



Brocade SilkWorm 3200, 3250, 3800, 3850, and 3900 Switches and 12000 and 24000 Directors Rackmounting Guide

For Mounting in Sun Equipment Racks

Sun Microsystems, Inc.
www.sun.com

Part No. 817-0066-15
October 2004, Revision A

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Preface

This manual describes how to install the following:

- Brocade SilkWorm 3200, 3250, 3800, 3850, and 3900 switches in a Sun StorEdge™ 72-inch Expansion Cabinet and a Sun™ Rack 900/1000 equipment rack
- Brocade SilkWorm 12000 and 24000 directors in a Sun StorEdge 72-inch Expansion Cabinet

A rackmounting kit comes bundled with the 3800 and 3900 switches and the 12000 and 24000 directors. You must order a separate rackmounting kit for the following switches:

- Brocade SilkWorm 3200—SG-XSWBRO3200-RK
- Brocade SilkWorm 3250 and 3850—SG-XSWBRO3X50-RK

This manual provides procedures that meet the air flow requirements and other criteria of Sun Microsystems for rackmounted systems.

How This Book Is Organized

Chapter 1 describes how to install the Brocade SilkWorm 3200, 3250, and 3850 switches in a Sun StorEdge 72-inch Expansion Cabinet and a Sun Rack 900/1000 equipment rack.

Chapter 2 describes how to install the Brocade SilkWorm 3800 switch in a Sun StorEdge 72-inch Expansion Cabinet and a Sun Rack 900/1000 equipment rack.

Chapter 3 describes how to install the Brocade SilkWorm 3900 switch in a Sun StorEdge 72-inch Expansion Cabinet and a Sun Rack 900/1000 equipment rack.

Chapter 4 describes how to install the Brocade SilkWorm 12000 and 24000 directors in a Sun Rack 900/1000, Sun StorEdge 72-inch Expansion Cabinet, and Sun Fire™ cabinet.

Using UNIX Commands

This document might not contain information on basic UNIX® commands and procedures such as shutting down the system, booting the system, and configuring devices. Refer to the following for this information:

- Software documentation that you received with your system
- Solaris™ Operating System documentation, which is at <http://docs.sun.com>

Shell Prompts

Shell	Prompt
C shell	<i>machine-name%</i>
C shell superuser	<i>machine-name#</i>
Bourne shell and Korn shell	\$
Bourne shell and Korn shell superuser	#

Typographic Conventions

Typeface*	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. % You have mail.
AaBbCc123	What you type, when contrasted with on-screen computer output	% su password:
<i>AaBbCc123</i>	Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values.	Read Chapter 6 in the <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be superuser to do this. To delete a file, type <code>rm filename</code> .

* The settings on your browser might differ from these settings.

Related Documentation

Application	Title	Part Number
SAN installation	<i>Sun StorEdge SAN Foundation Installation Guide</i>	817-3671
SAN configuration	<i>Sun StorEdge SAN Foundation Configuration Guide</i>	817-3672
Switch information	<i>Brocade SilkWorm 3200 QuickStart Guide</i>	53-0001620 *
	<i>Brocade SilkWorm 3200 Hardware Reference Manual</i>	53-0001619 *
	<i>Brocade SilkWorm 3250/3850 QuickStart Guide</i>	53-0000624 *
	<i>Brocade SilkWorm 3250/3850 Hardware Reference Manual</i>	53-0000623 *
	<i>Brocade SilkWorm 3800 QuickStart Guide</i>	53-0001577 *
	<i>Brocade SilkWorm 3800 Hardware Reference Manual</i>	53-0001576 *
	<i>Brocade SilkWorm 3900 QuickStart Guide</i>	53-0001596 *
	<i>Brocade SilkWorm 3900 Hardware Reference Manual</i>	53-0001595 *
	<i>Brocade SilkWorm 12000 QuickStart Guide</i>	53-0000152 *
	<i>Brocade SilkWorm 12000 Hardware Reference Manual</i>	53-0000148 *
Switch configuration and management in a SAN	<i>Brocade SilkWorm 24000 QuickStart Guide</i>	53-0000620 *
	<i>Brocade SilkWorm 24000 Hardware Reference Manual</i>	53-0000619 *
	<i>Brocade Fabric OS Procedures Guide, Version 3.1.0</i>	53-0000501 *
Latest switch information	<i>Brocade Fabric OS Procedures Guide, Supporting Fabric OS v4.2.0, Supporting SilkWorm 24000, 12000, 3900, 3850, and 3250</i>	53-0000518 *
	<i>Brocade Slide Rack Mount Kit Installation Procedure</i>	53-0001625 *
Latest switch information	<i>Sun StorEdge Network 2 Gb Brocade SilkWorm 3200, 3800, and 12000 Core Fabric Switch Release Notes</i>	817-0771

* This document is available on the Brocade Documentation CD that comes with the product, or from your Sun Service Representative.

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Brocade Silkworm 3200, 3250, 3800, 3850, and 3900 Switches and 12000, and 24000 Directors Rackmounting Guide, For Mounting in Sun Equipment Racks, part number 817-0066-15

Rackmounting the Brocade SilkWorm 3200, 3250, and 3850 Switches

The Brocade SilkWorm 3200, 3250, and 3850 switches require that the slide rails be mounted into a Sun StorEdge 72-inch Expansion Cabinet or a Sun Rack 900/1000 equipment rack before installing the switches. You must order the SG-XSWBRO3200-RK or SG-XSWBRO3X50-RK rackmounting kit separately for these switches.

The 3200, 3250, and 3850 switches are 1 RU (rack unit) in height.

This chapter contains the following sections:

- “Installing the Rails” on page 1
- “Installing the Brocade SilkWorm 3200, 3250, and 3850 Switches” on page 6

Note – Some hardware in the rackmounting kit parts list might not be used in this installation.

Installing the Rails

1. Separate the inner and outer slide rails for both slide assemblies by performing the following steps.
 - a. Pull the inner slide rail out until the lock engages.
 - b. Depress the lock release lever that is located inside the inner slide rail, and pull the inner slide rail out of the outer slide rail.
 - c. Repeat Steps a and b with the second slide assembly.

2. Install the rackmount brackets on the inner slide rail by performing the following steps.

These rackmount brackets prevent the switches from sliding all the way out of the rack in the event the rack is accidentally moved.

Note – To meet air flow requirements, the 3200, 3250, and 3850 switches are mounted with their port sides facing the back of the cabinet (rack).

- a. Position a rackmount bracket at the end of one of the inner slide rails (the end that does not contain the lock release lever), as shown in FIGURE 1-1.
 - b. Attach the rackmount bracket to the slide rail using two of the slotted head 8-32 x 3/8-inch screws, with a lock nut on the end of each screw.
 - c. Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).
 - d. Repeat Steps a through c with the second inner slide rail.
- 3. Attach two of the three-hole slide mount L-brackets to each outer slide rail.**
- a. See FIGURE 1-2. Use two of the slotted head 8-32 x 3/8-inch screws per L-bracket, with the screw heads on the inside of the slide rails and a lock nut on the end of each screw.
 - b. Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).
- 4. Install the inner slide rails to the 3200, 3250, or 3850 switch chassis by performing the following steps.**
- a. Position one of the inner slide rails with the flat side against the switch.
To allow the fan side of the switch to slide out the front of the rack, orient the rail as shown in FIGURE 1-1, with the end containing the lock release lever towards the port side of the switch.
 - b. Attach the rail to the 3200, 3250, or 3850 switch by using two of the Phillips 8-32 x 3/16-inch screws. See FIGURE 1-1.



Caution – Using screws longer than 3/16-inch on the 3200, 3250, and 3850 switch chassis can damage the switch.

- c. Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).
- d. Repeat Steps a and b with the second inner slide rail on the other side of the 3200, 3250, or 3850 switch.

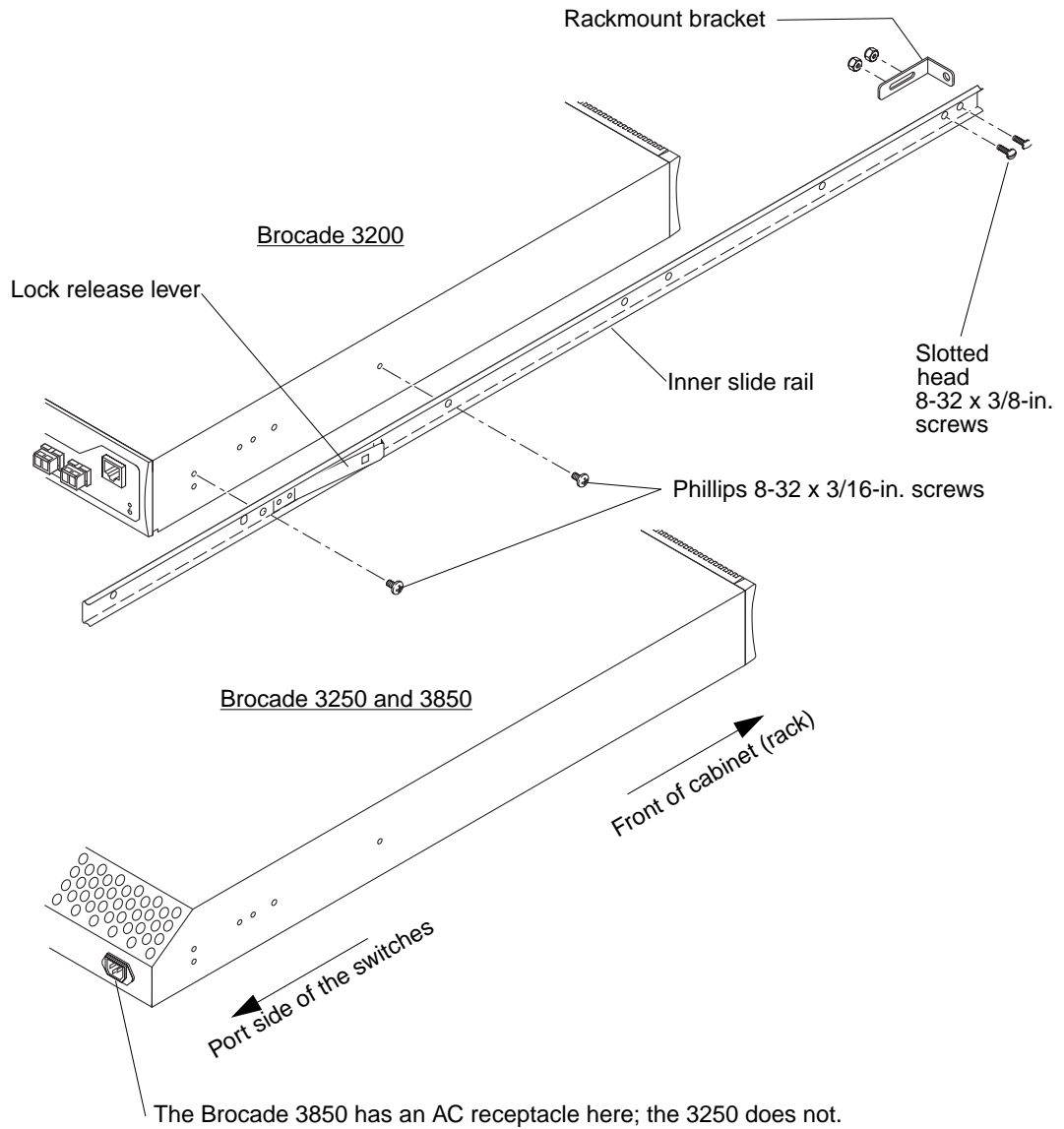


FIGURE 1-1 Brocade SilkWorm 3200, 3250, and 3850 Switch Inner Slide Rail Installation

5. Install the outer slide rails in the rack by performing the following steps.

a. Loosen the screws of both of the three-hole slide mount L-brackets on one of the outer slide rails.

b. Position the outer slide rail in the rack and adjust the L-brackets to accommodate the depth of the cabinet. Refer to FIGURE 1-2.

To allow the 3200, 3250, or 3850 switch to slide out the front of the rack, orient the rail as shown in FIGURE 1-2, with the closed end of the slide rail towards the back of the rack.

Note – For racks with a depth greater than 31.50 inches (80 cm), the rear L-brackets must be replaced with the 11-inch (27.9 cm) L-bracket. Adjust the length as required.

c. Re-tighten the screws.

d. Attach the L-bracket on the front end of the outer slide rail to the corresponding rack vertical rail, using two of the Phillips 10-32 x 3/8-inch screws. See FIGURE 1-2.

e. Tighten the screws to a torque of 25 inch-pounds (28.8 cm-kgs).

f. Repeat Steps d and e with the bracket on the back end of the same outer slide rail.

The bracket position can be adjusted to fit the rack. The back end uses three screws.

g. Repeat Steps a through f with the second outer slide rail.

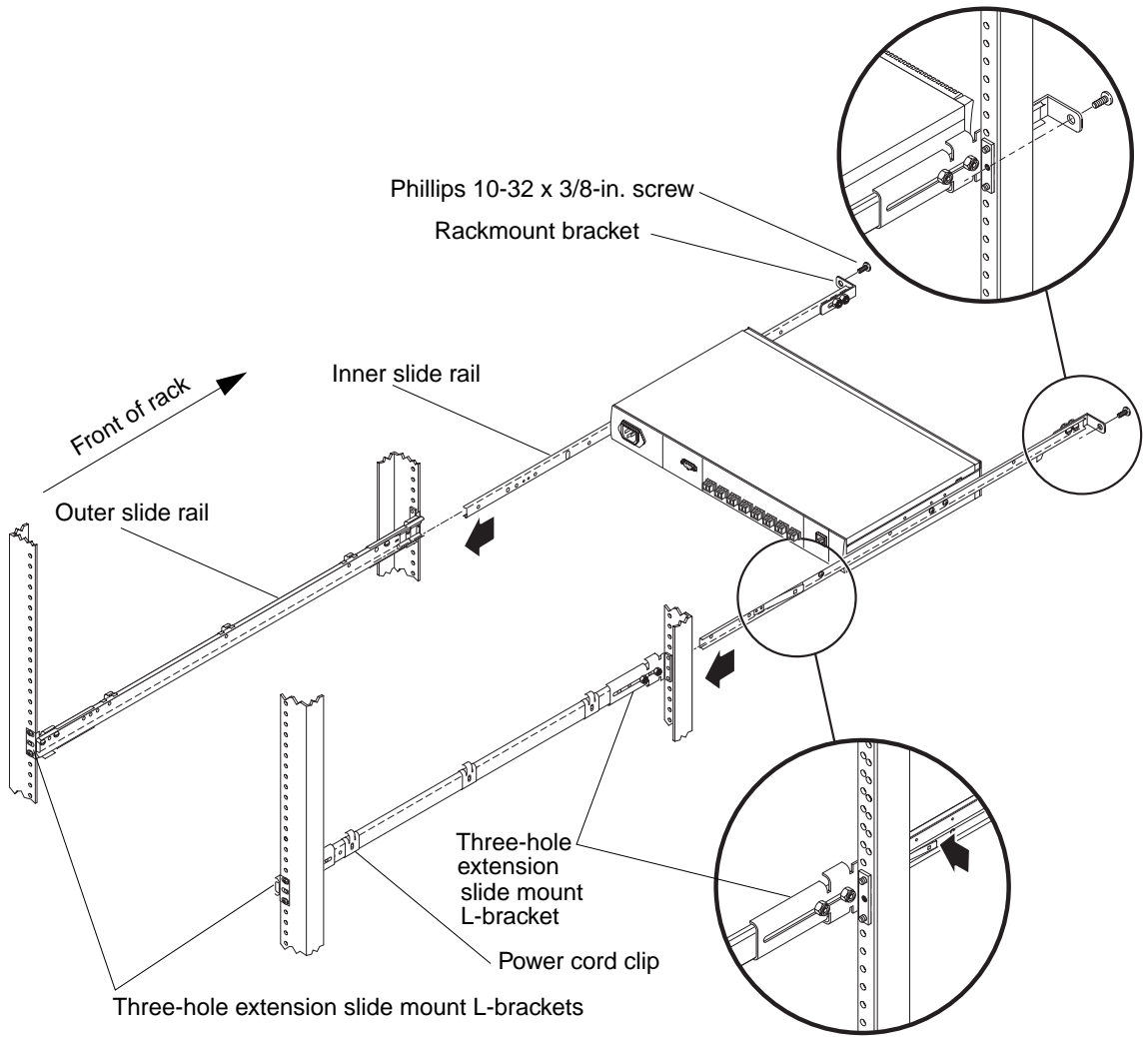


FIGURE 1-2 Brocade SilkWorm 3200, 3250, and 3850 Switch and Outer Slide Rail Installation

Installing the Brocade SilkWorm 3200, 3250, and 3850 Switches

1. Install the 3200, 3250, or 3850 switch in the rack by performing the following steps.
 - a. Position the switch next to the rack as shown in FIGURE 1-2, and insert the inner slide rails into the outer slide rails.
 - b. Slide the switch into the rack.

Note – A screwdriver might be needed to depress the slide lock on the side of the slide rail when inserting or removing the switch from the rack.

- c. Check the alignment by sliding the switch in and out of the rack.

If there is any difficulty, pull the switch out of the rack and realign the slide rails.

2. Attach the rackmount brackets to the vertical rack rails using one Phillips 10-32 x 3/8-inch screw per bracket, tightening the screws to a torque of 25 inch-pounds (28.8 cm-kgs). See FIGURE 1-2.
3. (Optional) Provide power to the 3200, 3250, or 3850 switch by performing the following steps.
 - a. Place the power cord clips on the outer slide rails. See FIGURE 1-2.

The clips can be positioned with the tabs above or below the rail.

Note – The 3200 and 3250 switches have only one power cord.

- b. Insert each power cord into a power cord clip with a minimum service loop of six inches at the switch to ensure freedom to plug and unplug the power cord.

Caution – Do not plug a power cord into the power source or into the switch power supply until the switch is completely installed in the rack.

Ensure all cables and cords are routed so that they will not be exposed to stress when the switch is moved on the slide rails.

- c. Connect the power cords to the 3200, 3250, or 3850 switch and to a power outlet.



Note – Always unplug each power cord from the 3200, 3250, or 3850 switch before moving it on the slide rails to prevent the cord from being pulled out of the power cord clips.

Refer to the following for important information on setting up the switches:

- Brocade SilkWorm 3200 switch
 - *Brocade Fabric OS Procedures Guide Version 3.1.0*, 53-0000501
 - *Brocade SilkWorm 3200 QuickStart Guide*, 53-0001620
 - *Brocade SilkWorm 3200 Hardware Reference Manual*, 53-0001619
- Brocade SilkWorm 3250 and 3850 switches
 - *Brocade Fabric OS Procedures Guide, Supporting Fabric OS v4.2.0, Supporting SilkWorm 24000, 12000, 3900, 3850, and 3250*, 53-0000518
 - *Brocade SilkWorm 3250/3850 QuickStart Guide*, 53-0000624
 - *Brocade SilkWorm 3250/3850 Hardware Reference Manual*, 53-0000623



Caution – Do not connect the 3200, 3250, or 3850 switch to the network until the IP addresses are correctly set.

Rackmounting the Brocade SilkWorm 3800 Switch

The Brocade SilkWorm 3800 switch requires that the rails be mounted into a Sun StorEdge 72-inch Expansion Cabinet or a Sun Rack 900/1000 equipment rack before installing the switch. Each 3800 switch comes with a rackmounting kit.

The 3800 switch is 1 RU (rack unit) in height.

This chapter contains the following sections:

- “Installing the Rails” on page 9
- “Installing the Brocade SilkWorm 3800 Switch” on page 13

Note – Some hardware in the rackmounting kit parts list might not be used in this installation.

Installing the Rails

1. Separate the inner and outer slide rails for both slide assemblies by performing the following steps.
 - a. Pull the inner slide rail out until the lock engages.
 - b. Depress the lock release lever that is located inside the inner slide rail, and pull the inner slide rail out of the outer slide rail.
 - c. Repeat Steps a and b with the second slide assembly.

2. Install the rackmount brackets on the inner slide rail by performing the following steps.

These rackmount brackets prevent the switch from sliding all the way out of the rack in the event the rack is accidentally moved.

Note – To meet air flow requirements, the 3800 switch is mounted with the port side facing the back of the cabinet (rack).

- a. Position a rackmount bracket at the end of one of the inner slide rails (the end that does not contain the lock release lever), as shown in FIGURE 2-1.
 - b. Attach the rackmount bracket to the slide rail using two of the slotted head 8-32 x 3/8-inch screws, with a lock nut on the end of each screw.
 - c. Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).
 - d. Repeat Steps a through c with the second inner slide rail.
- 3. Attach two of the three-hole extension slide mount L-brackets to each outer slide rail.**
- a. See FIGURE 2-2. Use two of the slotted head 8-32 x 3/8-inch screws per L-bracket, with the screw heads on the inside of the slide rails and a lock nut on the end of each screw.
 - b. Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).
- 4. Install the inner slide rails to the 3800 switch chassis by performing the following steps.**
- a. Position one of the inner slide rails with the flat side against the 3800 switch.
To allow the power supply side of the 3800 switch to slide out the front of the rack, orient the rail as shown in FIGURE 2-1, with the end containing the lock release lever towards the port side of the 3800 switch.
 - b. Attach the rail to the 3800 switch by using the Phillips 8-32 x 3/16-inch screws.



Caution – Using screws longer than 3/16-inch on the 3800 switch chassis can damage the 3800 switch.

- c. Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).
- d. Repeat Steps a and b with the second inner slide rail on the other side of the 3800 switch.

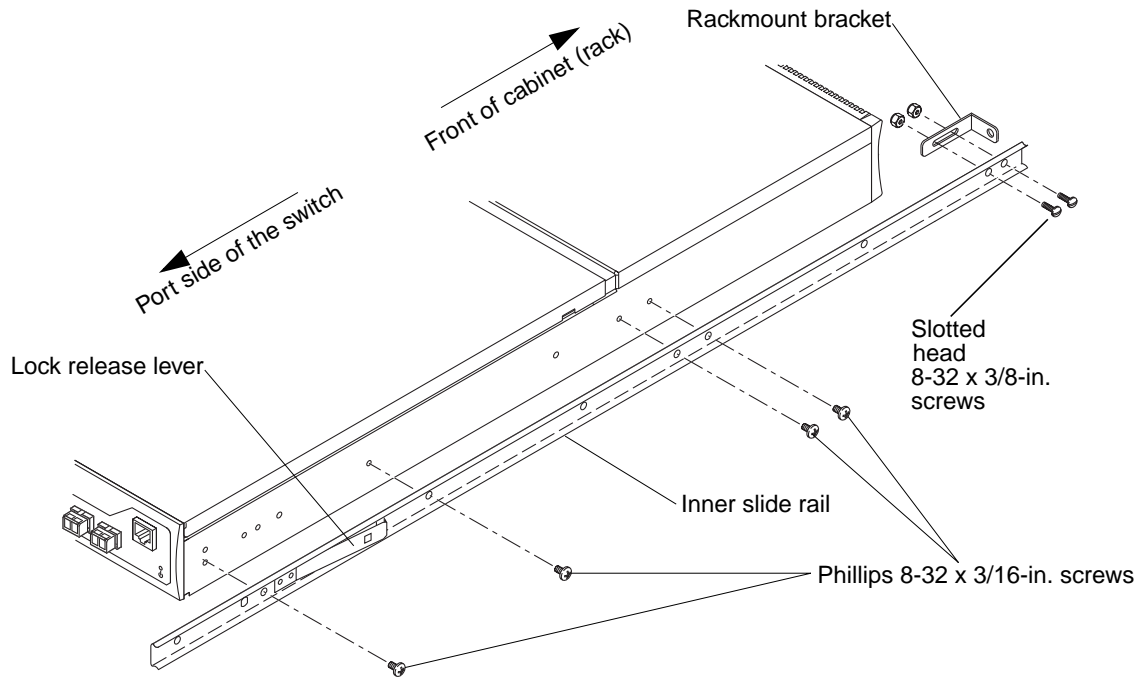


FIGURE 2-1 Brocade SilkWorm 3800 Switch Inner Slide Rail Installation

5. Install the outer slide rails in the rack by performing the following steps.

- a. Loosen the screws of both of the three-hole extension slide mount L-brackets on one of the outer slide rails.
- b. Position the outer slide rail in the rack and adjust the L-brackets to accommodate the depth of the cabinet. Refer to FIGURE 2-2.

To allow the 3800 switch to slide out the front of the rack, orient the rail as shown in FIGURE 2-2, with the closed end of the slide rail towards the back of the rack.

Note – For racks with a depth greater than 31.50 inches (80 cm), the rear L-brackets must be replaced with the 11-inch (27.9 cm) L-bracket. Adjust the length as required.

- c. Re-tighten the screws.
- d. Attach the L-bracket on the front end of the outer slide rail to the corresponding rack vertical rail, using two of the Phillips 10-32 x 3/8-inch screws. See FIGURE 2-2.

- e. Tighten the screws to a torque of 25 inch-pounds (28.8 cm-kgs).
- f. Repeat Steps d and e with the bracket on the back end of the same outer slide rail.
The bracket position can be adjusted to fit the rack. The back end uses three screws.
- g. Repeat Steps a through f with the second outer slide rail.

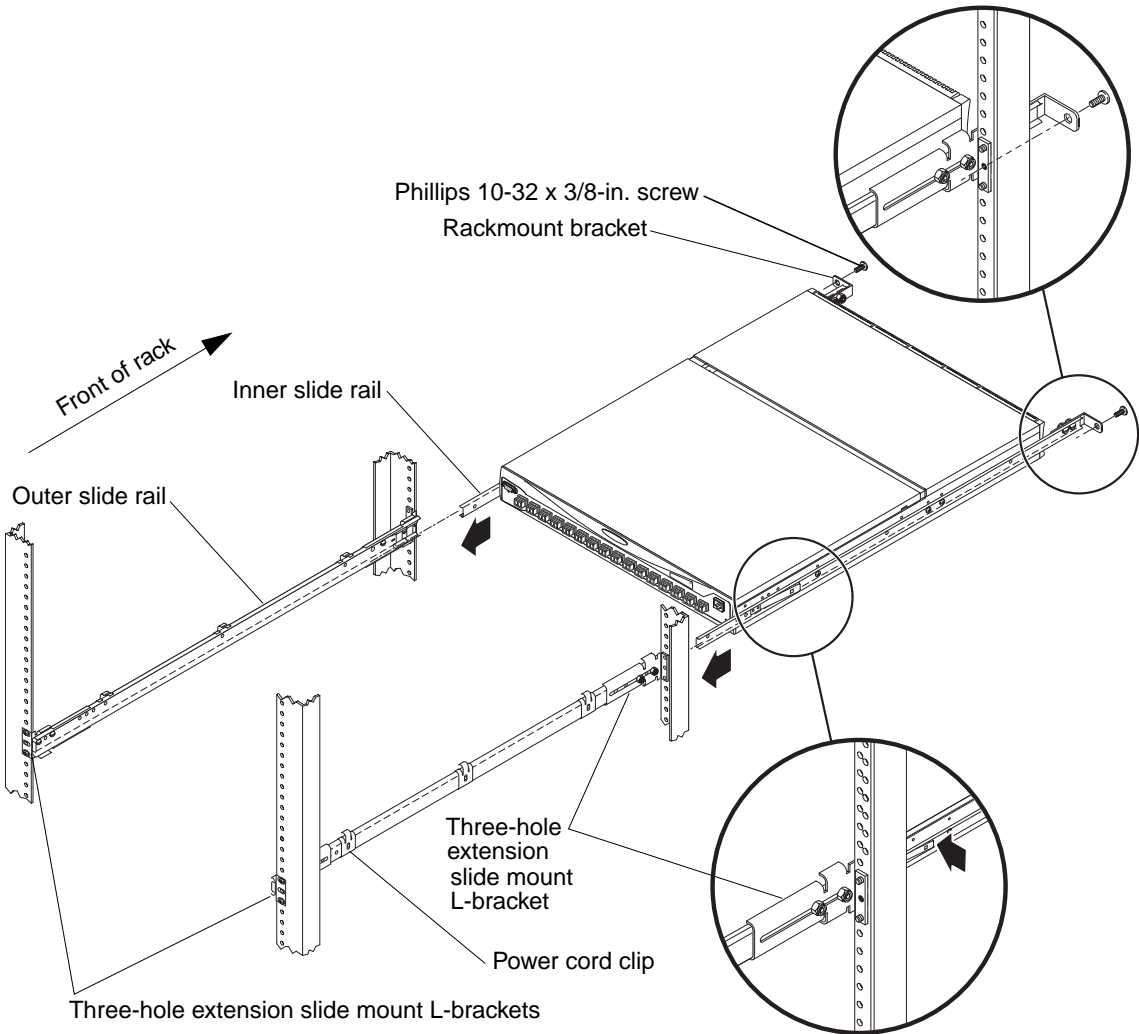


FIGURE 2-2 Brocade Silksworm 3800 Switch and Outer Slide Rail Installation

Installing the Brocade SilkWorm 3800 Switch

1. Install the 3800 switch in the rack by performing the following steps.
 - a. Position the 3800 switch next to the rack as shown in FIGURE 2-2, and insert the inner slide rails into the outer slide rails.
 - b. Slide the 3800 switch into the rack.

Note – A screwdriver might be needed to depress the slide lock on the side of the slide rail when inserting or removing the 3800 switch from the rack.

- c. Check the alignment by sliding the switch in and out of the rack.

If there is any difficulty, pull the switch out of the rack and realign the slide rails.

2. Attach the rackmount brackets to the vertical rack rails using one Phillips 10-32 x 3/8-inch screw per bracket, tightening the screws to a torque of 25 inch-pounds (28.8 cm-kgs). See FIGURE 2-2.
3. (Optional) Provide power to the 3800 switch by performing the following steps.
 - a. Place the power cord clips on the outer slide rails. See FIGURE 2-2.

The clips can be positioned with the tabs above or below the rail.
 - b. Insert the power cords into the power cord clips with a minimum service loop of six inches at the switch to ensure freedom to plug and unplug the power cord.



Caution – Do not plug a power cord into the power source or into the switch power supply until the switch is completely installed in the rack.

Ensure all cables and cords are routed so that they will not be exposed to stress when the switch is moved on the slide rails.

- c. Connect the power cords to the 3800 switch and to a power outlet.

Note – Always unplug the power cords from the 3800 switch before moving it on the slide rails to prevent the cords from being pulled out of the power cord clips.

d. Flip the 3800 switch AC power switches to “I”.

Refer to the following for important information on setting up the switch:

- *Brocade Fabric OS Procedures Guide Version 3.1.0, 53-0000501*
- *Brocade SilkWorm 3800 QuickStart Guide, 53-0001577*
- *Brocade SilkWorm 3800 Hardware Reference Manual, 53-0001576*



Caution – Do not connect the 3200, 3250, or 3850 switch to the network until the IP addresses are correctly set.

Rackmounting the Brocade SilkWorm 3900 Switch

The Brocade SilkWorm 3900 switch requires that the rails be mounted into a Sun StorEdge 72-inch Expansion Cabinet or a Sun Rack 900/1000 equipment rack before installing the switch. Each 3900 switch comes with a rackmounting kit.

The 3900 switch is 1.5 RU (rack unit) in height.

This chapter contains the following sections:

- “Installing the Rails” on page 15
- “Installing the Brocade SilkWorm 3900 Switch” on page 20

Note – Some hardware in the rackmounting kit parts list might not be used in this installation.

Installing the Rails

1. Separate the inner and outer slide rails for both slide assemblies by performing the following steps.
 - a. Pull the inner slide rail out until the lock engages.
 - b. Depress the lock release lever that is located inside the inner slide rail, and pull the inner slide rail out of the outer slide rail.
 - c. Repeat Steps a and b with the second slide assembly.

2. Determine the vertical positioning of the switch in the cabinet prior to installing the inner slide rails on the 3900 switch chassis (FIGURE 3-1).

- To install the switch so that the additional 0.5 RU is above the slide rail, install the inner slide rail in the lower row of holes on the switch. See FIGURE 3-2.
- To install the switch so that the bulk of the switch is below the slide rail, install the inner slide rail in the upper row of holes on the switch. See FIGURE 3-2.



FIGURE 3-1 1.5 RU Switch Installed With the Additional 0.5 RU Above the L-Brackets

3. Install the inner slide rails to the 3900 switch chassis by performing the following steps.

a. Position one of the inner slide rails with the flat side against the 3900 switch.

To allow the power supply side of the 3900 switch to slide out the front of the rack, orient the rail as shown in FIGURE 3-2, with the end containing the lock release lever towards the port side of the 3900 switch.

b. Attach the rail using the Phillips 8-32 x 3/16-inch screws.



Caution – Using screws longer than 3/16-inch on the 3900 switch chassis can damage the 3900 switch.

c. Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).

d. Repeat Steps a and b with the second inner slide rail on the other side of the 3900 switch.

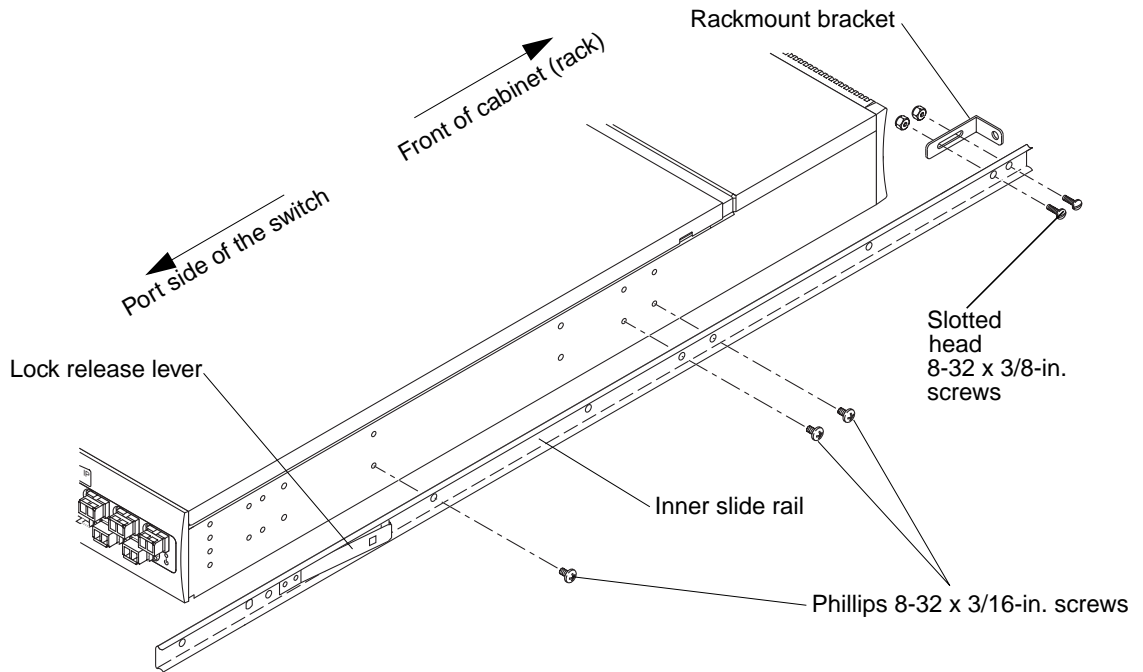


FIGURE 3-2 Installing the Inner Rail (Shown With Optional Lower Set of Holes)

4. Install the rackmount brackets on the inner slide rail by performing the following steps.

These rackmount brackets prevent the switch from sliding all the way out of the rack in the event the rack is accidentally moved.

Note – To meet air flow requirements, the 3900 switch is mounted with the port side facing the back of the cabinet (rack).

- a. Position a rackmount bracket at the end of one of the inner slide rails (the end that does not contain the lock release lever), as shown in FIGURE 3-2.
- b. Attach the rackmount bracket to the slide rail using two of the slotted head 8-32 x 3/8-inch screws with a lock nut on the end of each screw.
- c. Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).

d. Repeat Steps a through c with the second inner slide rail.

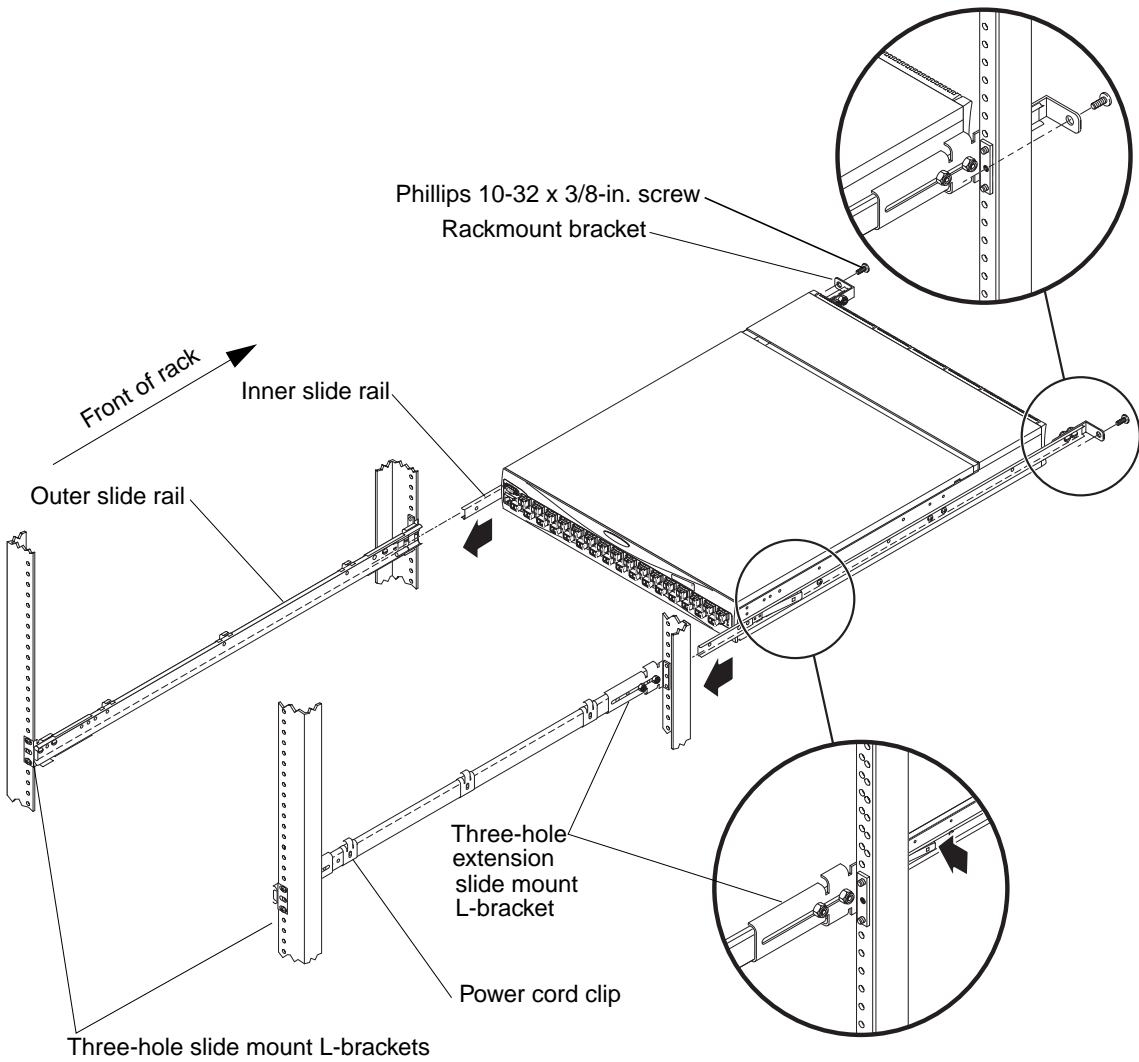


FIGURE 3-3 Brocade SilkWorm 3900 Switch and Outer Slide Rail Installation

5. **Attach two of the three-hole extension slide mount L-brackets to each outer slide rail. See FIGURE 3-3. Use two of the slotted head 8-32 x 3/8-inch screws per L-bracket, with the screw heads on the inside of the slide rails and a lock nut on the end of each screw.**

Tighten the screws to a torque of 15 inch-pounds (17.3 cm-kgs).

6. **Install the outer slide rails in the rack by performing the following steps.**
 - a. **Loosen the screws of both of the three-hole extension slide mount L-brackets on one of the outer slide rails.**

- b. **Position the outer slide rail in the rack and adjust the L-brackets to accommodate the depth of the cabinet. Refer to FIGURE 3-3.**

To allow the 3800, switch to slide out the front of the rack, orient the rail as shown in FIGURE 3-3, with the closed end of the slide rail towards the back of the rack.

Note – For racks with a depth greater than 31.50 inches (80 cm), the rear L-brackets must be replaced with the 11-inch (27.9 cm) L-bracket. Adjust the length as required.

- c. **Re-tighten the screws.**
 - d. **Attach the L-bracket on the front end of the outer slide rail to the corresponding rack vertical rail, using two of the Phillips 10-32 x 3/8-inch screws. See FIGURE 3-3.**
 - e. **Tighten the screws to a torque of 25 inch-pounds (28.8 cm-kgs).**
 - f. **Repeat Steps d and e with the bracket on the back end of the same outer slide rail.**

The bracket position can be adjusted to fit the rack. The back end uses three screws.
 - g. **Repeat Steps a through f with the second outer slide rail.**

Installing the Brocade SilkWorm 3900 Switch

1. Install the 3900 switch in the rack by performing the following steps.
 - a. Position the 3900 switch next to the rack as shown in FIGURE 3-3, and insert the inner slide rails into the outer slide rails.
 - b. Slide the 3900 switch into the rack.

Note – A screw driver might be needed to depress the slide lock on the side of the slide rail when inserting or removing the 3900 switch from the rack.

- c. Check alignment by sliding the switch in and out of the rack.

If there is any difficulty, pull the switch out of the rack and realign the slide rails.

2. Attach the rackmount brackets to the vertical rack rails using one Phillips 10-32 x 3/8-inch screw per bracket, tightening the screws to a torque of 25 inch-pounds (28.8 cm-kgs). See FIGURE 3-3.
3. (Optional) Provide power to the 3900 switch by performing the following steps.
 - a. Place the power cord clips on the outer slide rails. See FIGURE 3-3.

The clips can be positioned with the tabs above or below the rail.
 - b. Insert the power cords into the power cord clips with a minimum service loop of six inches at the switch to ensure freedom to plug and unplug the power cord.



Caution – Do not plug a power cord into the power source or into the switch power supply until the switch is completely installed in the rack.

Ensure all cables and cords are routed so that they will not be exposed to stress when the switch is moved on the slide rails.

- c. Connect the power cords to the 3900 switch and to a power outlet.

Note – Always unplug the power cords from the 3900 switch before moving it on the slide rails to prevent the cords from being pulled out of the power cord clips.

d. Flip the 3900 switch AC power switches to “I”.

The 3900 switch automatically performs a power-on self-test (POST).

Refer to the following for important information on setting up the switch:

- *Brocade Fabric OS Procedures Guide, Supporting Fabric OS v4.2.0, Supporting SilkWorm 24000, 12000, 3900, 3850, and 3250, 53-0000518*
- *Brocade SilkWorm 3900 QuickStart Guide, 53-0001596*
- *Brocade SilkWorm 3900 Hardware Reference Manual, 53-0001595*



Caution – Do not connect the 3900 switch to the network until the IP addresses are correctly set.

Rackmounting the Brocade SilkWorm 12000 and 24000 Directors

The Brocade SilkWorm 12000 and 24000 directors require that the rails be mounted into the Sun Rack 900/1000, Sun StorEdge 72-inch Expansion Cabinet, or Sun Fire cabinet before installing the directors. Each 12000 and 24000 director comes with a rackmounting kit.

The 12000 and 24000 directors each have a 14 RU (rack unit) height.

This chapter contains the following sections:

- “Rackmounting in the Sun Rack 900/1000” on page 24
 - “Installing the Rails” on page 24
 - “Installing the Brocade SilkWorm 12000/24000 Director” on page 28
- “Rackmounting in the Sun StorEdge 72-Inch Expansion Cabinet and the Sun Fire Cabinet” on page 34
 - “Installing the Rails” on page 34
 - “Installing the Brocade SilkWorm 12000/24000 Director” on page 39

Rackmounting in the Sun Rack 900/1000

Each Brocade SilkWorm 12000 and 24000 director comes with a rackmounting kit that contains two mounting rails and two sets of mounting rail brackets. One set is for the Sun Rack 900/1000 and the other for both the Sun StorEdge 72-Inch Expansion cabinet and the Sun Fire sabinet.

Installing the Rails

One of two Sun Rack 900/1000 mounting rails and brackets are shown in FIGURE 4-1. The 12000/24000 director will *rest* on the mounting rail ledge.

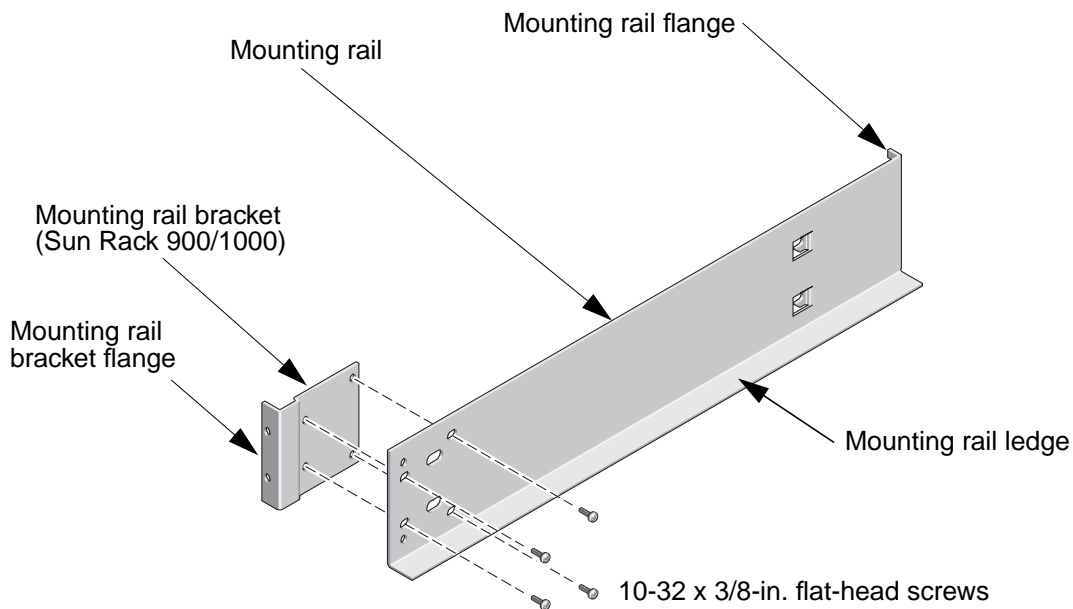


FIGURE 4-1 Mounting Rail Assembly (One of Two) for Sun Rack 900/1000

1. Assemble the mounting rail and the mounting rail bracket as shown in FIGURE 4-1.

Attach the mounting rail bracket such that its flange faces the opposite direction from the mounting rail ledge. Do not tighten the four 10-32 x 3/8-in. flat-head screws.

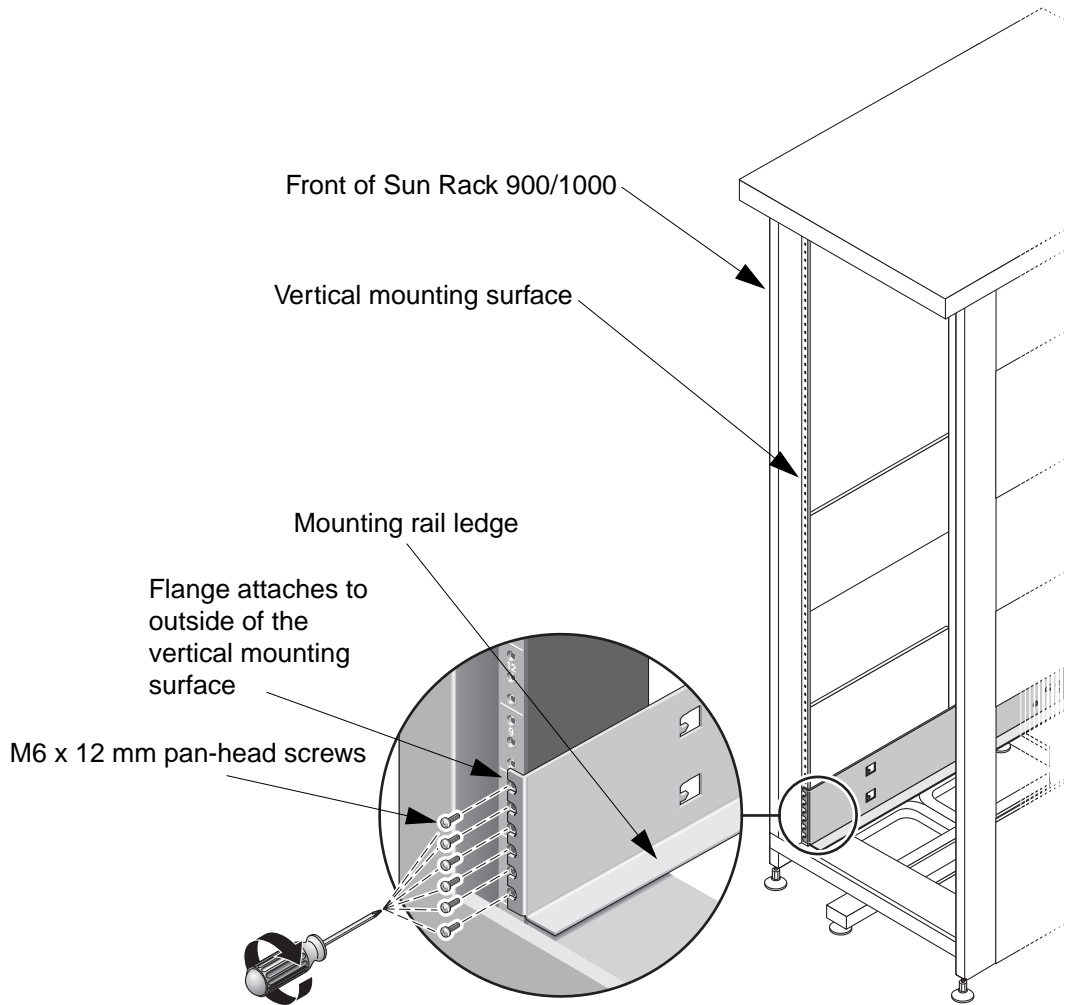


FIGURE 4-2 Attaching the Mounting Rail Flange to the Cabinet

- 2. Place the mounting rail assembly with the mounting rail flange in the front of the cabinet and the rail ledge facing inward.**

The rail must be in the lowest possible position of the Sun Rack 900/1000. The mounting rail flange attaches to the outside of the cabinet vertical mounting surface as shown in FIGURE 4-2. Tighten the six M6 x 12 mm pan-head screws of each mounting rail flange to a torque of 25 inch-pounds (28.8 cm-kgs).

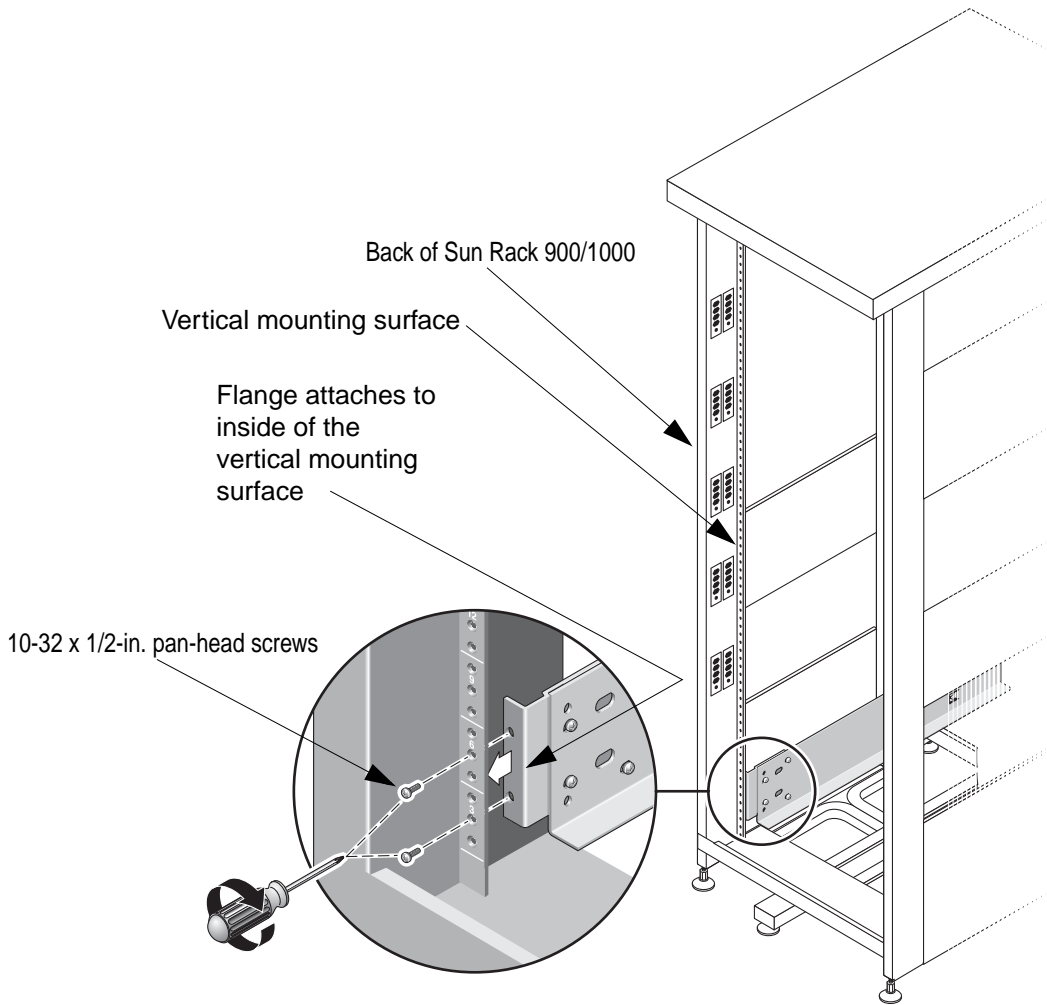


FIGURE 4-3 Attaching the Mounting Rail Bracket Flange to the Cabinet

3. In the back of the cabinet, attach the mounting rail bracket flange to the inside of the cabinet vertical mounting surface.

Tighten the two 10-32 x 1/2-in. pan-head screws of each mounting rail bracket flange to a torque of 25 inch-pounds (28.8 cm-kgs).

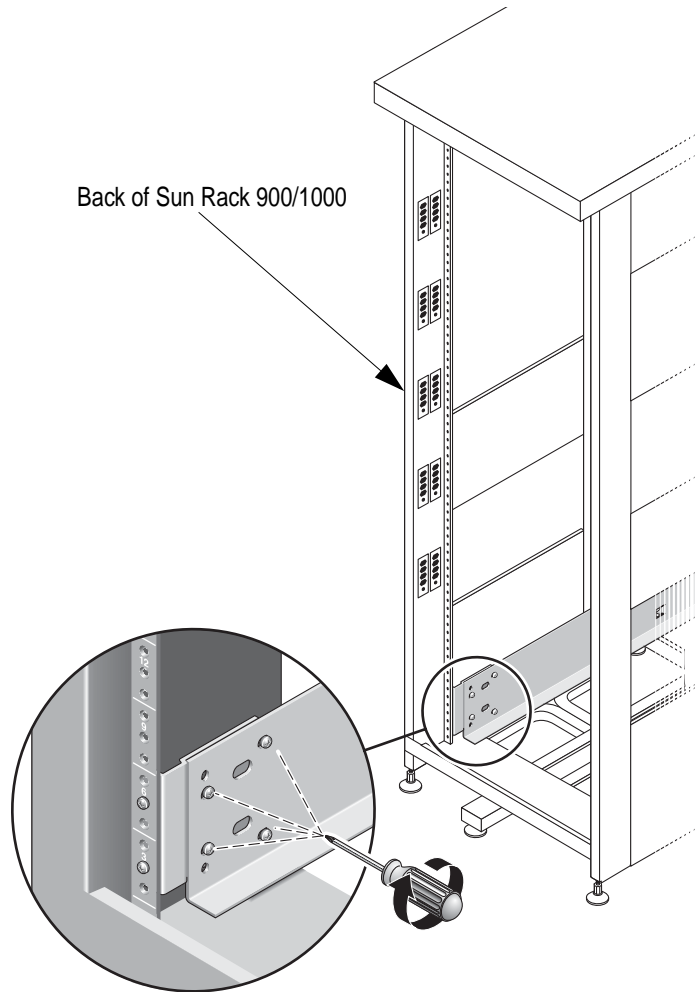


FIGURE 4-4 Securing the Mounting Rail to the Mounting Rail Bracket (One of Two)

- 4. Secure the mounting rail to the mounting bracket by tightening the four screws to a torque of 25 inch-pounds (28.8 cm-kgs) as shown.**
Make sure the screw heads are flush with the mounting rail.
- 5. Repeat Steps 1 through 4 for the other rail assembly.**

Installing the Brocade SilkWorm 12000/24000 Director

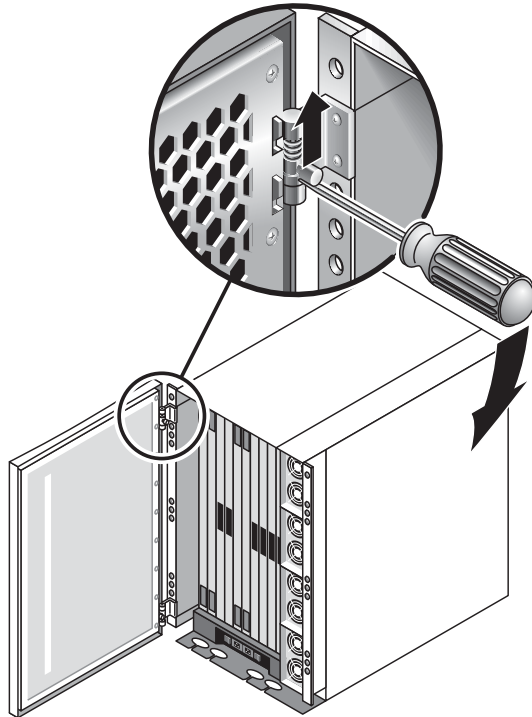


FIGURE 4-5 Removing the Front Door of the Director

- 1. To remove the 12000 or 24000 director door, perform the following steps:**
 - a. Open the door and locate the spring hinge pins on the left side.**
 - b. Press down on the lower spring hinge pin to release it and press up on the upper spring hinge pin to release it.**
It might be helpful to use a screwdriver to pry the hinge pins.
 - c. Pull the door out to remove it.**

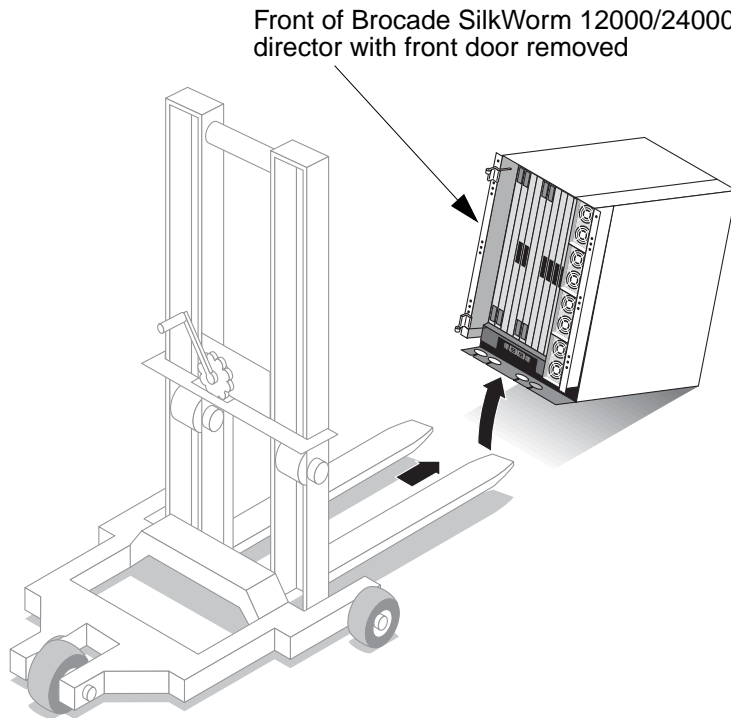


FIGURE 4-6 Use Four People to Help the Director on the Hand Truck

2. **Bring a hand truck up to the front of the director.**
3. **Use four people to pivot the director on its back edge and slide the hand truck forks under the director to support it.**



Caution – The Brocade SilkWorm 12000 and 24000 directors weigh approximately 250 pounds (113.4 kg).

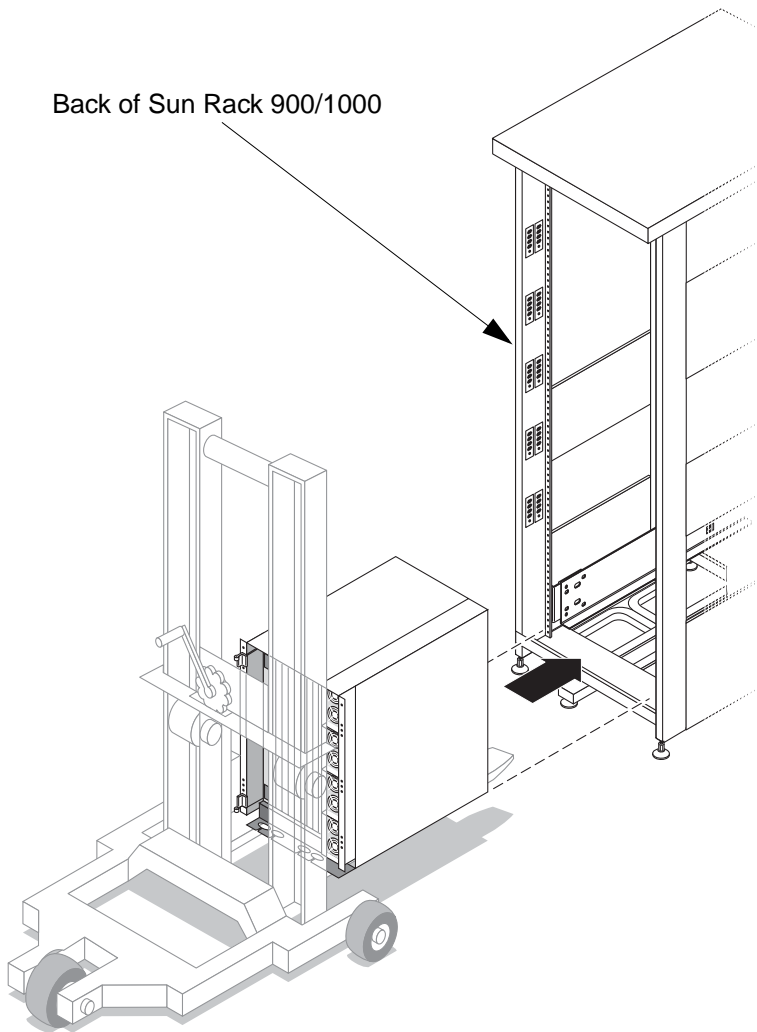


FIGURE 4-7 Ready to Install the Director into the Sun Rack 900/1000

The Brocade SilkWorm 12000/24000 director is installed into the back of the Sun Rack 900/1000 with the front of the director facing the back of the cabinet.

- 4. Use the hand truck to position the director on the mounting rail ledges.**

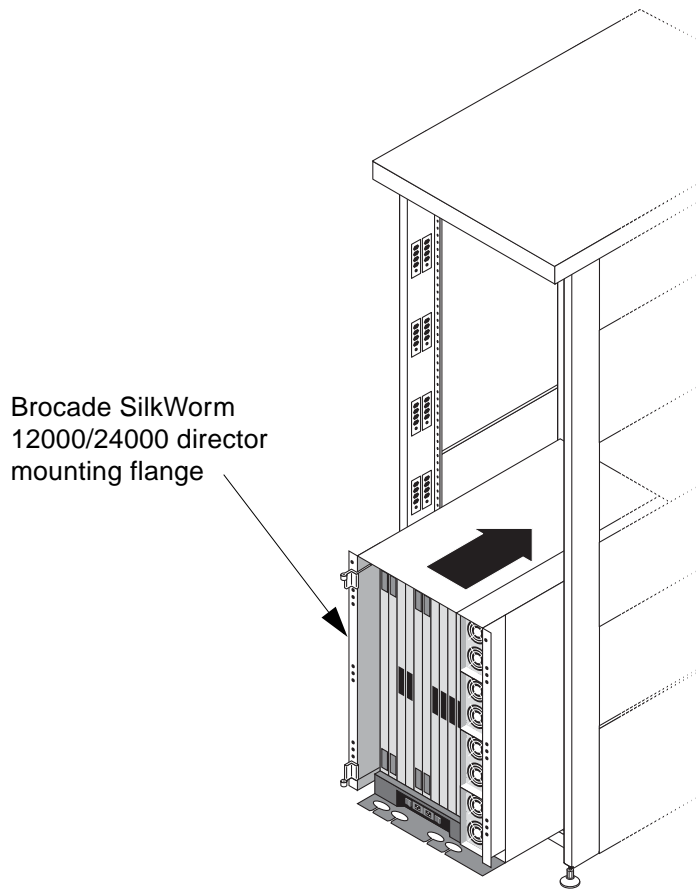


FIGURE 4-8 Installing the Director into the Sun Rack 900/1000

- 5. Push the director to slide it all the way into the cabinet.**
Make sure the director clears any loose cables.

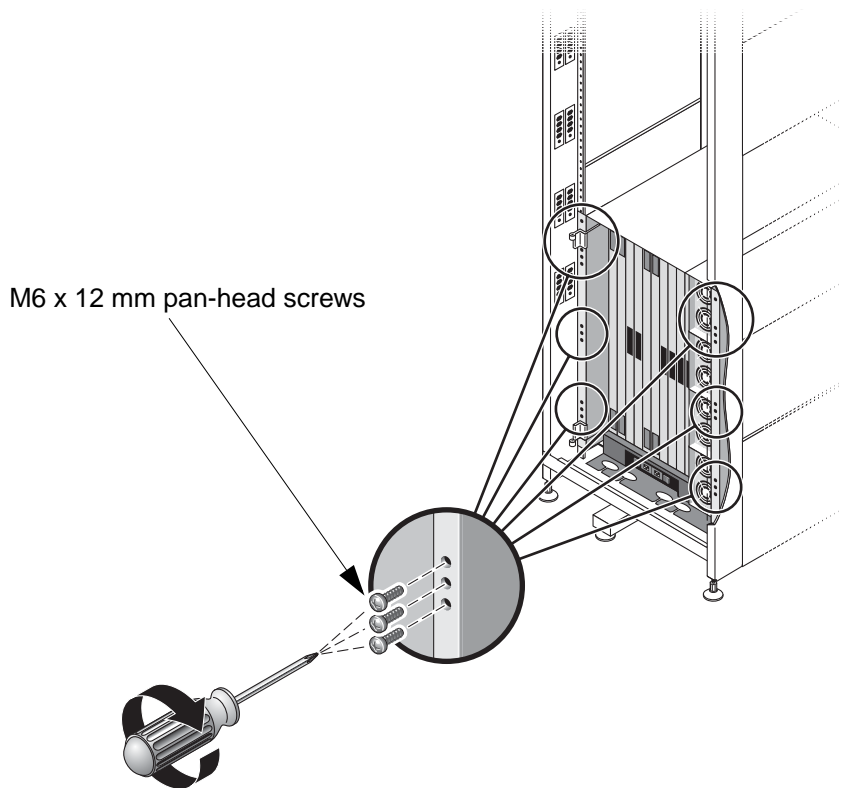


FIGURE 4-9 Securing the Director to the Sun Rack 900/1000

The Brocade SilkWorm 12000/24000 director mounting flange holes must line up with the Sun Rack 900/1000 vertical mounting surface holes.

6. Tighten the ten M6 x 12 mm pan-head screws to a torque of 25 inch-pounds (28.8 cm-kgs) on each side of the director mounting flange to the vertical mounting surface of the cabinet.

Note – Do not replace the director front door.

7. To ensure the proper cooling air flow, remove any filler panels on the front of the cabinet that are directly in front of the director.

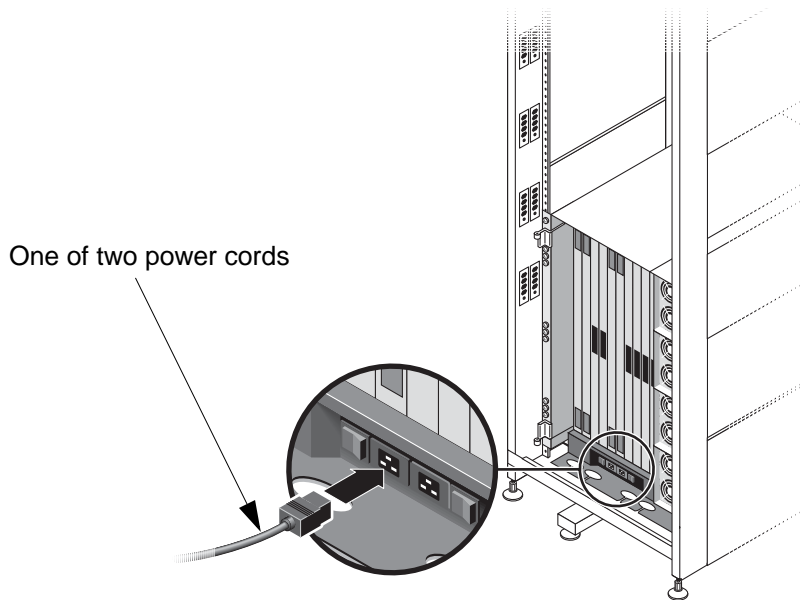


FIGURE 4-10 Attaching the Power Cords to the Brocade SilkWorm 12000/24000 Director

8. (Optional) Provide power to the 12000 or 24000 director.

Refer to the following for information:

- *Brocade Fabric OS Procedures Guide, Supporting Fabric OS v4.2.0, Supporting SilkWorm 24000, 12000, 3900, 3850, and 3250, 53-0000518*
- *Brocade SilkWorm 12000 QuickStart Guide, 53-0000152*
- *Brocade SilkWorm 12000 Hardware Reference Manual, 53-0000148*
- *Brocade SilkWorm 24000 QuickStart Guide, 53-0000620*
- *Brocade SilkWorm 24000 Hardware Reference Manual, 53-0000619*



Caution – Do not connect the 12000 or 24000 director to the network until the IP addresses are correctly set.

Rackmounting in the Sun StorEdge 72-Inch Expansion Cabinet and the Sun Fire Cabinet

Each Brocade SilkWorm 12000 and 24000 director comes with a rackmounting kit that contains two mounting rails and two sets of mounting rail brackets. One set is for the Sun Rack 900/1000 and the other for both the Sun StorEdge 72-Inch Expansion cabinet and the Sun Fire cabinet.

Installing the Rails

One of two Sun StorEdge 72-Inch Expansion Cabinet and Sun Fire cabinet mounting rails and brackets are shown in FIGURE 4-11. The 12000/24000 director will *rest* on the mounting rail ledge.

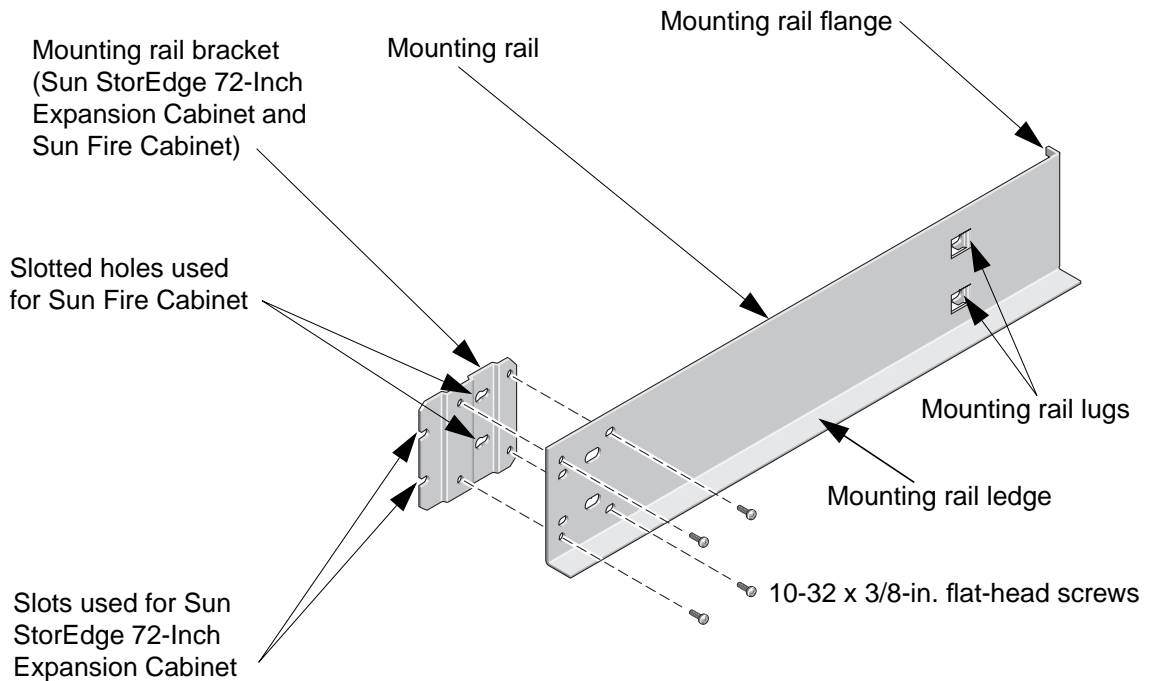


FIGURE 4-11 Mounting Rail Assembly (One of Two) for Sun StorEdge 72-Inch Expansion Cabinet and Sun Fire Cabinet

- 1. Assemble the mounting rail and mounting rail bracket as shown in** FIGURE 4-11. Tighten the four 10-32 x 3/8-in. flat-head screws to a torque of 25 inch-pounds (28.8 cm-kgs). Make sure the screw heads are flush with the mounting rail.

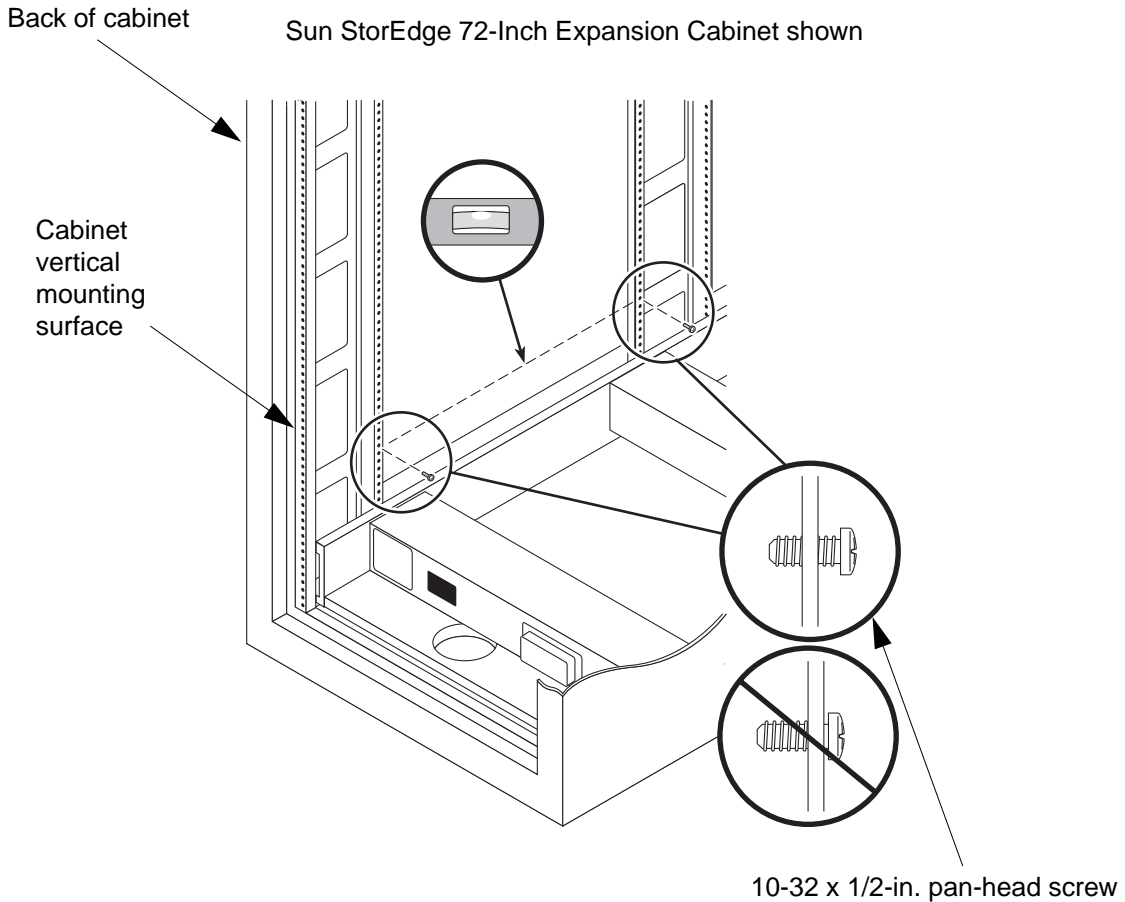


FIGURE 4-12 Installing Two Screws Before Installing the Mounting Rail

- 2. Partially install two of the 10-32 x 1/2-in. pan-head screws as shown in the cabinet vertical mounting surfaces.**

The top mounting rail lug and either the top mounting rail bracket slot (in the case of the Sun StorEdge 72-Inch Expansion Cabinet) or the top mounting rail bracket slotted hole (in the case of the Sun Fire cabinet) will slide onto these screws. The screws must be positioned such that the mounting rail will be in the lowest possible position in the cabinet.

Sun StorEdge 72-Inch Expansion Cabinet shown

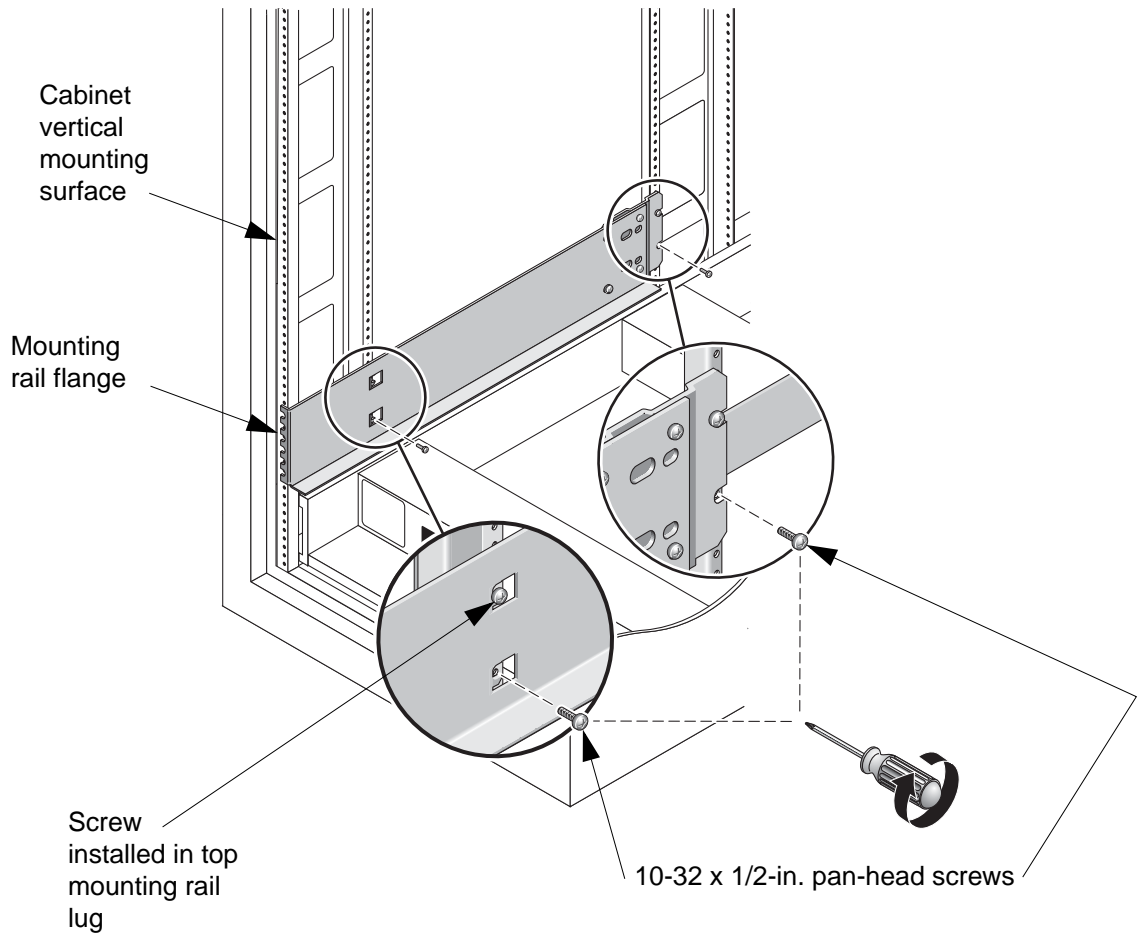


FIGURE 4-13 Positioning the Mounting Rail (One of Two) in the Cabinet

3. Place the mounting rail assembly as shown and slide the rail to fully engage the two screws in the mounting rail lug and the mounting rail bracket slot (for the Sun StorEdge 72-Inch Expansion Cabinet) or the bracket slotted hole (for the Sun Fire cabinet). See FIGURE 4-11 and FIGURE 4-13.

The mounting rail flange attaches to the outside of the cabinet vertical mounting surface.

4. Install the remaining two 10-32 x 1/2-in. pan-head screws and tighten all four to a torque of 25 inch-pounds (28.8 cm-kgs).

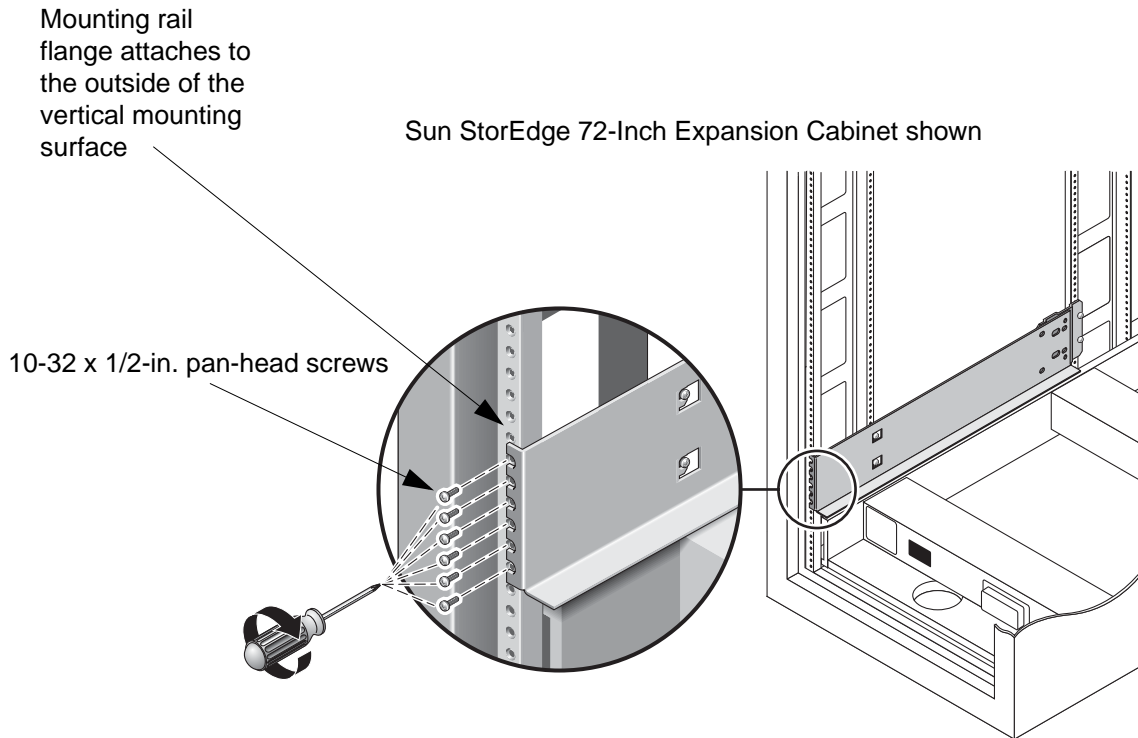


FIGURE 4-14 Attaching the Mounting Rail Flange (One of Two) to the Cabinet

5. **Secure the mounting rail flange in the front of the cabinet with six 10-32 x 1/2-in. pan-head screws.**

Tighten the six 10-32 x 1/2-in. pan-head screws of each mounting rail flange to a torque of 25 inch-pounds (28.8 cm-kgs). Repeat for the other rail.

6. **Repeat Steps 1 through 5 for the other rail assembly.**

Installing the Brocade SilkWorm 12000/24000 Director

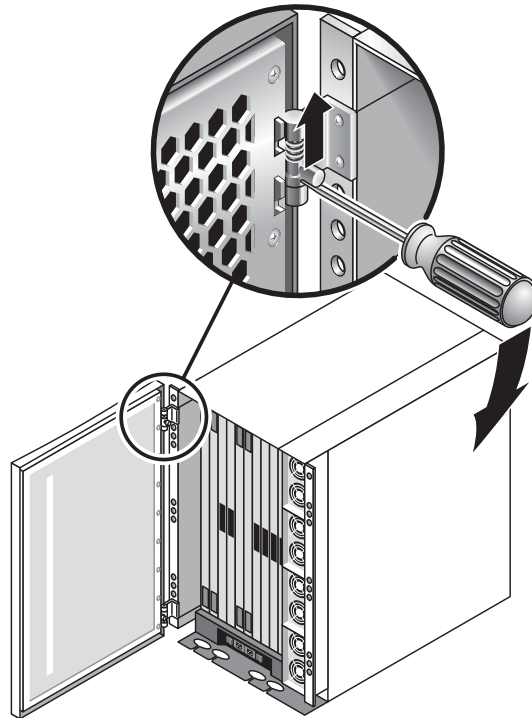


FIGURE 4-15 Removing the Front Door of the Director

- 1. To remove the 12000 or 24000 director door, perform the following steps:**
 - a. Open the door and locate the spring hinge pins on the left side.**
 - b. Press down on the lower spring hinge pin to release it and press up on the upper spring hinge pin to release it.**

It might be helpful to use a screwdriver to pry the hinge pins.
 - c. Pull the door out to remove it.**

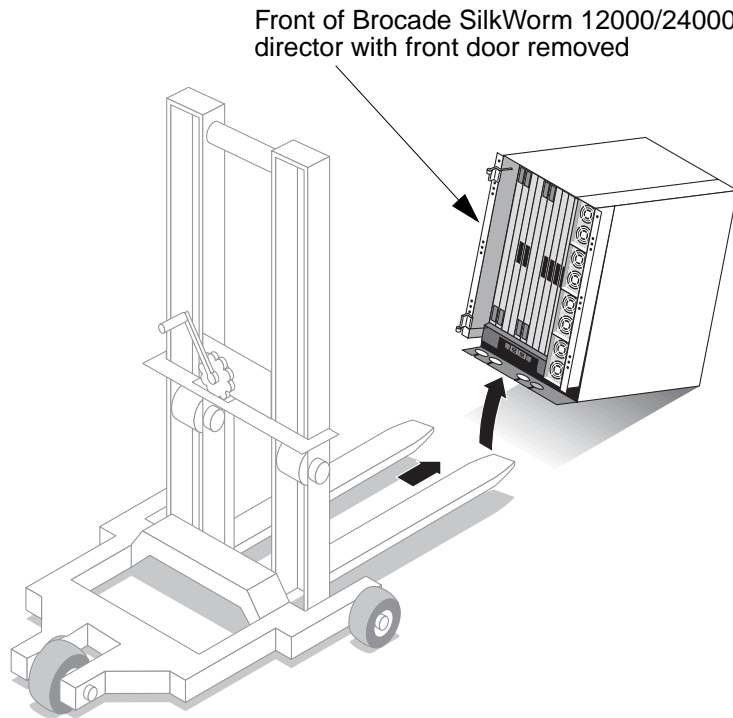


FIGURE 4-16 Use Four People to Help the Director on the Hand Truck

2. Bring a hand truck up to the front of the director.
3. Use four people to pivot the director on its back edge and slide the hand truck forks under the director to support it.



Caution – The Brocade SilkWorm 12000 and 24000 directors weigh approximately 250 pounds (113.4 kg).

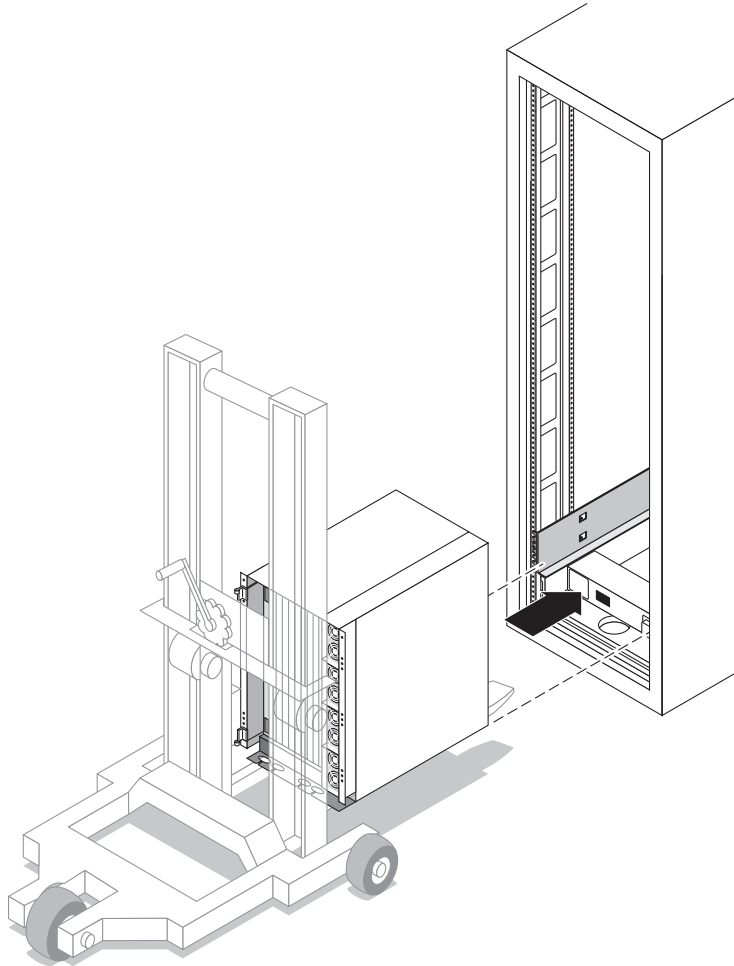


FIGURE 4-17 Ready to Install the Director into the Sun StorEdge 72-Inch Expansion Cabinet or the Sun Fire Cabinet

The Brocade SilkWorm 12000/24000 director is installed into the back of the cabinet with the front of the director facing the back of the cabinet.

- 4. Use the hand truck to position the director on the mounting rail ledges.**

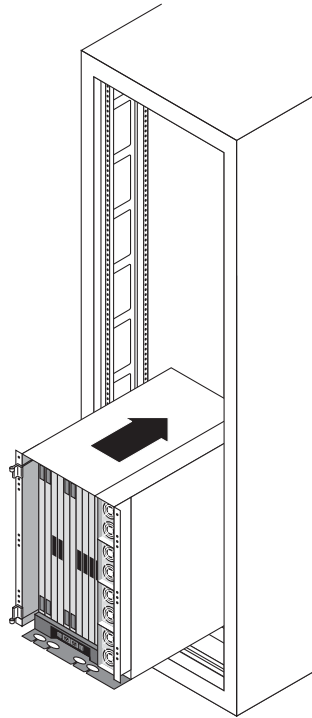


FIGURE 4-18 Installing the Director into the Sun StorEdge 72-Inch Expansion Cabinet or the Sun Fire Cabinet

5. Push the director to slide it all the way into the cabinet.

Make sure the director clears any loose cables.

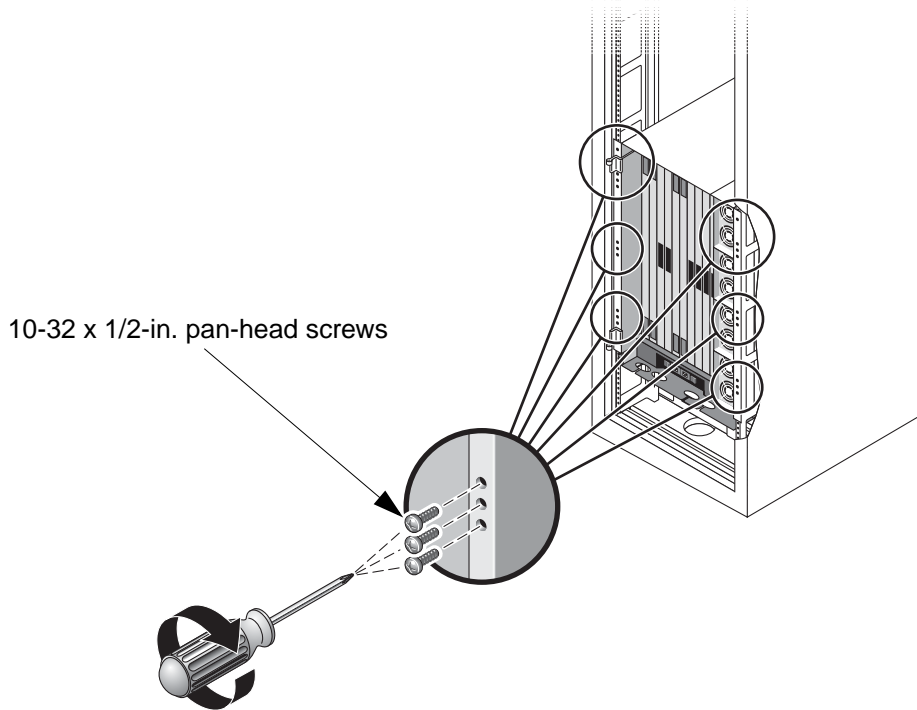


FIGURE 4-19 Securing the Director to the Sun StorEdge 72-Inch Expansion Cabinet or the Sun Fire Cabinet

The Brocade SilkWorm 12000/24000 director mounting flange holes must line up with the cabinet vertical mounting surface holes.

6. **Tighten the ten 10-32 x 1/2-in. pan-head screws to a torque of 25 inch-pounds (28.8 cm-kgs) on each side of the director mounting flange to the vertical mounting surface of the cabinet.**

Note – Do not replace the director front door.

7. **To ensure the proper cooling air flow, remove any filler panels on the front of the cabinet that are directly in front of the director.**

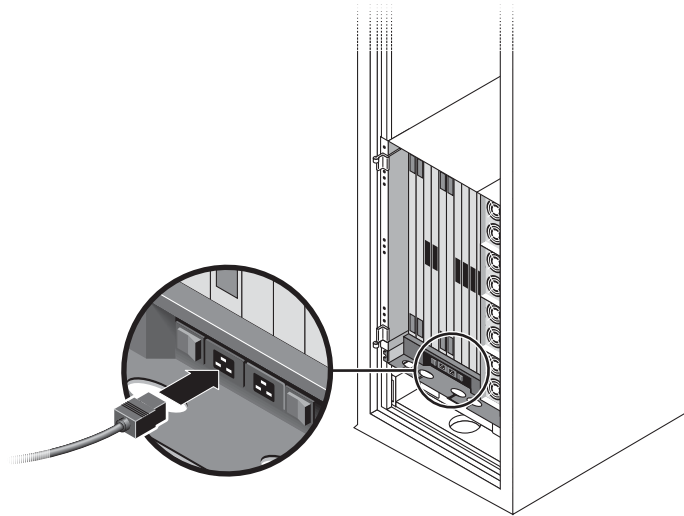


FIGURE 4-20 Attaching the Power Cords to the Brocade SilkWorm 12000/24000 Director

8. (Optional) Provide power to the 12000 or 24000 director.

Refer to the following for information:

- *Brocade Fabric OS Procedures Guide, Supporting Fabric OS v4.2.0, Supporting SilkWorm 24000, 12000, 3900, 3850, and 3250, 53-0000518*
- *Brocade SilkWorm 12000 QuickStart Guide, 53-0000152*
- *Brocade SilkWorm 12000 Hardware Reference Manual, 53-0000148*
- *Brocade SilkWorm 24000 QuickStart Guide, 53-0000620*
- *Brocade SilkWorm 24000 Hardware Reference Manual, 53-0000619*



Caution – Do not connect the 12000 or 24000 director to the network until the IP addresses are correctly set.

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