Sun StorEdge™ 3000 Family Rack Installation Guide for 2U Arrays

Sun Microsystems, Inc.
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Part No. 819-4026-11
May 2006, Revision A

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CHAPTER 1

Mounting the Array in Racks and Cabinets

This document describes mounting Sun StorEdge™ 3000 Family 2U arrays in supported racks and cabinets. Topics covered in this chapter are:

- Section 1.1, "Overview of Rackmount Kits" on page 1-1
- Section 1.2, "One-Person Installation Requirements" on page 1-3
- Section 1.3, "Reviewing the Tools" on page 1-3
- Section 1.4, "Converting Your Front Bezel Locks So the Keys Cannot Be Removed" on page 1-4

1.1 Overview of Rackmount Kits

For late-breaking news about additional supported racks and cabinets, refer to the Release Notes for the model of the array that you are installing. You can find the Release Notes at:

`http://www.sun.com/products-n-solutions/hardware/docs/Network_Storage_Solutions/Workgroup/`

Tip – The instructions in this guide can save you a lot of time if you read them carefully. The entire assembly procedure should take less than thirty minutes if you follow all the instructions provided in this guide.

The following table lists the supported cabinets and racks and other required kits, the rackmount kits that apply to each one, and the location of the installation instructions in this guide.

TABLE 1-1 Supported Cabinets With Associated Rackmount Kits

Supported Cabinet or Rack	Rackmount Kit Needed	Installation Instructions
Sun StorEdge 72-inch Expansion Cabinets[1] SG-(X)ARY030A	XTA-3000-2URK-19UZ	Section 2.2, "Rear Bracket Configuration" on page 2-5
Sun Fire Cabinets SF-(X)CAB, SFE-(X)CAB	XTA-3000-2URK-19UZ	Section 2.3, "Middle Bracket Configuration" on page 2-12
Sun Fire 6800 System F6800-1	XTA-3000-2URK-19UZ	Section 2.3, "Middle Bracket Configuration" on page 2-12
Sun Fire E6900 System E6900-BASE	XTA-3000-2URK-19UZ	Section 2.3, "Middle Bracket Configuration" on page 2-12
Sun Rack 900 Cabinet[2] SR9-(X)KL038A-IP	XTA-3000-2URK-19UZ	Section 2.2, "Rear Bracket Configuration" on page 2-5
Standard EIA Cabinets	XTA-3000-2URK-19UZ	Section 2.2, "Rear Bracket Configuration" on page 2-5
Telco flushmount racks	XTA-3000-2URK-19FZ	Section 3.1, "Flushmount Configuration" on page 3-1
Telco center-of-gravity racks	XTA-3000-2URK-19CZ	Section 3.2, "Center-of-Gravity Configuration" on page 3-6

1 The Sun StorEdge 72-inch expansion cabinet requires the X9818A door kit for the Sun StorEdge 3000 Family 2U arrays.

2 The Sun Rack 900 cabinet also requires the X6825A door kit and the X6835A EMI kit with these arrays.

1.2 One-Person Installation Requirements

Two people should install each array; however, one person can install the array:

- In a Sun cabinet if the rail kit contains rear brackets with flanges that provide support
- In a Telco rack if the person has an appropriate equipment lift that can ensure safety and ease of installation

For a one-person installation, remove the power supplies and disk drives to reduce weight and to be safe. If possible, position the array on top of another device or shelf in the rack to hold the unit as you attach all the brackets.

Caution – If you have only one person to perform the installation in a Sun cabinet and do not have rear brackets with flanges or special equipment lift, you must remove the power supplies and hard disk drives from the array before installing the array in a rack.

To reduce the weight of the array during the rackmounting procedure, refer to the *Sun StorEdge 3000 Family FRU Installation Guide* for your array, and follow instructions on removing drives and power supplies. A fully populated array weighs over 57 pounds (26 kilograms); an array without drives and power supplies weighs about 30 pounds (13.61 kilograms).

1.3 Reviewing the Tools

The following tools are used to complete this procedure:

- Medium Phillips screwdriver
- Allen wrench (provided; used with 6-mm screws and #12-24 x 3/8-inch sockethead screws)

Caution – Do not use any power tools with any procedures. Power tools can strip or damage connections.

1.4 Converting Your Front Bezel Locks So the Keys Cannot Be Removed

The bezel on your array has two locks whose keys can be removed when the locks are in either the locked or open position. It is possible to reconfigure the locks so that the keys cannot be removed. It is most convenient to make this optional change when removing the bezel prior to installing the array in a rack or cabinet.

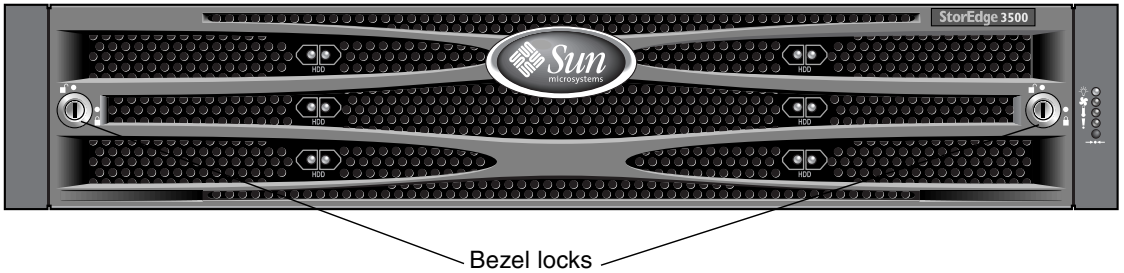

FIGURE 1-1 Front Bezel and Front Bezel Locks of an Array

To change the locks so the keys cannot be removed, follow these steps:

1. **Remove the bezel by gently pivoting the swing arms out of their ear sockets, and make sure the key is in the locked position, with the pawl extending horizontally past the edge of the bezel (see the first panel of** FIGURE 1-2**).**
2. **Hold the key in place and use a 12-mm or 3/8-inch nut driver to remove the locking nut that holds the pawl in place, as shown in the first panel of** FIGURE 1-2**.**

Caution – Be sure to hold the key in place. Otherwise there is a risk of breaking the small tab on the lock that serves as a stop.

3. **Lift the pawl off the threaded part of the lock body, as shown in the second panel of** FIGURE 1-2**.**
4. **Set the pawl aside, face up, so that you can remember its orientation when you replace it.**
5. **Use the key to turn the lock 180 degrees, as shown in the third panel of** FIGURE 1-2
6. **Replace the pawl in the same orientation as before, as shown in the fourth panel of** FIGURE 1-2**.**

7. **Hold the key in place and use the nut driver to refasten the locking nut that holds the pawl in place, as shown in the fifth panel of** FIGURE 1-2**. Be careful not to cross-thread the nut.**

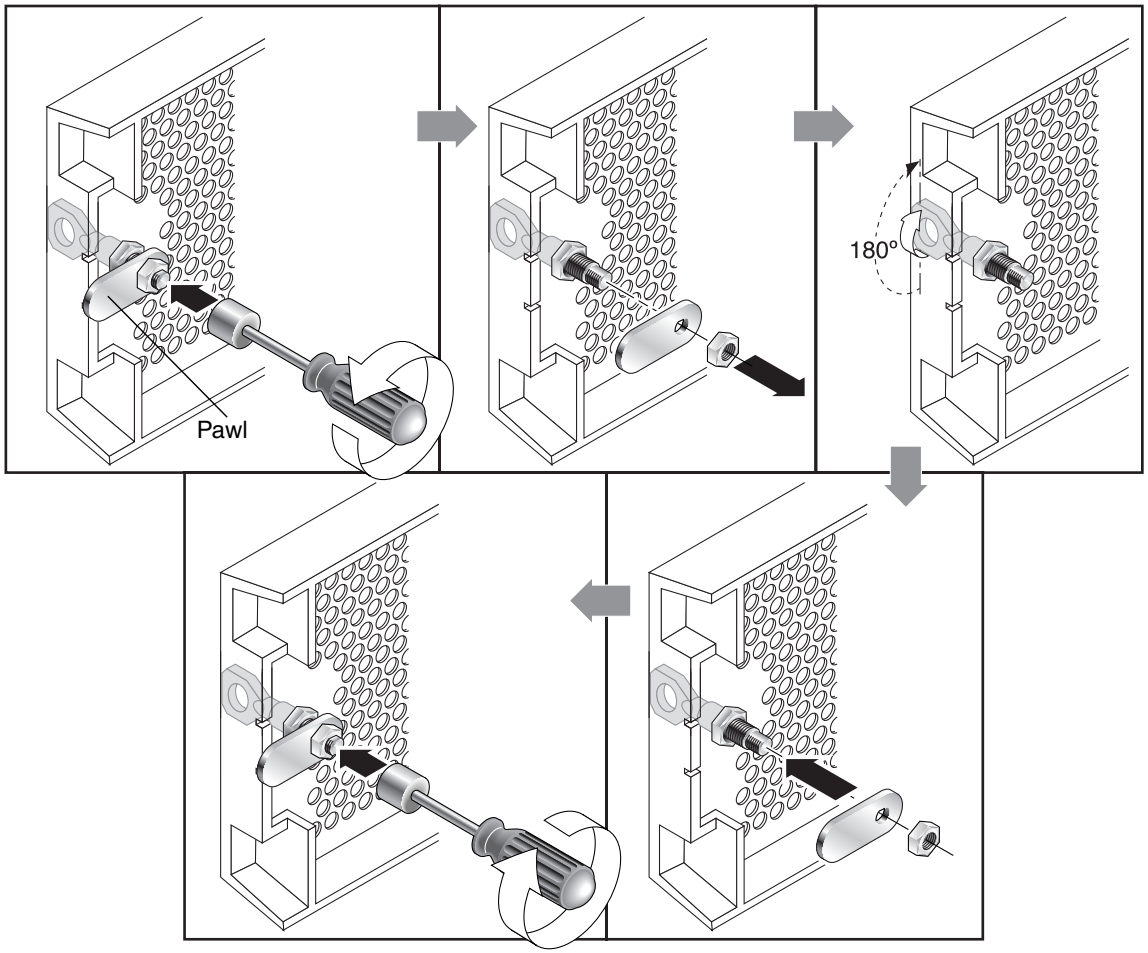

FIGURE 1-2 Sequence of Steps to Change Front Bezel Locks So Keys Cannot Be Removed

Caution – Be sure to hold the key in place. Otherwise there is a risk of breaking the small tab on the lock that serves as a stop.

8. **Replace the bezel.**

Note – To convert your bezel locks back so that the keys can be removed, repeat the preceding steps.

CHAPTER 2

Mounting in Sun Cabinets

This chapter explains how to mount Sun StorEdge 3000 Family 2U arrays by using universal, adjustable mounting brackets for depth ranges between 24 to 36 inches (60.96 to 91.44 cm).

The topics covered are:

- Section 2.1, "Overview of Assembly" on page 2-1
- Section 2.2, "Rear Bracket Configuration" on page 2-5
- Section 2.3, "Middle Bracket Configuration" on page 2-12

2.1 Overview of Assembly

Two configurations exist for Sun cabinets:

- You can mount a cabinet using rear and side brackets for depth ranges between 24 to 36 inches (60.96 to 91.44 cm). FIGURE 2-1 displays a completed installation of a Sun StorEdge 3000 Family 2U array in a standard EIA cabinet using rear and side brackets.
- You can mount a cabinet using middle and side brackets at 24.5 inches (62.22 cm). FIGURE 2-2 displays a completed installation of a Sun StorEdge 3000 Family 2U array in a Sun Fire cabinet using middle and side brackets.

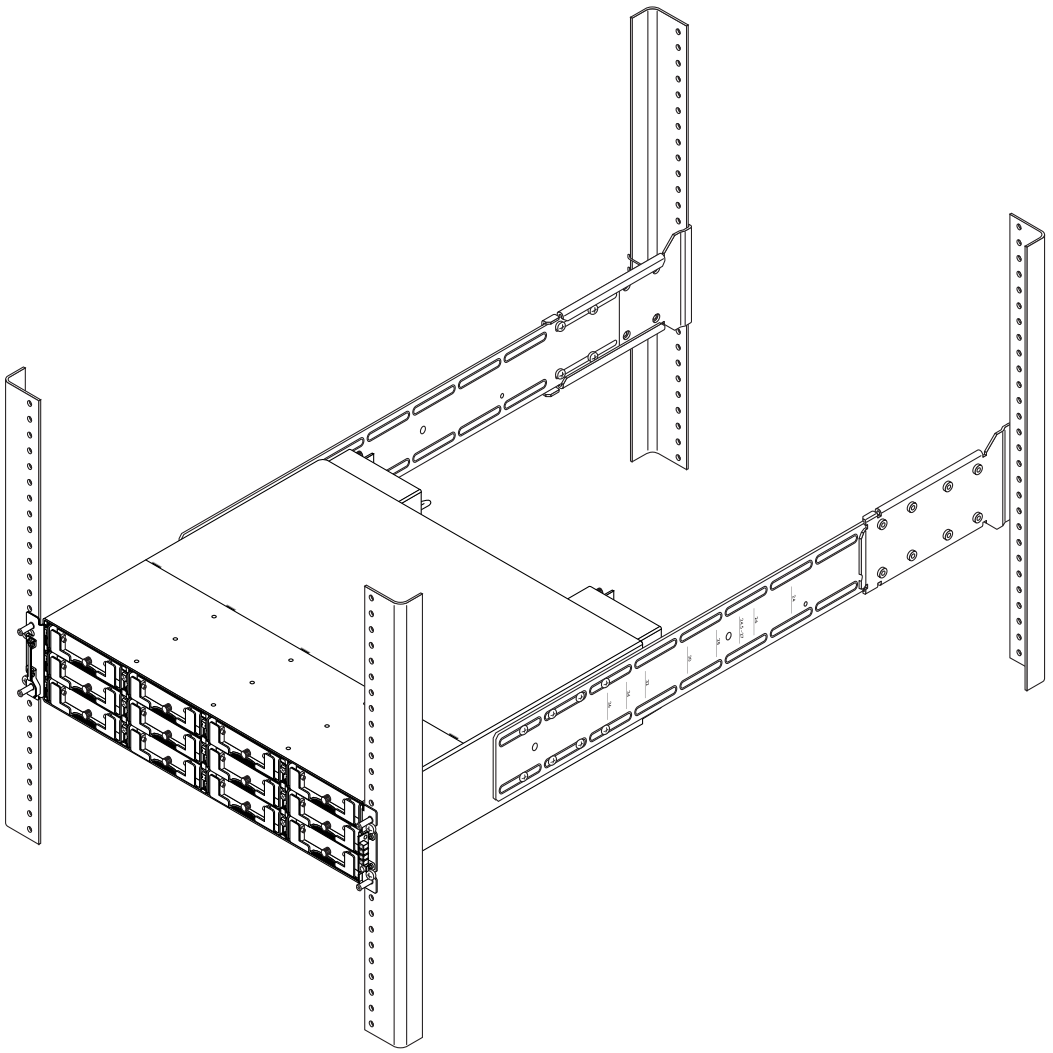

FIGURE 2-1 Rackmounted Cabinet Array Using Rear Brackets With Chassis Ears and Bezels Removed, After Installation

Refer to FIGURE 2-4 during installation.

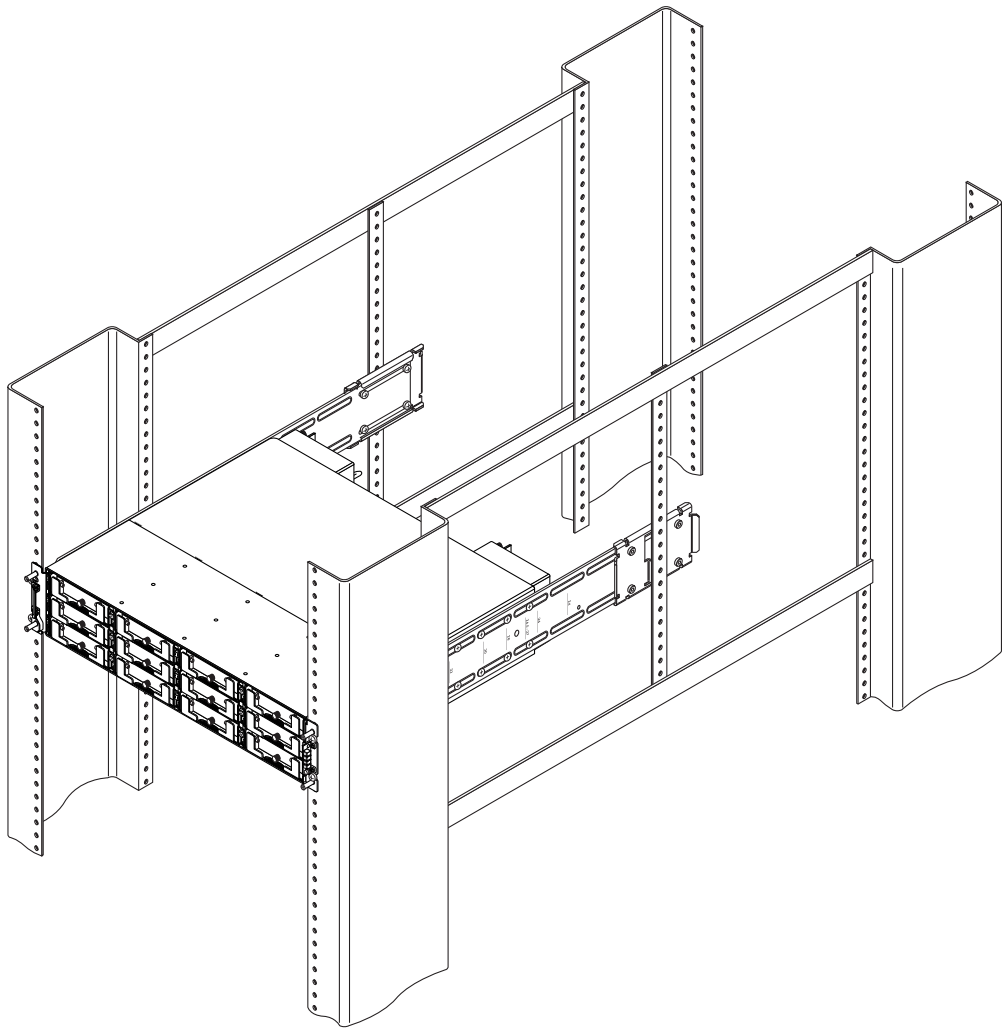

FIGURE 2-2 Rackmounted Cabinet Array Using Middle Brackets With Chassis Ears and Bezels Removed, After Installation

Refer to FIGURE 2-9 during installation.

Note – It is possible for customer-supplied racks to have several sizes of threaded holes. Rackmount kits have several sizes of panhead screws and sockethead screws in order to fit these various racks. Sockethead screws are supplied for the front mounting ears when the diameter of the screw is too large for panhead screws to fit.

Note – When you finish the installation, you will have unused screws left in your rackmount kit. This does not indicate a problem with your installation. Several types of screws are included for different rack configurations, and extra screws are provided in case any are misplaced.

Before mounting the Sun StorEdge 3000 Family 2U array into a 19-inch wide cabinet, check that you have all the rackmount kit components (TABLE 2-1) listed for the rack installation kit you are installing.

TABLE 2-1 XTA-3000-2URK-19UZ Universal Rack Kit, 2U, 19-inch Wide, 24–36 Inches Deep (594-2005-01)

Major Components			Fasteners		
Qty.	**Part Number**	**Description**	**Qty.**	**Part Number**	**Description**
2	71-00000762	Side brackets	16	01-00000142	#8-32 x 3/16-in.flathead screws
2	79-00000100	Front brackets	10	01-00000186	#8-32 x 1/4-in. panhead screws
2	71-00000766	Rear brackets with flanges[1]	16	01-00000192	#10-32 x 3/8-in. panhead screws
2	71-00000748	Middle brackets	12	02-00000018	#10 flat washers
			5	01-00000151	6-mm sockethead screws
			9	01-00000152	6-mm panhead screws
			16	01-00000150	5-mm panhead screws
1	09-00000064	5-mm Allen wrench for 6-mm sockethead screws			

1 The U-shaped flanges support the side brackets and eliminate the need for a second person to support the array while you assemble and tighten the screws.

2.2 Rear Bracket Configuration

Be sure to review Section 1.2, "One-Person Installation Requirements" on page 1-3 and Section 1.3, "Reviewing the Tools" on page 1-3 before rackmounting the array.

Refer to the parts list in TABLE 2-1 and the illustration in FIGURE 2-1 during installation. The table lists the major components and fasteners required to install an array into the cabinet.

1. **Determine the position at which the array will be installed.**

   Install the first array at the *bottom* of the rack, and install each subsequent chassis above the previous one.

   For additional rack hole information, see Appendix A.

Note – Keep all hardware items in plastic bags until you are ready to use them. This will enable you to correctly identify the screws and avoid confusion.

---

2. **Before rackmounting, be sure to check your site location and confirm that you have cables with adequate lengths to connect to servers and to power outlets.**

3. **(Optional). Before you mount the unit, screw the front support brackets (79-00000100) into position on the rack face. The front support brackets enable one person to easily position and support the front of the unit in the rack.**

   a. Attach each front bracket to the rack face (See FIGURE 2-3):

   To connect the front brackets (79-00000100), use a minimum of two screws per front bracket.

   Use the appropriate screws for the rack:

   - #10-32 x 3/8-inch (01-00000192) panhead screws
     or
   - 5-mm (01-00000150) panhead screws
     or
   - 6-mm (01-00000152) panhead screws

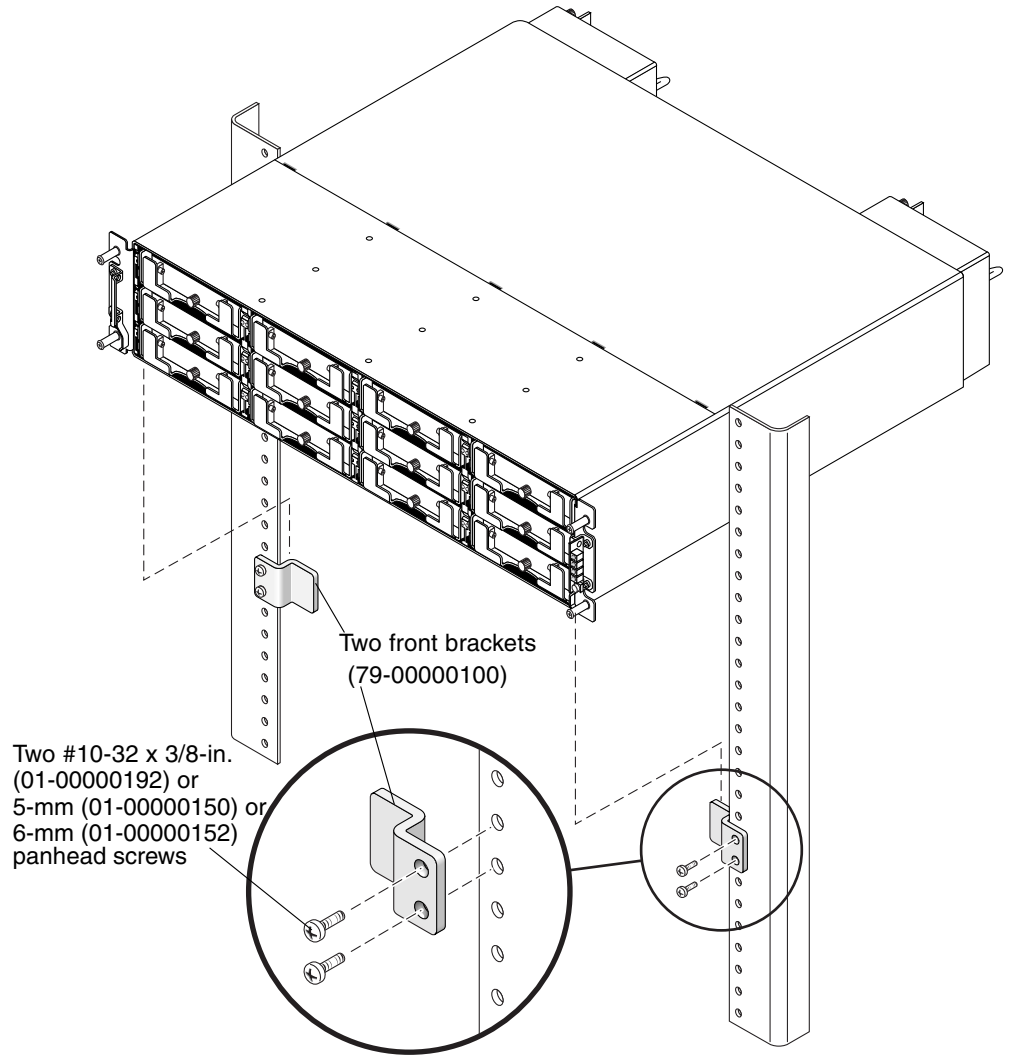

FIGURE 2-3 Front Bracket Position on the Rack Face

4. **Remove the bezel (the front faceplate) and the two plastic ear caps from the front of the chassis.**

Caution – The plastic ear caps are snap-on parts that require some care when you remove them. Remove the right plastic ear cap carefully to avoid breaking the push button reset switch that is directly below the ear cap.

To remove a plastic ear cap (both caps are removed the same way):

a. Squeeze both sides of the cap at the top and the bottom.

b. Turn the cap toward the center of the array until it disengages and pull it free.

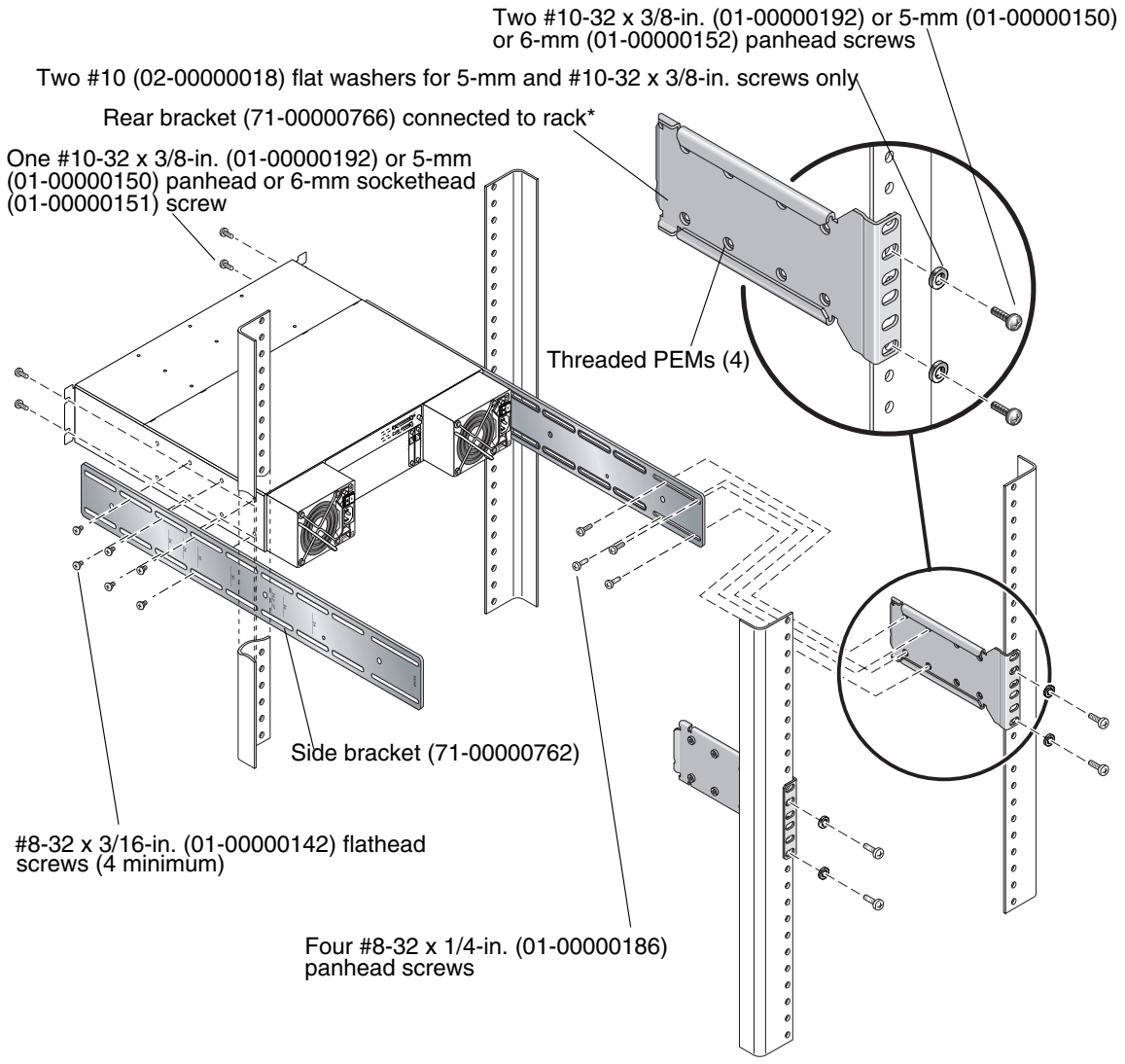

FIGURE 2-4 Cabinet Rackmount with Rear Brackets

*Flanged rear brackets support the side brackets and enable an easy one-person installation.

Note – Alternate screws can be used with the appropriate racks: 5-mm panhead screws (front and back), or 6-mm sockethead screws (front) and 6-mm panhead screws (back).

5. **Attach the side brackets (71-00000762) to the left and right sides of the chassis.**

   Attach up to eight #8-32 x 3/16-inch (01-00000142) flathead machine screws on each side to allow some adjustment to the placement. Make sure you use at least four screws on each side.

Note – The right and left side brackets are identical. See TABLE 2-1 for the rack kit contents and part numbers.

   a. **Use the alignment marks (depth in inches) stamped into the side brackets to position the brackets and screws.**

      There are markings for several depths: 24, 26, 24.5-27, 28, 30, 32, 34, and 36 inches.

      Determine the depth you require, and align the last alignment mark on the side bracket with the last mounting holes on the chassis.

      Make sure the alignment mark corresponding to the depth you want lines up with the top and bottom threaded holes on the side of the chassis closest to the rear.

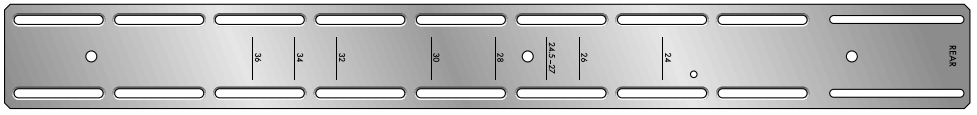

FIGURE 2-5 Side Bracket With Alignment Marks

   b. **Insert the first two screws on each side through the side bracket slots above and below the alignment mark and into the last pair of rear threaded holes in the chassis.**

      In FIGURE 2-6 the alignment marks (24, 26, 24.5-27, 28, 30, 32, 34, or 36 inches) are positioned above and below the last pair of rear threaded holes. This positions the array for a 27-inch deep rack.

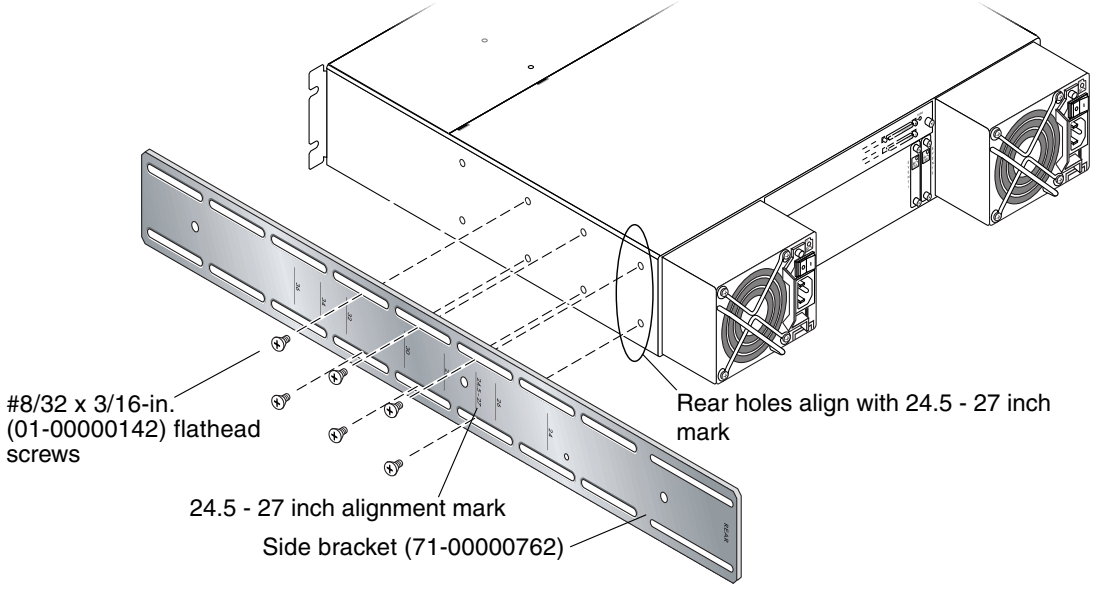

FIGURE 2-6 Aligning a Side Bracket With the Rear Threaded Holes on the Side of the Array

c. Insert up to six other screws through the side bracket slots into the other threaded holes in the chassis.

6. Use a total of four screws and four washers to attach the rear brackets to the rear vertical posts (two screws to attach each bracket to a post).

a. Attach each rear bracket with two screws.

Use the appropriate type of screws for the posts:

- Four #10-32 x 3/8-inch (01-00000192) panhead screws with #10 washers (02-00000018)
  or
- Four 5-mm (01-00000150) panhead screws with #10 washers (02-00000018)
  or
- Four 6-mm (01-00000152) panhead screws (no washers required)

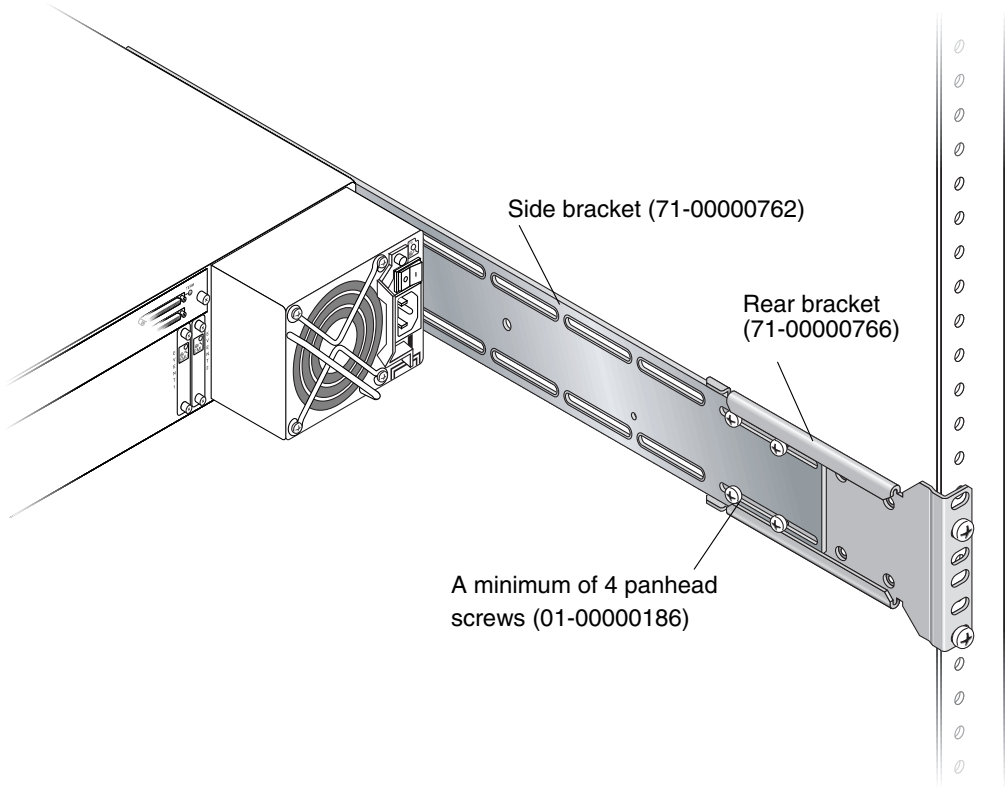

FIGURE 2-7 Rear and Side Brackets Assembled

7. **Lift the chassis and slide the side brackets into the rear brackets, which are attached to the rear posts.**

   Adjust the depth of these brackets so that the rear slotted cutouts on the *side brackets* align with the four PEM nuts in the *rear brackets.*

8. **Attach each side bracket to a rear bracket** (see FIGURE 2-7):

   To connect the rear brackets and side brackets of a 24-inch to 36-inch deep rack, use a minimum of four screws each and up to a total of four #8-32 x 1/4-inch (01-00000186) panhead screws per bracket.

9. **Attach and secure the array's front mounting ears with four appropriate screws (two screws into each ear):**

   - Four #10-32 x 3/8-inch (01-00000192) panhead screws
     or
   - Four 5-mm (01-00000150) panhead screws
     or
   - Four 6-mm (01-00000151) sockethead cap screws

10. **Remount all drives and power/fan modules into the array.**

11. **If you mounted the unit using the optional front support brackets, remove them from the rack face using a standard screwdriver.**

12. **Reattach the two plastic ear caps and the bezel onto the front of the chassis.**

    Each plastic cap is replaced the same way, but be sure the cap with the LED labels is on the right ear.

    a. **Align the inside round notches of the cap with the round cylindrical posts (ball studs) on the ear.**

    b. **Push the top and bottom of the ear cap onto the ear, pressing in on the top side toward the center of the array first.**

    c. **Continue pushing the top and bottom of the ear cap onto the ear, pressing on the side toward the outside of the array.**

       Do not use force when placing a cap on an ear.

Caution – Be careful to avoid "wedging" the reset button below the LEDs on the right ear when you replace the plastic cap over it.

    d. **Insert the bezel arms into the chassis holes.**

    e. **Lift the bezel into position and press it onto the front of the chassis until it is flush with the front.**

    f. **Use the key to lock both bezel locks.**

13. **Connect power cables to the chassis, power up, and check for proper operation of the LEDs.**

    For details on powering on and checking LEDs, see Chapter 4.

2.3 Middle Bracket Configuration

Be sure to review Section 1.2, "One-Person Installation Requirements" on page 1-3 and Section 1.3, "Reviewing the Tools" on page 1-3 before rackmounting the array.

Refer to the parts list in TABLE 2-1 and the illustration in FIGURE 2-2 during installation. The table lists the major components and fasteners required to install an array into the cabinet.

1. **Determine the position at which the array will be installed.**

   Install the first array at the *bottom* of the rack, and install each subsequent chassis above the previous one.

   For additional rack hole information, see Appendix A.

Note – Keep all hardware items in plastic bags until you are ready to use them. This will enable you to correctly identify the screws and avoid confusion.

---

2. **Before rackmounting, be sure to check your site location and confirm that you have cables with adequate lengths to connect to servers and to power outlets.**

3. **(Optional). Before you mount the unit, screw the front support brackets (79-00000100) into position on the rack face. The front support brackets enable one person to easily position and support the front of the unit in the rack.**

   a. Attach each front bracket to the rack face (See FIGURE 2-8):

   To connect the front brackets (79-00000100), use a minimum of two screws per front bracket.

   Use the appropriate screws for the rack:

   - #10-32 x 3/8-inch (01-00000192) panhead screws
     or
   - 5-mm (01-00000150) panhead screws
     or
   - 6-mm (01-00000152) panhead screws

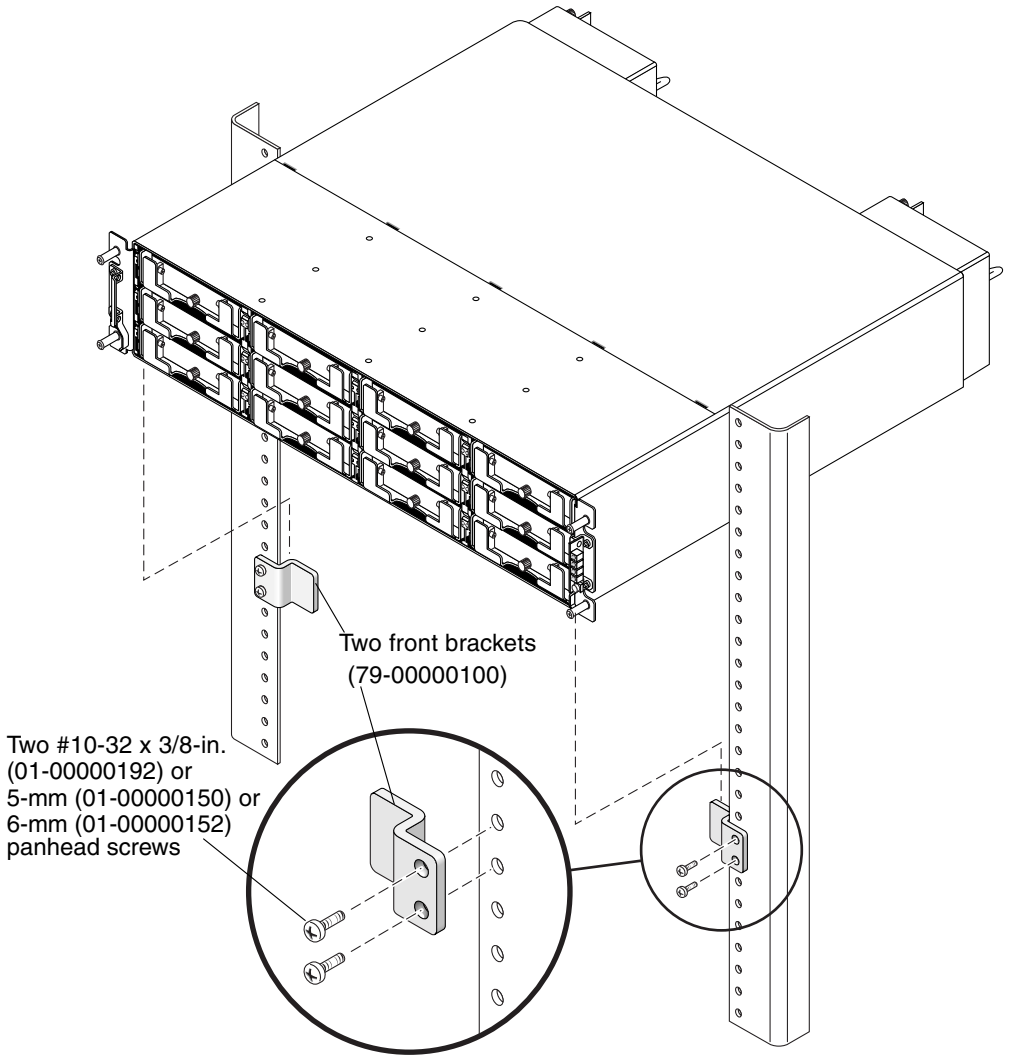

FIGURE 2-8 Front Bracket Position on the Rack Face

4. **Remove the bezel (the front faceplate) and the two plastic ear caps from the front of the chassis.**

Caution – The plastic ear covers are snap-on parts that require some care when you remove them. Remove the right plastic ear cap carefully to avoid breaking the push button reset switch that is directly below the ear cap.

To remove a plastic ear cap (both caps are removed the same way):

a. Squeeze both sides of the cap at the top and the bottom.

b. Turn the cap toward the center of the array until it disengages and pull it free.

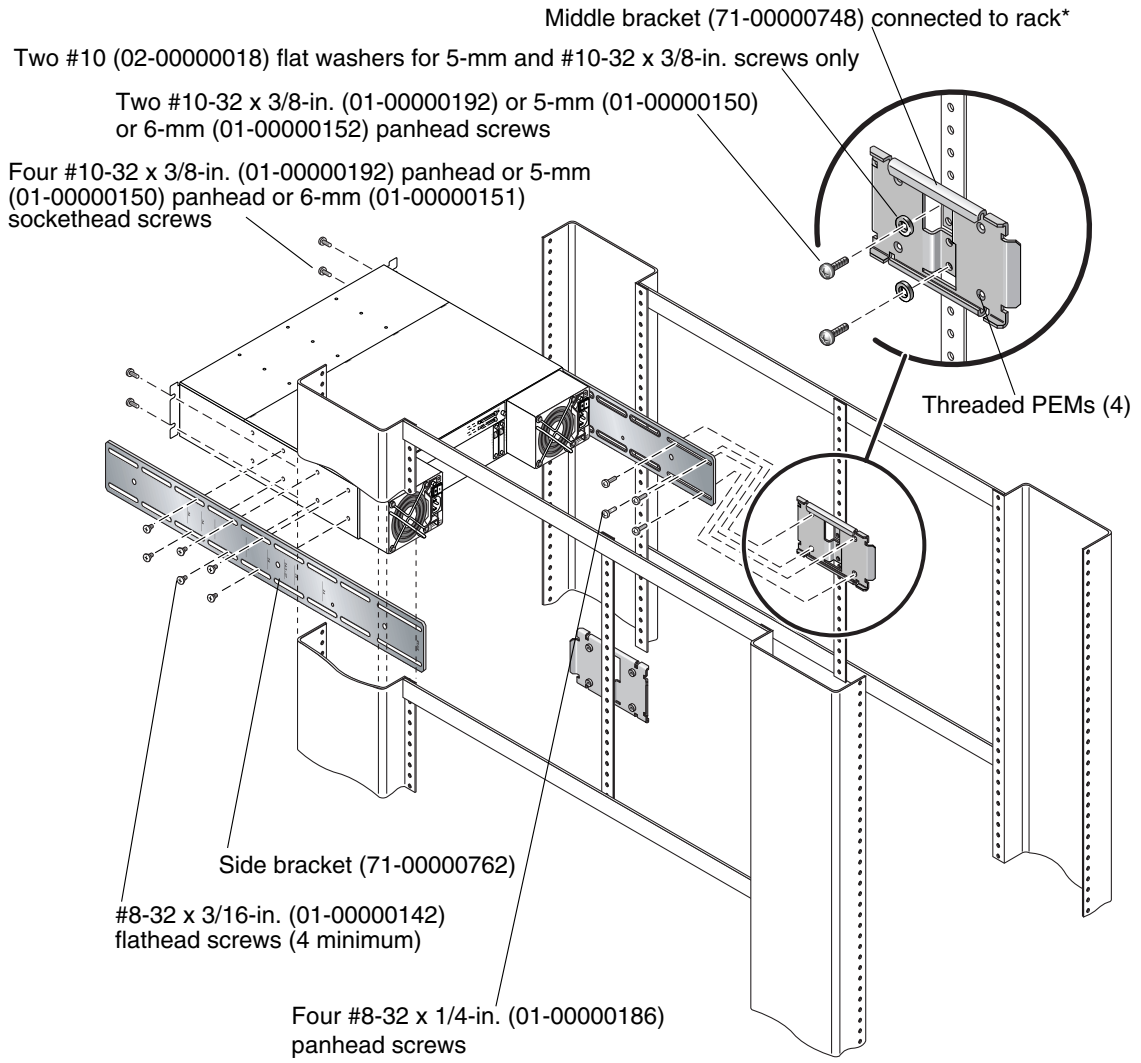

FIGURE 2-9 Cabinet Rackmount with Middle Brackets

*Flanged middle brackets support the side brackets and enable an easy one-person installation.

Note – Alternate screws can be used with the appropriate racks: 5-mm panhead screws (front and back), or 6-mm sockethead screws (front) and 6-mm panhead screws (back).

5. **Attach the side brackets to the left and right sides of the chassis.**

   Attach up to eight #8-32 x 3/16-inch (01-00000142) flathead machine screws on each side to allow some adjustment to the placement. Make sure you use at least four screws.

Note – The right and left side brackets are identical. See TABLE 2-1 for the rack kit contents and part numbers.

   a. **Use the alignment marks (depth in inches) stamped into the side brackets to position the brackets and screws.**

      There are markings for several depths: 24, 26, 24.5-27, 28, 30, 32, 34, and 36 inches.

      Determine the depth you require, and align the last alignment mark on the side bracket with the last mounting holes on the chassis.

      Make sure the alignment mark corresponding to the depth you want lines up with the top and bottom threaded holes on the side of the chassis closest to the rear.

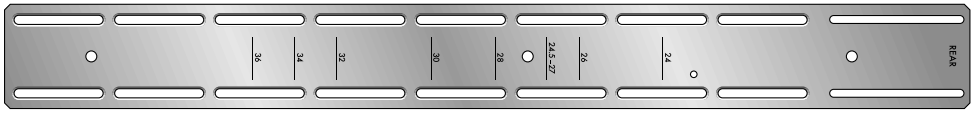

FIGURE 2-10 Side Bracket With Alignment Marks

   b. **Insert the first two screws on each side through the side bracket slots above and below the alignment mark and into the last pair of rear threaded holes in the chassis.**

      In FIGURE 2-11 the alignment marks (24, 26, 24.5-27, 28, 30, 32, 34, or 36 inches) are positioned above and below the last pair of rear threaded holes. This positions the array for a 24.5-inch deep center rail for mounting the middle bracket.

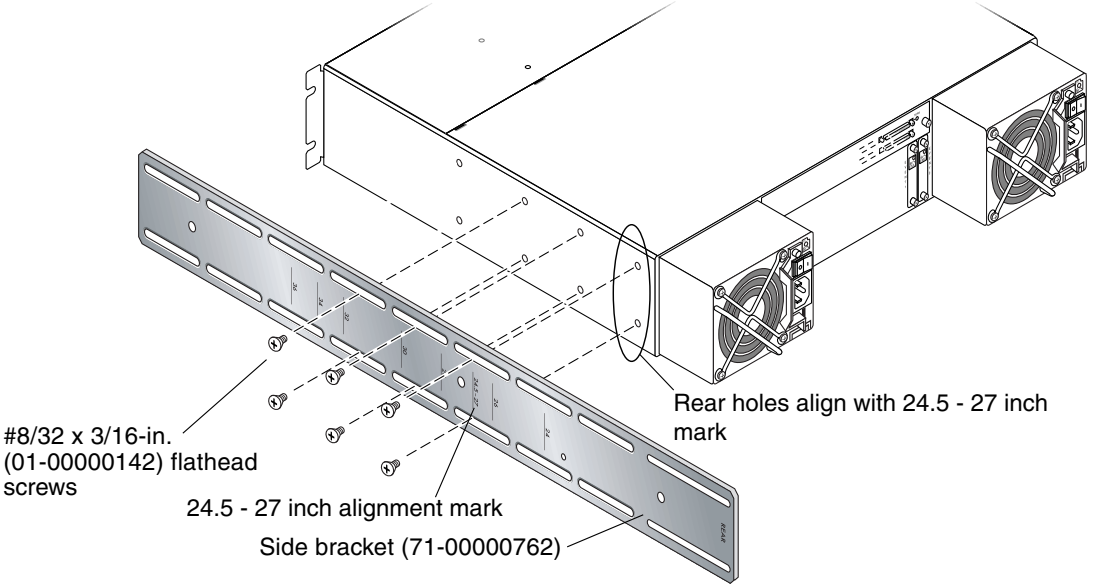

FIGURE 2-11 Aligning a Side Bracket With the Rear Threaded Holes on the Side of the Array

c. Insert up to six other screws through the side bracket slots into the other threaded holes in the chassis.

6. Use a total of four screws (01-00000192) and four washers (02-00000018) to mount the middle brackets to the rack vertical center posts (two screws to attach each bracket to a post).

a. Insert a minimum of two screws through the side bracket slots and through the middle bracket holes. (See FIGURE 2-9).

Use the appropriate type of screws for the posts:

- #10-32 x 3/8-inch (01-00000192) panhead screws with #10 washers (02-00000018)
  or
- 5-mm (01-00000150) panhead screws with #10 washers (02-00000018)
  or
- 6-mm (01-00000152) panhead screws (no washers required)

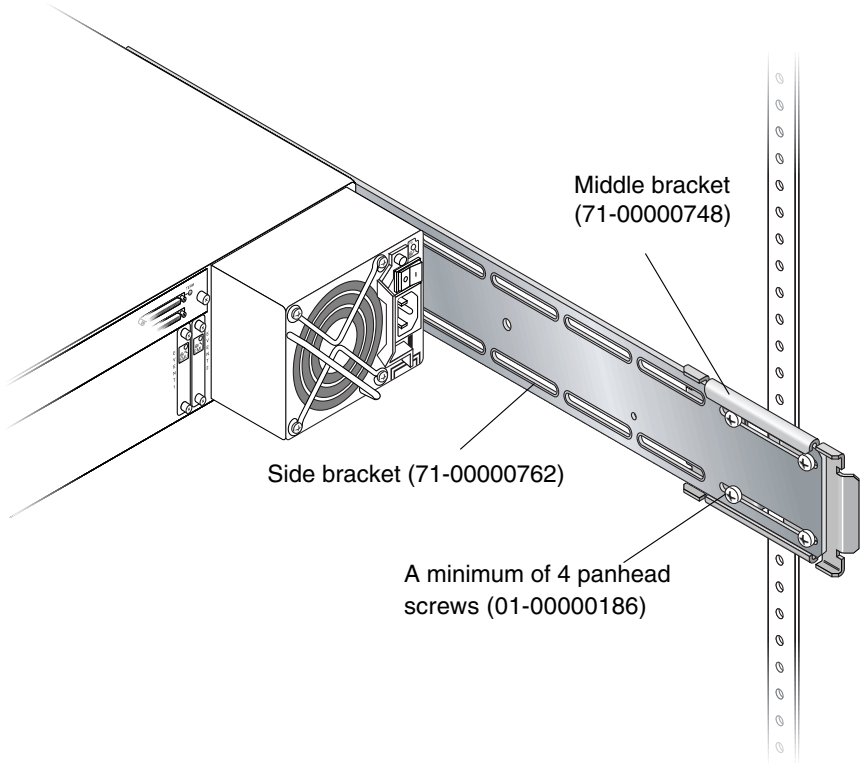

FIGURE 2-12 Middle and Side Brackets Assembled

7. **Lift the chassis and slide the side brackets into the middle brackets, which are attached to the center posts.**

   Adjust the depth of the side brackets so that the slotted cutouts on the *side brackets* align with the four PEM nuts in the *middle brackets.*

8. **Attach each side bracket to a middle bracket** (see FIGURE 2-12):

   To connect the middle brackets (71-00000748) and side brackets of a 24-inch to 36-inch deep rack, use a minimum of four screws each and up to a total of four #8-32 x 1/4-inch (01-00000186) panhead screws per middle bracket.

9. **Attach and secure the array's front mounting ears with four appropriate screws (two screws into each ear):**
   - Four #10-32 x 3/8-inch (01-00000192) panhead screws
     or
   - Four 5-mm (01-00000150) panhead screws
     or
   - Four 6-mm (01-00000151) sockethead screws

10. **Remount all drives and power/fan modules into the array.**

11. **If you mounted the unit using the optional front support brackets, remove them from the rack face using a standard screwdriver.**

12. **Reattach the two plastic ear caps and the bezel onto the front of the chassis.**

    Each plastic cap is replaced the same way, but be sure the cap with the LED labels on the right ear.

    a. **Align the inside round notches of the cap with the round cylindrical posts (ball studs) on the ear.**

    b. **Push the top and bottom of the ear cap onto the ear, pressing in on the top side toward the center of the array first.**

    c. **Continue pushing the top and bottom of the ear cap onto the ear, pressing on the side toward the outside of the array.**

       Do not use force when placing a cap on an ear.

Caution – Be careful to avoid "wedging" the reset button below the LEDs on the right ear when you replace the plastic cap over it.

    d. **Insert the bezel arms into the chassis holes.**

    e. **Lift the bezel into position and press it onto the front of the chassis until it is flush with the front.**

    f. **Use the key to lock both bezel locks.**

13. **Connect power cables to the chassis, power up, and check for proper operation of the LEDs.**

    For details on powering on and checking LEDs, see Chapter 4.

CHAPTER 3

Telco Rackmounting

This chapter provides the procedure for mounting Sun StorEdge 3000 Family 2U arrays with the use of Telco hardware.

The topics covered are:

- Section 3.1, "Flushmount Configuration" on page 3-1
- Section 3.2, "Center-of-Gravity Configuration" on page 3-6

3.1 Flushmount Configuration

Be sure to review Section 1.2, "One-Person Installation Requirements" on page 1-3 and Section 1.3, "Reviewing the Tools" on page 1-3 before rackmounting the array.

Refer to FIGURE 3-1 and TABLE 3-1 during installation. TABLE 3-1 lists the major components and fasteners required to install an array into the Telco 19-inch wide flushmount racks.

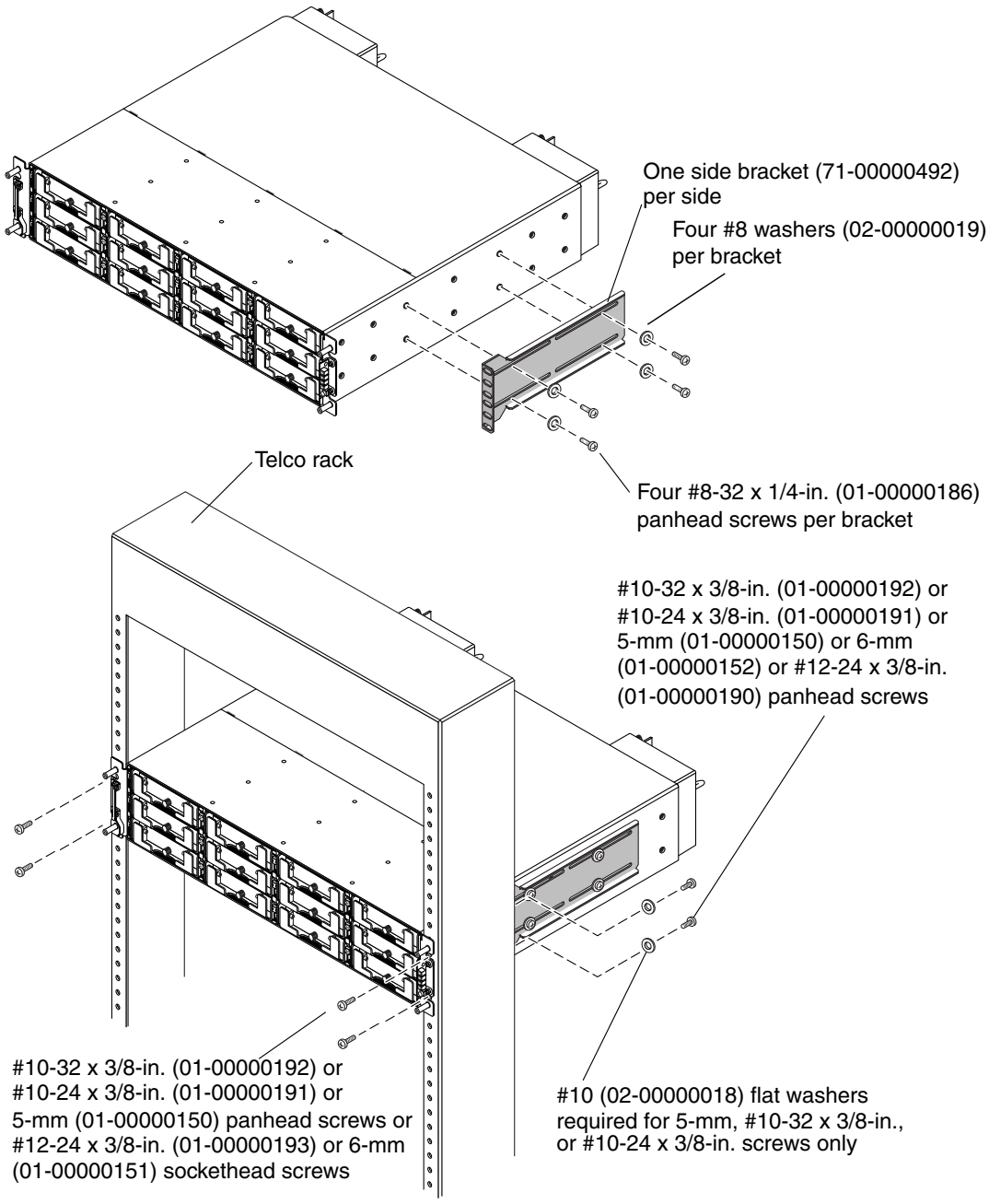

FIGURE 3-1 Flushmount Assembly

TABLE 3-1 XTA-3000-2URK-19FZ: Telco Flushmount Rackmount Kit (594-2007-01)

Major Component			Fasteners		
Qty.	**Part Number**	**Description**	**Qty.**	**Part Number**	**Description**
2	71-00000492	Rear brackets	10	01-00000186	#8-32 x 1/4 in. panhead screws
			10	02-00000019	#8 washers
			10	01-00000192	#10-32 x 3/8 in. panhead screws
			4	02-00000018	#10 washers
			5	01-00000151	6-mm sockethead screws
			8	01-00000152	6-mm panhead screws
			10	01-00000150	5-mm panhead screws
			10	01-00000191	#10-24 x 3/8 in. panhead screws
			5	01-00000193	#12-24 x 3/8 in. sockethead screws
			5	01-00000190	#12-24 x 3/8 in. panhead screws
1	09-00000063	5/32-inch Allen wrench for #12-24 sockethead screws			
1	09-00000064	5-mm Allen wrench for 6-mm sockethead screws			

Perform the following installation steps for a Telco flushmount rack configuration (see FIGURE 3-1).

1. **Determine the position at which the array will be installed.**

   Install the first array at the *bottom* of the rack, and install each subsequent chassis above the one below.

   For additional rack hole information, see Appendix A.

Note – Keep all hardware items in plastic bags until you are ready to use them. This will enable you to correctly identify the screws and avoid confusion.

---

2. **Before rackmounting, be sure to check your site location and confirm that you have cables with adequate lengths to connect to servers and to power outlets.**

3. **Remove the bezel (the front faceplate) and two plastic ear caps from the front of the chassis.**

Caution – The plastic ear covers are snap-on parts that require some care when you remove them. Remove the right plastic ear caps carefully to avoid breaking the push button reset switch that is directly below the ear cap.

To remove a plastic ear cap (both caps are removed the same way):

a. Squeeze both sides of the cap at the top and the bottom.

b. Turn the cap toward the center of the array until it disengages and pull it free.

4. **While supporting the chassis, attach the unit to the Telco rack, using four screws through the chassis ears.**

   Use the appropriate type of screws for the posts:

   - #10-32 x 3/8-inch (01-00000192) panhead screws
     or
   - #10-24 x 3/8-inch (01-00000191) panhead screws
     or
   - 5-mm (01-00000150) panhead screws
     or
   - 6-mm (01-00000151) sockethead screws
     or
   - #12-24 x 3/8-inch (01-00000193) sockethead screws

5. **Attach the rear brackets (71-00000492) to the left and right sides of the chassis. Use four #8-32 x 1/4-inch (01-00000186) panhead machine screws with #8 washers (02-00000019) per bracket.**

6. **Attach the chassis to the rear of the Telco rack by inserting four or more screws through the mounting holes located on both sides of the brackets and into the frame.**

   Use the appropriate type of screws for the ports:

   - #10-32 x 3/8-inch (01-00000192) panhead screws with #10 (02-00000018) washers
     or
   - #10-24 x 3/8-inch (01-00000191) panhead screws with #10 (02-00000018) washers
     or
   - 5-mm (01-00000150) panhead screws with #10 (02-00000018) washers
     or
   - 6-mm (01-00000152) panhead screws
     or
   - #12-24 x 3/8-inch (01-00000190) panhead screws

7. **Reinstall all drive modules and power/fan modules into the array if they were removed.**

8. **Reattach the two plastic ear caps and the bezel onto the front of the chassis.**

   Each plastic cap is replaced the same way, but be sure the cap with the LED labels on the right ear.

   a. Align the inside round notches of the cap with the round cylindrical posts (ball studs) on the ear.

b. Push the top and bottom of the ear cap onto the ear, pressing in on the top side toward the center of the array first.

c. Continue pushing the top and bottom of the ear cap onto the ear, pressing on the side toward the outside of the array.

Do not use force when placing a cap on an ear.

Caution – Be careful to avoid "wedging" the reset button below the LEDs on the right ear when you replace the plastic cap over it.

d. Insert the bezel arms into the chassis holes.

e. Lift the bezel into position and press it onto the front of the chassis until it is flush with the front.

f. Use the key to lock both bezel locks.

9. Connect the power cables to the chassis, power on, and check for proper operation of the LEDs.

For details about the LEDs, see Chapter 4.

3.2 Center-of-Gravity Configuration

Be sure to review Section 1.2, "One-Person Installation Requirements" on page 1-3 and Section 1.3, "Reviewing the Tools" on page 1-3 before rackmounting the array.

Refer to the following parts list and FIGURE 3-2 during installation. The following table lists the major components and fasteners required to install an array into the Telco 19-inch wide center-of-gravity rack.

TABLE 3-2 XTA-3000-2URK-19CZ: Telco Center-of-Gravity Rackmount Kit (594-2006-01)

Major Components			Fasteners		
Qty.	**Part Number**	**Description**	**Qty.**	**Part Number**	**Description**
4	71-00000491	Side brackets	24	01-00000186	#8-32 x 1/4 in. panhead screws
			24	02-00000019	#8 washers
			10	01-00000192	#10-32 x 3/8 in. panhead screws
			10	02-00000018	#10 washers
			10	01-00000152	6-mm panhead screws
			10	01-00000150	5-mm panhead screws
			10	01-00000191	#10-24 x 3/8 in. panhead screws
			10	01-00000190	#12-24 x 3/8 in. panhead screws

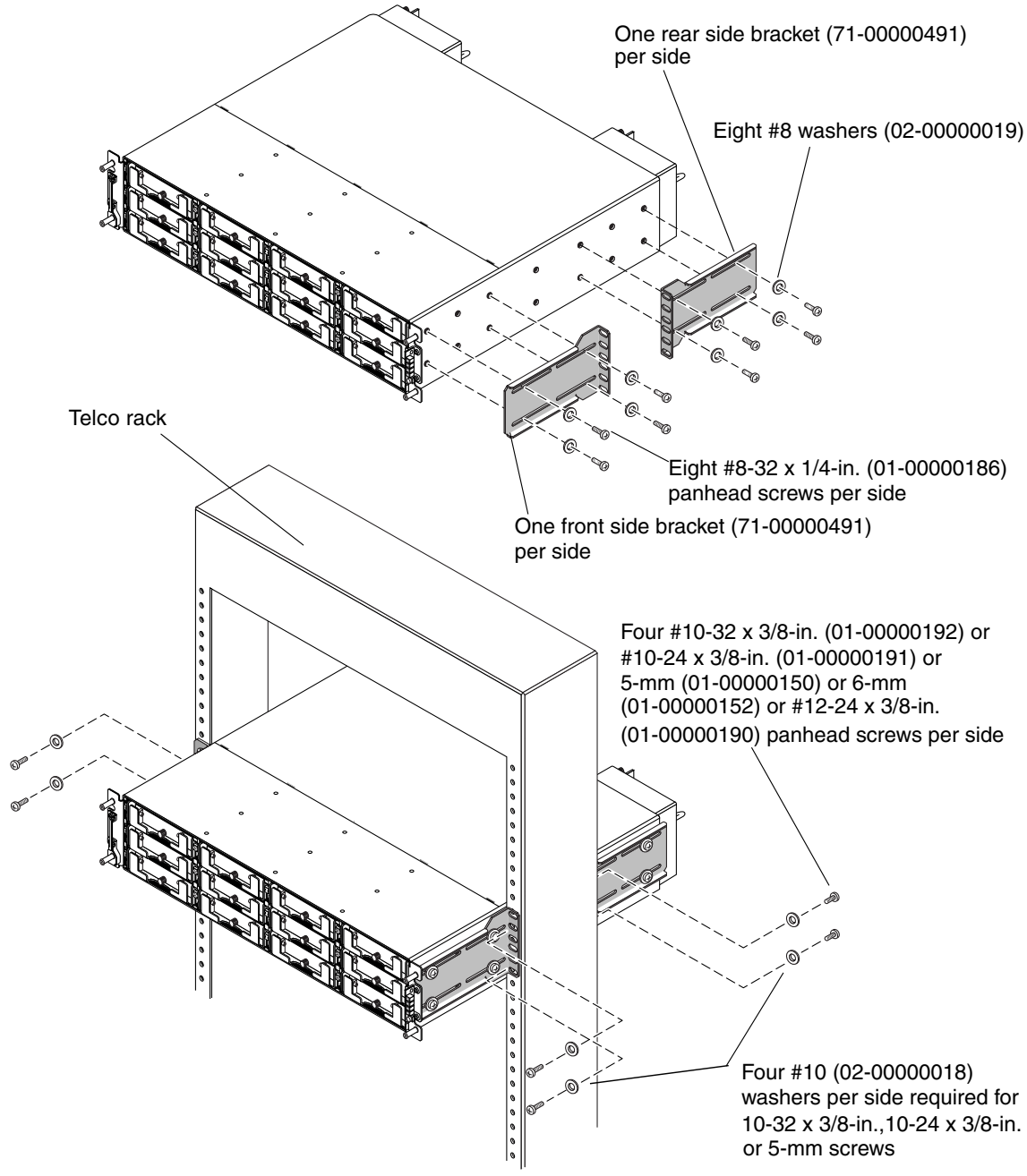

FIGURE 3-2 Center-of-Gravity Assembly

Perform the following installation steps for a Telco center-of-gravity rack configuration (see FIGURE 3-2).

1. **Determine the position at which the array will be installed.**

   Install the first array at the *bottom* of the rack, and install each subsequent chassis above the one below.

   For additional rack hole information, see Appendix A.

Note – Keep all hardware items in plastic bags until you are ready to use them. This will enable you to correctly identify the screw sizes and avoid confusion.

---

2. **Before rackmounting, be sure to check your site location and confirm that you have cables with adequate lengths to connect to servers and to power outlets.**

3. **Remove the bezel (the front faceplate) and two plastic ear caps from the front of the chassis.**

Caution – The plastic ear covers are snap-on parts that require some care when you remove them. Remove the right plastic ear caps carefully to avoid breaking the push button reset switch that is directly below the ear cap.

To remove a plastic ear cap (both caps are removed the same way):

a. Squeeze both sides of the cap at the top and the bottom.

b. Turn the cap toward the center of the array until it disengages and pull it free.

4. **Attach the side brackets to each side of the chassis:**

   Allow for the depth of the rack, and allow for the distance you want the chassis to extend forward in the rack. Attach the front brackets first.

   Use up to six #8-32 x 1/4-inch (01-00000186) panhead screws with #8 (02-00000019) washers for each front side bracket, using the mounting holes available. (Use four screws as a minimum.) Then mount the front brackets to the Telco rack as explained in step 5.

5. **Attach the chassis to the Telco rack by inserting four or more screws through the mounting holes located on both sides of the brackets and into the frame.**

   a. **Use the appropriate type of screws for the ports:**

   - #10-32 x 3/8-inch (01-00000192) panhead screws with #10 (02-00000018) washers
     or
   - #10-24 x 3/8-inch (01-00000191) panhead screws with #10 (02-00000018) washers
     or
   - 5-mm (01-00000150) panhead screws with #10 (02-00000018 washers
     or
   - 6-mm (01-00000152) panhead screws
     or
   - #12-24 x 3/8-inch (01-00000190) panhead screws

   b. **Use four #8-32 x 1/4-inch (01-00000186) panhead screws with #8 (02-00000019) washers for each rear side bracket.**

6. **Reinstall all drive modules and power/fan modules into the array if they were removed.**

7. **Reattach the two plastic ear caps and the bezel onto the front of the chassis.**

   Each plastic cap is replaced the same way, but be sure the cap with the LED labels on the right ear.

   a. **Align the inside round notches of the cap with the round cylindrical posts (ball studs) on the ear.**

   b. **Push the top and bottom of the ear cap onto the ear, pressing in on the top side toward the center of the array first.**

   c. **Continue pushing the top and bottom of the ear cap onto the ear, pressing on the side toward the outside of the array.**

      Do not use force when placing a cap on an ear.

Caution – Be careful to avoid “wedging” the reset button below the LEDs on the right ear when you replace the plastic cap over it.

   d. **Insert the bezel arms into the chassis holes.**

   e. **Lift the bezel into position and press it onto the front of the chassis until it is flush with the front.**

   f. **Use the key to lock both bezel locks.**

8. **Connect power cables to the chassis, power up, and check for proper operation of the LEDs.**

   For details about the LEDs, refer to Chapter 4.

CHAPTER 4

Powering On and Checking LEDs

Perform the initial check of the array according to the following procedure.

1. **Connect two AC (or DC) power cables to the power/fan modules on the rear of the array.**
2. **Power on the array using both power switches.**
3. **Make sure all front LEDs turn green.**

   When a controller is powered on, continuous media scans begin on all physical drives that are active components of logical drives. Whenever media scan is running on a drive, its front-panel LED flashes green. It is normal for almost all front-panel drive LEDs to flash green unless media scanning is terminated. For more information, refer to the *Sun StorEdge 3000 Family RAID Firmware User's Guide*.

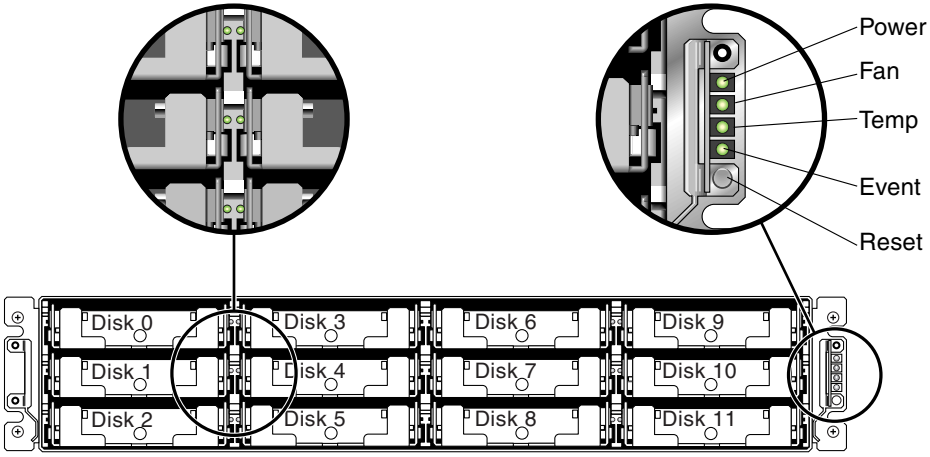

FIGURE 4-1 Front Panel With LEDs Displayed

Refer to the *Sun StorEdge 3000 Family Installation, Operation, and Service Manual* for your array, for more information about how to cable and power on the array and how to interpret the LEDs.

APPENDIX **A**

Mounting Holes in the Sun StorEdge 72-Inch Expansion Cabinet

The following table lists the bracket mounting holes for installing multiple Sun StorEdge 3000 Family 2U arrays in a 72-inch expansion cabinet.

Note – The Sun StorEdge 72-Inch Expansion Cabinet has power connections for up to eight Sun StorEdge 3000 Family 2U arrays

TABLE A-1 Sun StorEdge 3000 Family 2U SCSI and FC Arrays

Array	Front Holes	Rear Holes
1	9,12	9,12
2	15, 18	15, 18
3	21,24	21,24
4	27,30	27,30
5	33,36	33,36
6	39,42	39,42
7	45,48	45,48
8	51,54	51,54
9*	57,60	57,60
10*	63,66	63,66
11*	69,72	69,72
12*	75,78	75,78
13*	81,84	81,84
14*	87,90	87,90

TABLE A-1 Sun StorEdge 3000 Family 2U SCSI and FC Arrays *(Continued)*

Array	Front Holes	Rear Holes
15*	93,96	93,96
16*	99,102	99,102
17*	105,108	105,108

* These locations can be used only if arrays are not mounted using the holes shown for Arrays 1-8.

Note – The Sun StorEdge Expansion Cabinet (72-inch) is configured with a power sequencer in the bottom six holes.