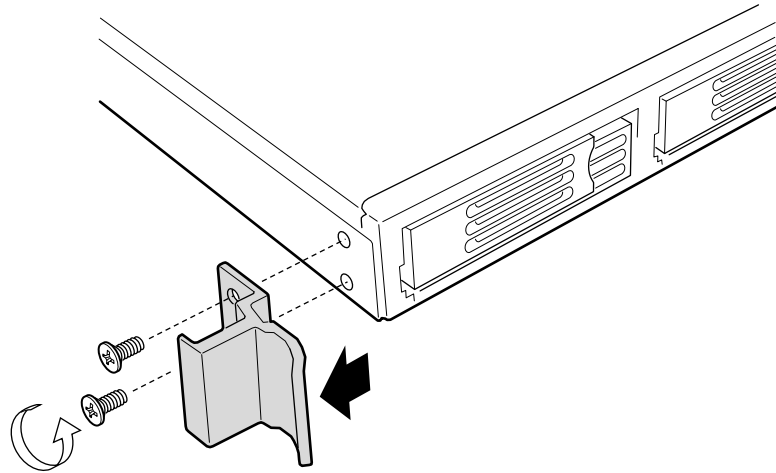
- A. Screw, #10-32 x 1/2-inch—qty. 8
- B. Screw, #6-32 x 3/16-inch—qty. 4
- C. Screw, #10-32 x 7/8-inch—qty. 2
- D. Handle spacers—qty. 2
- E. Nut bar—qty. 4
- F. Chassis disks—qty. 2

**Figure 1. Fastener Pack Contents**

# Mounting in a Four-Post Rack System

## Remove the Chassis Handles

1. Remove two screws (Figure 2) from each handle.
2. Set the handles and screws aside for reattachment later.



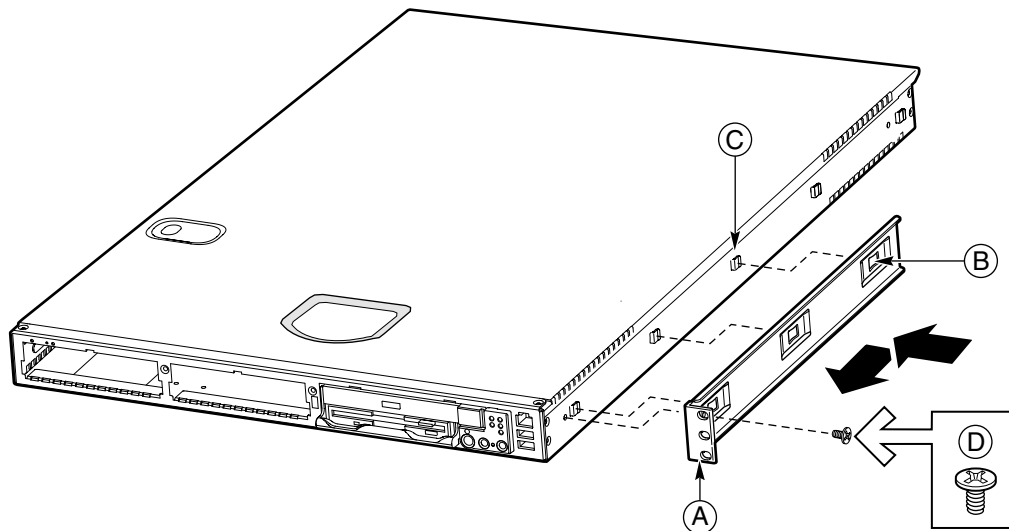
OM12358

**Figure 2. Removing a Handle from the Chassis**



## Attach Brackets to Chassis

1. Place a chassis bracket along one side of the chassis in the front-mount position (Figure 3, A).
2. Align the holes (B) in the bracket with the tabs (C) on the chassis and place the bracket against the chassis.
3. Slide the bracket as far as it will go toward the front of the chassis.
4. Fasten the bracket to the chassis using screw (D).
5. In the same manner, attach a chassis bracket to the other side of the chassis.



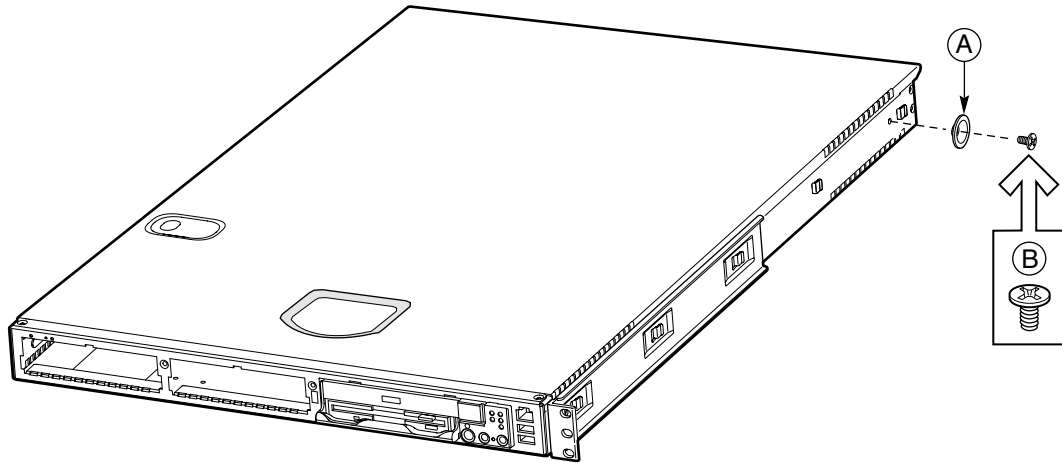
OM12359

- A. Chassis bracket in front-mount position
- B. Bracket holes
- C. Chassis tabs
- D. #6-32 x 3/16-inch screw

**Figure 3. Installing a Chassis Bracket in the Front-mount Position**

## Attach Disks to Chassis

1. Place a chassis disk at the side of the chassis towards the rear (see Figure 4, A).
2. Install screw (B) and tighten.
3. In the same manner, attach a chassis disk to the opposite side of the chassis.



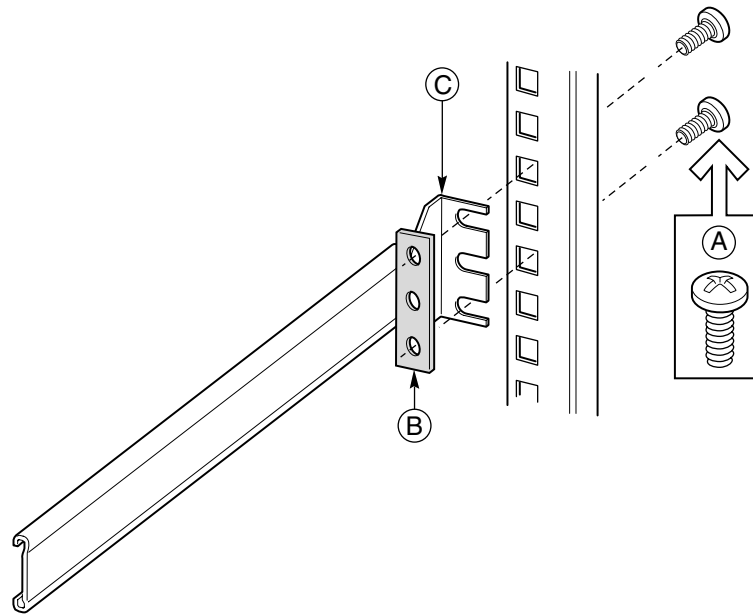
OM12360

- A. Chassis disk
- B. #6-32 x 3/16-inch screw

**Figure 4. Attaching a Chassis Disk to the Chassis**

## Attach Brackets to Rear Posts

1. Attach a nut bar (Figure 5, C) on the inside of the two rear rack posts using screws (A). Do not completely tighten the screws—leave them loose enough to allow insertion of the brackets in step 2.
2. Insert the slotted foot of a rear bracket (B) between each nut bar and post.
3. Align the face of the bracket foot with the edge of the rack post and firmly tighten the screws.



OM13948

- A. #10-32 x 1/2-inch screw
- B. Nut bar
- C. Rear bracket

**Figure 5. Attaching a Rear Bracket to a Rear Post**

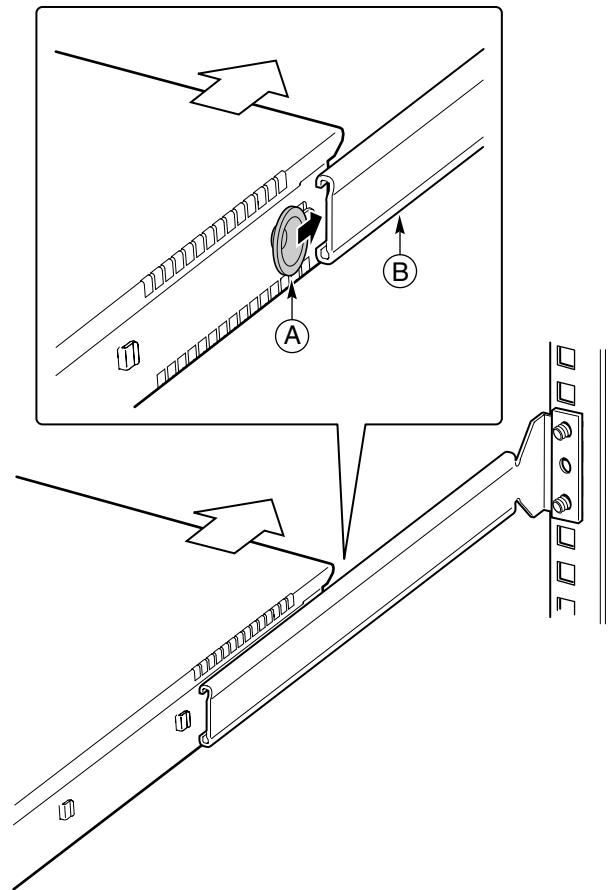
## Install Chassis in Rack



### CAUTION

Lifting the chassis and attaching it to the rack is a two-person job. If needed, use an appropriate lifting device. A fully loaded SR1200 or SR1300 server weighs approximately 13.6 kg (30 lbs.) and a fully loaded SR2200 or SR2300 server weighs approximately 23.1 kg (51 lbs.).

1. With the chassis front facing you, lift the chassis and position the chassis disks (Figure 6, A) so they fit in the rear brackets (B).



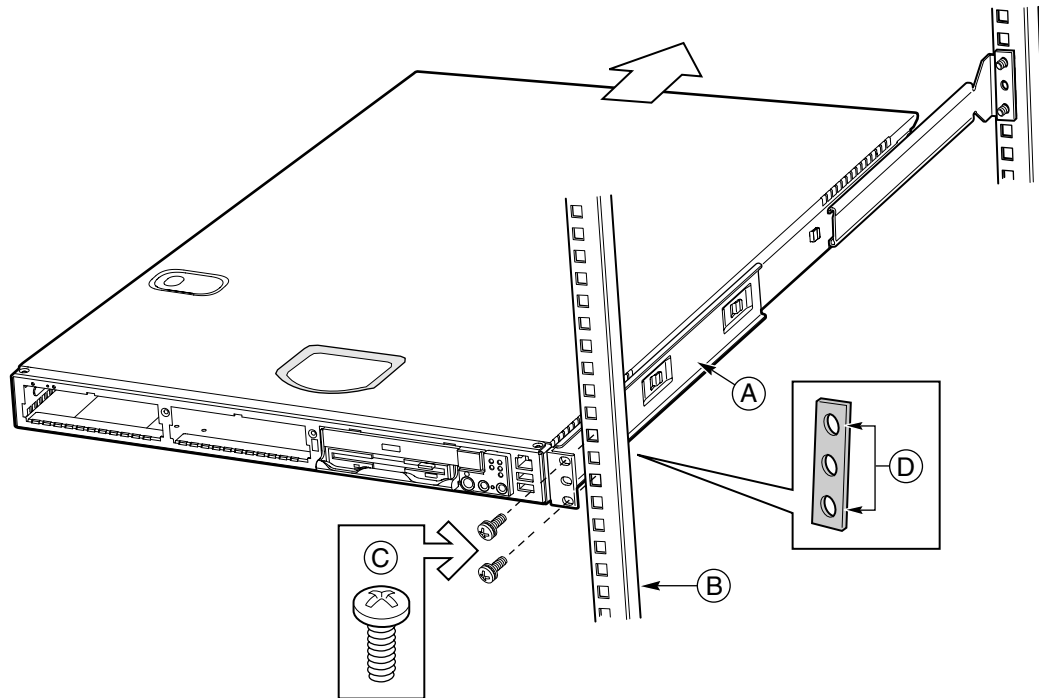
OM12363

- A. Chassis disk
- B. Rear bracket

**Figure 6. Installing the Chassis in the Rear Brackets**

2. Slide the chassis toward the rear of the rack until the front of the chassis brackets contact the front posts.

3. Attach the chassis brackets (Figure 7, A) to the front posts (B) using two screws (C) and one nut bar (E) per side.



OM13949

- A. Chassis bracket
- B. Front post
- C. #10-32 x 1/2-inch screw
- D. Nut bar

**Figure 7. Attaching a Front Bracket to a Front Post**

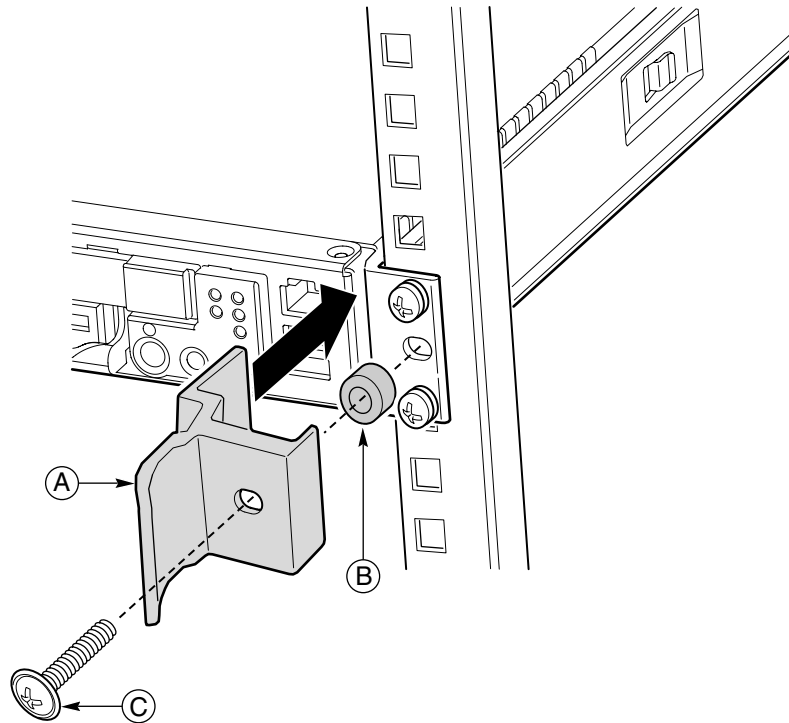
## Install Chassis Handles

 **NOTE**

The handles are required to hold the bezel on. If you will not be installing a bezel, you do not need to install the handles.

1. Slide a handle (Figure 8, A) between the chassis and the chassis bracket.
2. Align the hole in the handle with the unused hole in the chassis bracket.
3. Install a spacer (B) between the handle and the chassis bracket.
4. Install and tighten screw (C) to secure the handle.
5. In the same manner, attach the other handle to the opposite side.

You have completed the installation of your chassis in a four-post rack system.



OM12365

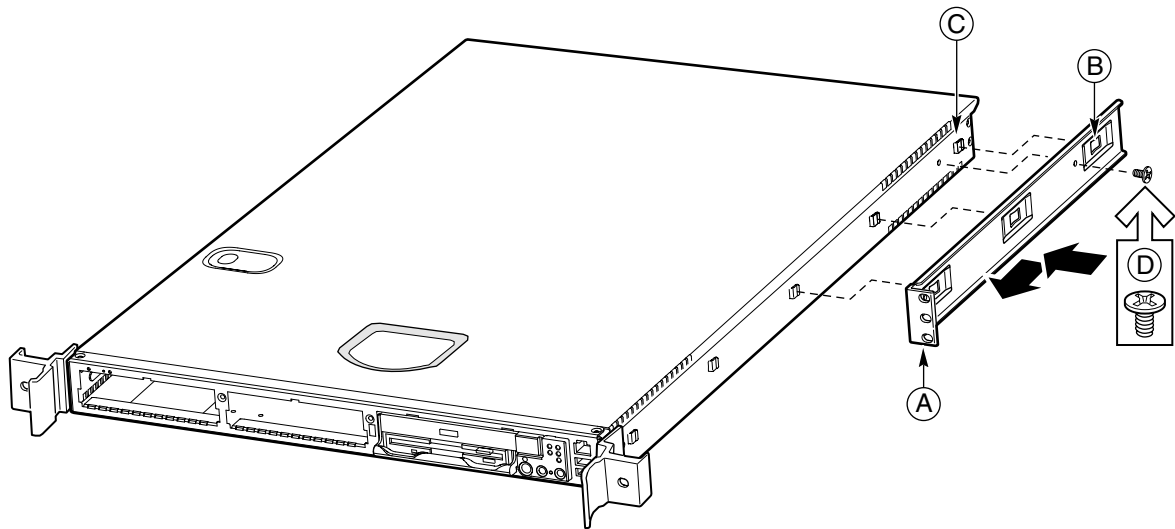
- A. Chassis handle
- B. Spacer
- C. #10-32 x 7/8-inch screw with washer

**Figure 8. Attaching a Chassis Handle to a Front Post**

# Mid-Mounting in a Two-Post Rack System

## Attach Brackets to Chassis

1. Place a mounting bracket (Figure 9, A) along one side of the chassis in the mid-mount position.
2. Align the holes (B) in the bracket with the tabs (C) on the chassis and place the bracket against the chassis.
3. Slide the bracket as far as it will go toward the front of the chassis.
4. Fasten the bracket to the chassis using screw (D).
5. In the same manner, attach a bracket to the other side of the chassis.



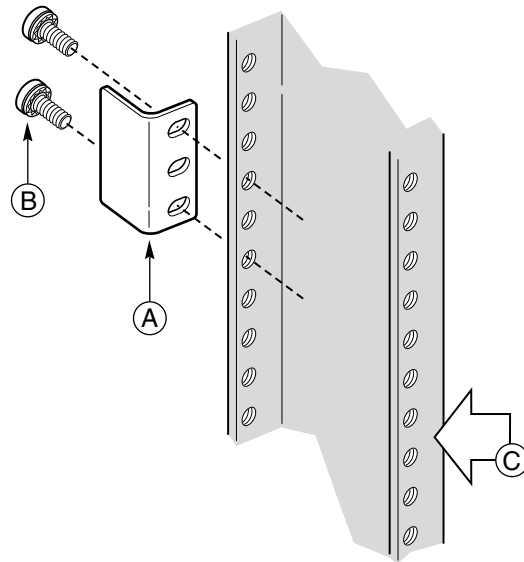
OM12361

- A. Chassis bracket in mid-mount position
- B. Bracket holes
- C. Chassis tabs
- D. #6-32 x 3/16-inch screw

**Figure 9. Installing a Chassis Bracket in the Mid-mount Position**

## Attach L Brackets to Center Posts

1. Position an L bracket (Figure 10, A) on the backside of the center post (C).
2. Attach the L bracket to the center post using the screws (B) supplied with your rack. Do not fully tighten at this time.
3. In the same manner, attach an L bracket to the other center post.



OM12366

- A. L bracket
- B. Screw (supplied by your rack manufacturer)
- C. Front side of typical right center post

**Figure 10. Attaching an L Bracket to a Center Post**



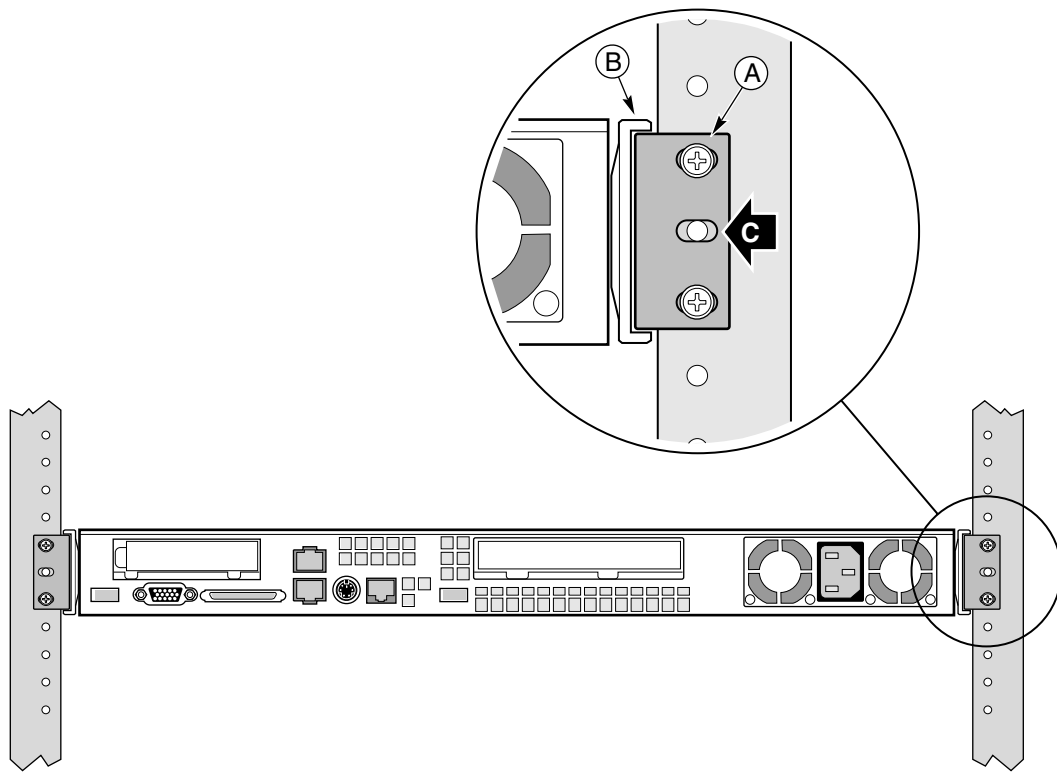
## Install Chassis in Rack



### CAUTION

Lifting the chassis and attaching it to the rack is a two-person job. If needed, use an appropriate lifting device. A fully loaded SR1200 or SR1300 server weighs approximately 13.6 kg (30 lbs.) and a fully loaded SR2200 or SR2300 server weighs approximately 23.1 kg (51 lbs.).

1. Locate one person at the front of the rack and one at the rear.
2. Position the chassis so that the L brackets (Figure 11, A) are inserted into the chassis mounting brackets (B).
3. While supporting the weight of the chassis, adjust the L brackets to fit tightly into the chassis brackets (C).

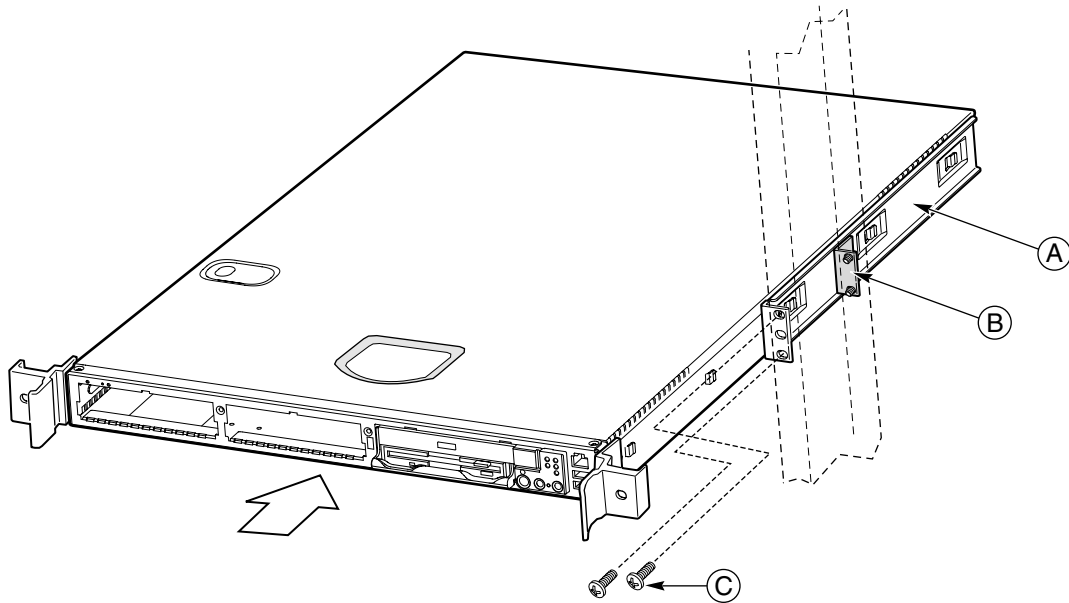


OM12371A

**Figure 11. L Brackets Inserted into Chassis Mounting Brackets (Rear View)**

4. Slide the chassis toward the rear of the rack until the front of the chassis mounting brackets contact the front of the center posts.
5. Using the screws (Figure 12, C) supplied with your rack, attach the front of the mounting brackets to the front of the center posts.

You have completed the mid-mount installation of your chassis in a two-post rack system.



OM12367

- A. Chassis bracket in mid-mount position
- B. L bracket
- C. Screw (supplied by rack manufacturer)

**Figure 12. Installing the Chassis in the Rack**

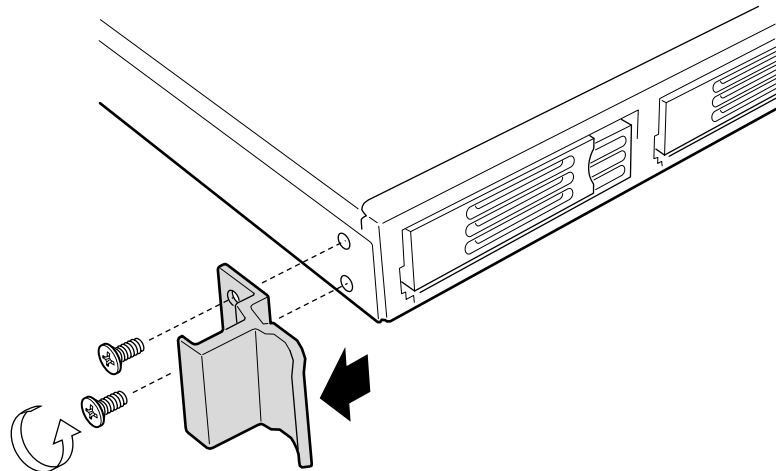
# Front-Mount-Only in a Two-Post Rack System

## WARNING

Your chassis' rack mount kit provides the option for mounting the system in a two post front-mount-only configuration. However, mounting your chassis using this option is not recommended for use in most rack systems. If a front-mount-only configuration is desired, it is highly recommended that you verify through your rack vendor that your specific rack is designed to support the excessive weight and stresses this type of mounting configuration imposes on the rack. Structural failure of the rack is likely if it is not designed for this type of load. A four-post or a two-post mid-mount configuration should be used when possible.

## Remove the Chassis Handles

1. Remove two screws from each handle (see Figure 13).
2. Set the handles and screws aside for reattachment later.

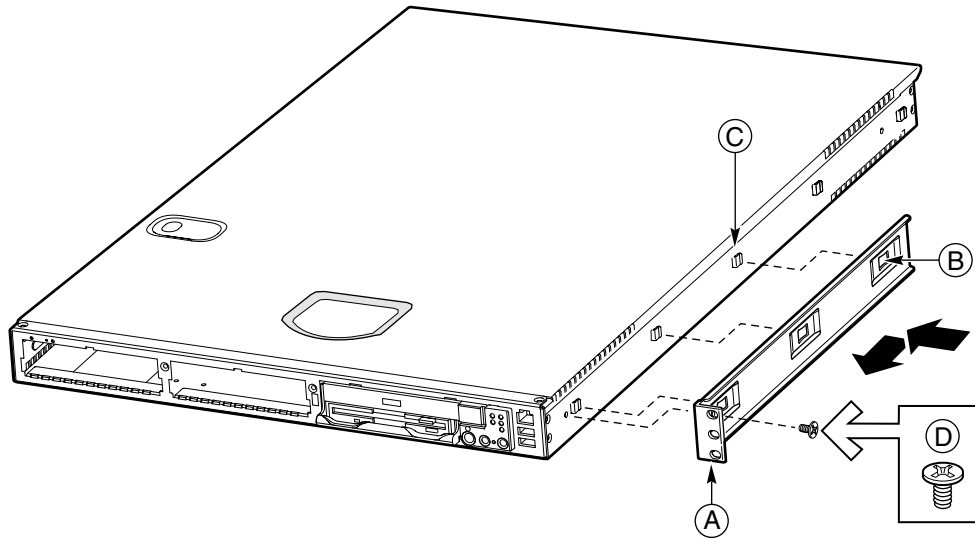


OM12358

**Figure 13. Removing a Handle from the Chassis**

## Attach Brackets to Chassis

1. Place a mounting bracket (Figure 14, A) along one side of the chassis in the front-mount position.
2. Align the holes (B) in the bracket with the tabs (C) on the chassis and place the bracket against the chassis.
3. Slide the bracket as far as it will go toward the front of the chassis.
4. Attach the bracket to the chassis using screw (D).
5. In the same manner, attach a bracket to the other side of the chassis.



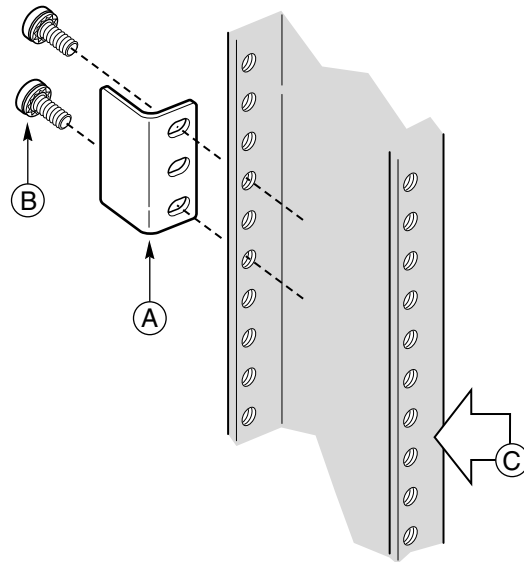
OM12361A

- A. Chassis bracket in front-mount position
- B. Bracket holes
- C. Chassis tabs
- D. #6-32 x 3/16-inch screw

**Figure 14. Installing a Chassis Bracket in the Front-mount Position**

## Attach L Brackets to Center Posts

1. Position an L bracket (Figure 15, A) on the backside of the center post (C).
2. Attach the L bracket to the center post using the screws (B) supplied with your rack. Do not fully tighten at this time.
3. In the same manner, attach an L bracket to the other center post.



OM12366

- A. L bracket
- B. Screw (supplied by rack manufacturer)
- C. Front flange of typical right center post

**Figure 15. Attaching an L Bracket to a Center Post**

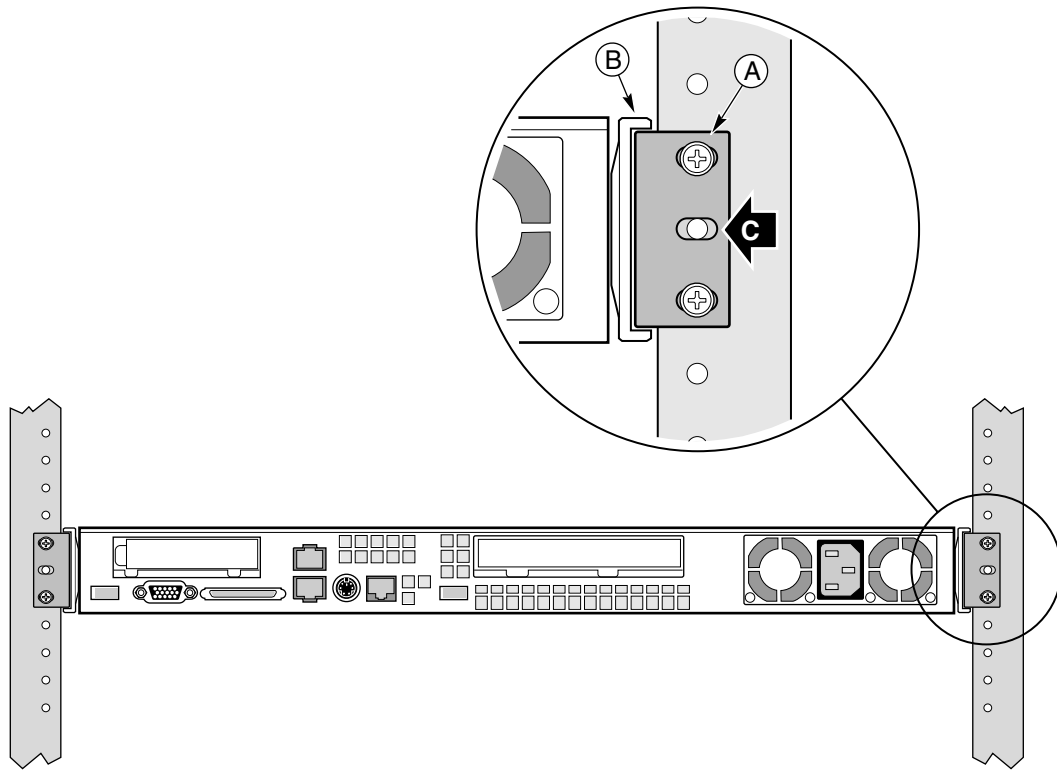
## Install Chassis in Rack



### CAUTION

Lifting the chassis and attaching it to the rack is a two-person job. If needed, use an appropriate lifting device. A fully loaded SR1200 or SR1300 server weighs about 13.6 kg (30 lbs.) and a fully loaded SR2200 or SR2300 server weighs about 23.1 kg (51 lbs.).

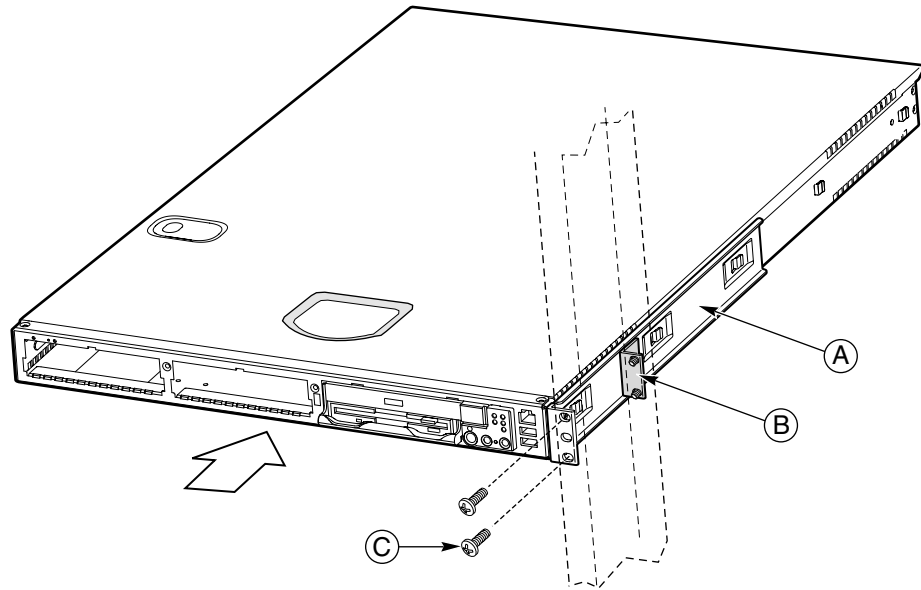
1. Locate one person at the front of the rack and one at the rear.
2. Position the chassis so that the L brackets (Figure 16, A) are inserted into the chassis mounting brackets (B).
3. While supporting the weight of the chassis, adjust the L brackets to fit tightly into the chassis brackets (C).



OM12371A

**Figure 16. L Brackets Inserted into Chassis Mounting Brackets (Rear View)**

4. Slide the chassis toward the rear of the rack until the front of the chassis brackets contact the front of the center posts.
5. Using the fasteners (Figure 17, C) supplied with your rack, attach the front of the mounting brackets to the front of the center posts.



OM12367A

- A. Chassis bracket in front-mount position
- B. L bracket
- C. Screw (supplied by rack manufacturer)

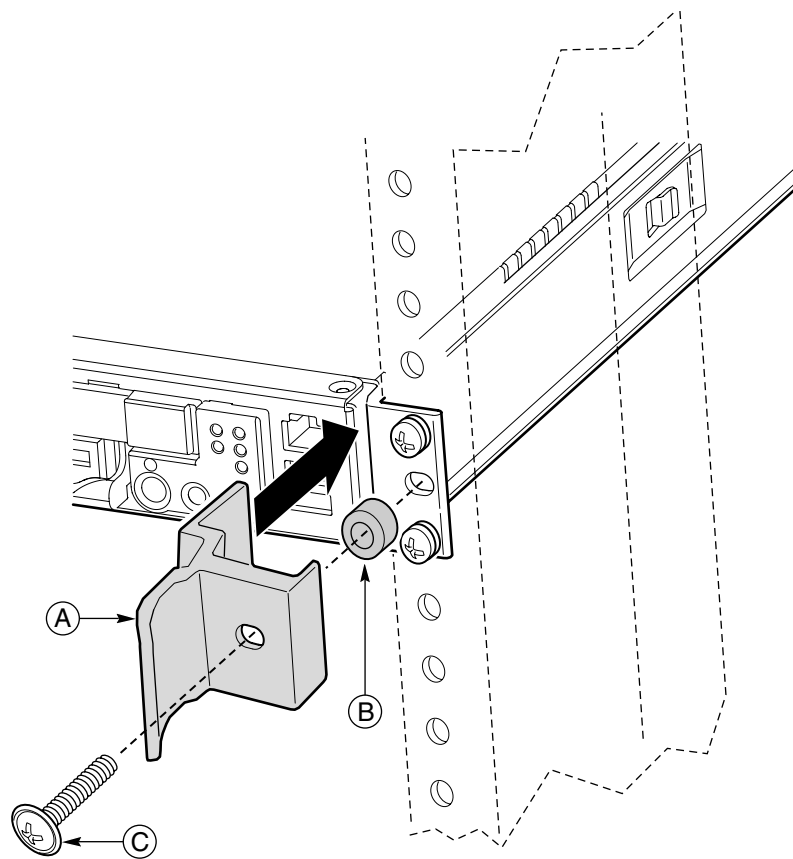
**Figure 17. Installing the Chassis in the Rack**

## Install Chassis Handles

### NOTE

The handles are only required to hold the bezel on. If you will not be installing a bezel, you do not need to install the handles.

1. Slide a handle (Figure 18, A) between the chassis and the chassis bracket.
2. Align the hole in the handle with the unused hole in the chassis bracket.
3. Install a spacer (B) between the handle and the bracket.
4. Install and tighten screw (C) to secure the handle.
5. In the same manner, attach the other handle to the opposite side.



OM12365A

- A. Chassis handle
- B. Spacer
- C. #10-32 x 7/8-inch screw with washer

**Figure 18. Attaching a Chassis Handle to a Front Post**