

Sun Ultra™ 80 Rack Mount Installation Guide



THE NETWORK IS THE COMPUTER™

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Sun Ultra 80 Rack Mount Installation Guide

This document describes how to install a Sun Ultra™ 80 workstation (the *system*) into a rack configuration using the optionally purchased rack-mounting kit.

Preparing Your Site

Prior to rack-mounting your system, ensure you have adequate power, ventilation, and environmental controls to support your rack-mounted system. This includes rack spacing that allows for front-to-back air flow for cooling your system. See TABLE 1.

TABLE 1 Site Rack Requirements

Feature	Requirement
Floor	Before installing the system cabinet ensure that the planned area floor is level.
Ventilation	To prevent over heating, openings in the rack must not be blocked or covered. Do not place the rack near a radiator or heating register.
Power	Operate the rack from the type of power source indicated on the electrical rating label provided on the rack. The rack power cords must each be connected to dedicated branch circuits of the proper current capacity.

The rack-mounting kit is designed so that you can install it in a Sun™ system cabinet or other similar industry-standard rack that meets the requirements listed in TABLE 2. You need one Sun rack-mounting kit for each system that you wish to rack-mount.

TABLE 2 Rack Requirements

Feature	Requirement
Load bearing capacity	The rack must firmly support the weight of up to five systems (at 65 lbs, 30 kg each), plus the weight of each associated rack-mounting kit.
Vertical space requirements	Each system requires seven rack units (12.25 inches, 31.12 cm) of vertical space for rack installation. A 72-inch (183 cm) cabinet can accommodate up to five systems.
Vertical mounting rail	The rack must have two pairs of vertical mounting rails (one pair in front, one in back) that conform to the EIA (RETMA) standard for mounting hole spacing.
	Left-side-to-right-side rail spacing (mounting hole center to mounting hole center) for front and rear rails must be 18.3 inches (46.5 cm).
	Front-to-rear rail spacing must be at least 28 inches (71.1 cm) and not more than 34 inches (86.3 cm) from the outside face of the front rail to the outside face of the rear rail.
	Front and rear vertical rail mounting faces must be parallel with each other and with the front plane of the rack.
EMI	Electromagnetic interference (EMI) shielding requirements are met by the system chassis and metal side panels, which remain in place when the unit is rack-mounted.
Anti-tip protection	The rack must be bolted securely to the floor or equipped with a sturdy and extendable anti-tip leg. You must prevent the cabinet from tipping forward when one or more systems and other devices are fully extended out the front of the rack.
Minimum service access	An area not less than 3 feet (1 meter) deep and 6 feet (2 meters) wide must be available in front of the rack for installation and service access.
Fire containment	The rack enclosure must meet Underwriters Laboratories, Inc. and TUV Rheinland of N.A. requirements for fire containment.

Preparing to Install

You will need a No. 2 Phillips screwdriver to perform this installation.

1. Unpack your rack-mounting kit (FIGURE 1).

Each item is a quantity of one, except the fasteners. There are 22 screw-type fasteners.

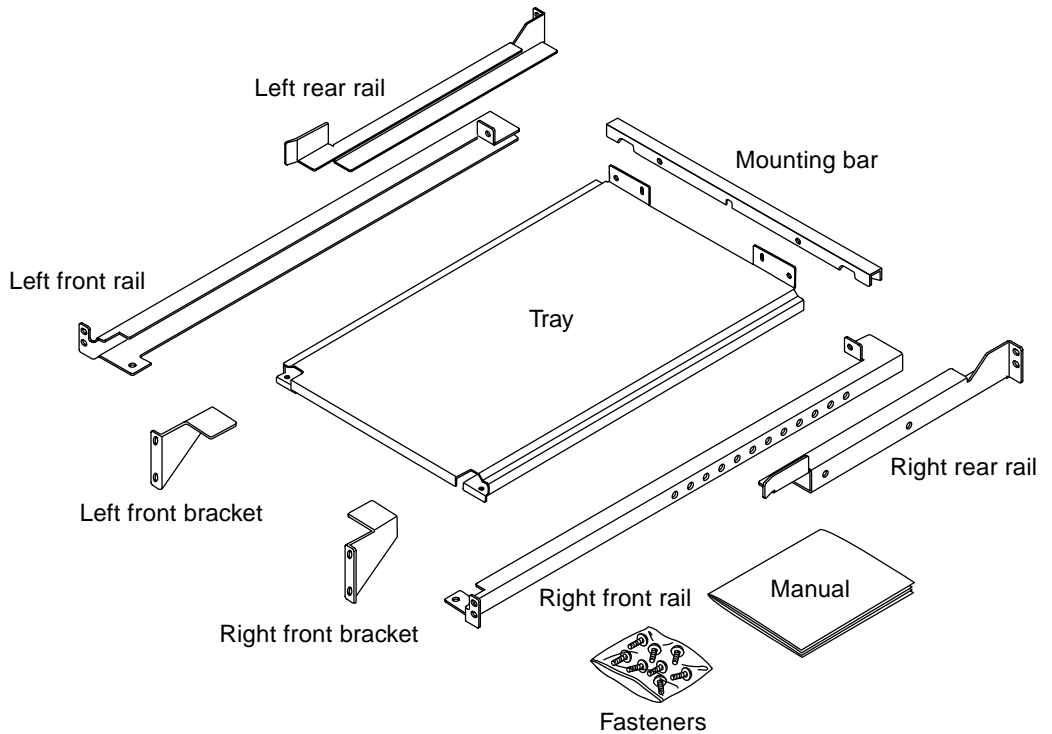


FIGURE 1 Rack-Mounting Kit Inventory

2. Unpack or disconnect your system (FIGURE 2).

Refer to your system documentation for specific directions on powering off and disconnecting your system.

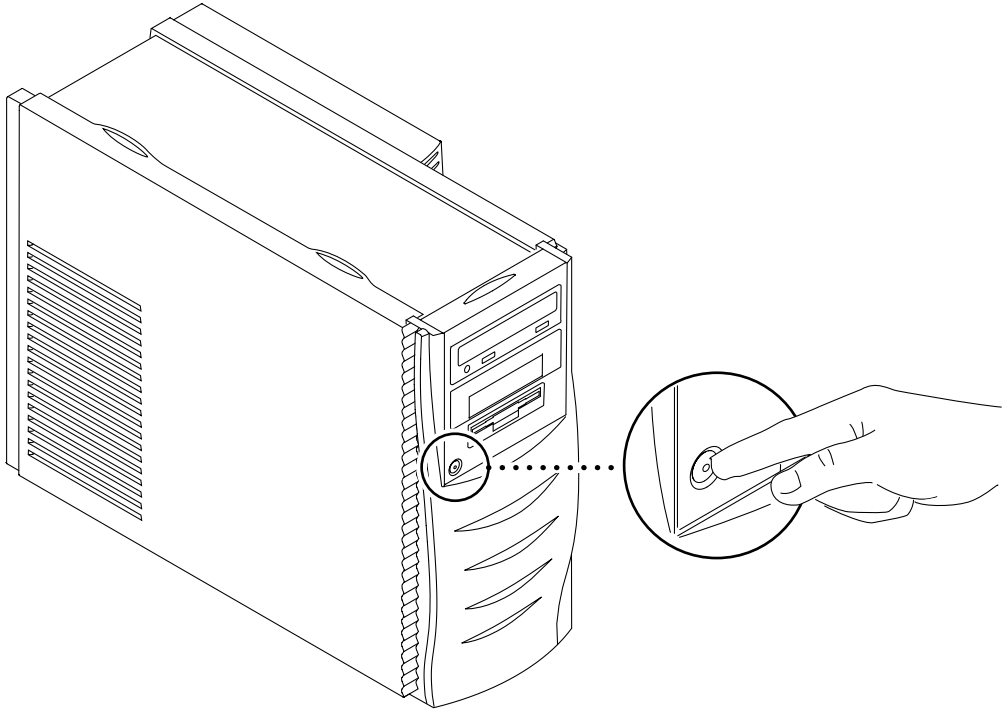


FIGURE 2 Power Switch on a System

To power off your system:



Caution – Prior to turning off the system power, exit from the operating system. Failure to do so may result in data loss.

a. Back up system files and data.

b. Halt the system.



Caution – Pressing the power switch does not remove all power from the system; a trickle voltage remains in the power supply. To remove all power from the system, disconnect the power cord.

- c. **Press and quickly release the front-panel power switch (FIGURE 2) and follow the instructions on the screen.**

Note – If a system will not shut down, such as when the operating system has crashed, press and hold the power switch for at least five seconds.

- d. **Verify the following:**
 - The front panel LED is off.
 - The system fans are not spinning.
 - e. **Turn off the power to the monitor.**
 - f. **Disconnect the power cords.**
 - g. **Disconnect cables to any peripheral equipment.**
3. **Set aside all cabling and peripherals.**

4. Clear a working space in the rack (FIGURE 3).

A rack-installed system requires clearance equal to seven rack-mount units (22 holes, 12.25 inches, 31.12 cm) of height. This distance allows for the rack-mounting tray, the system, and air flow space.

A typical rack 72-inch (183-cm) in height can support up to five rack-mounted systems.

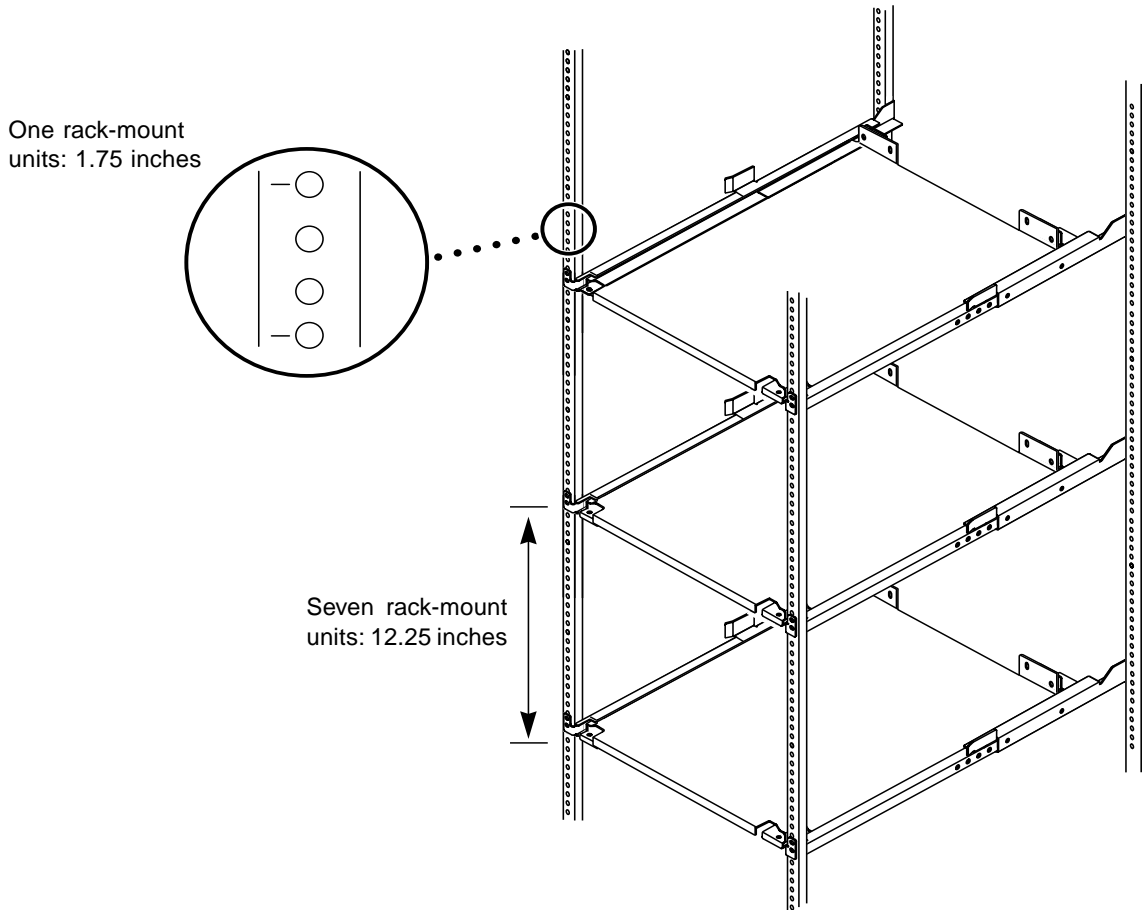


FIGURE 3 Mounting Rack

Preparing the Rack-Mounting Tray

1. Assemble the mounting rails (FIGURE 4).

- a. Place the left front rail into the left rear rail.
- b. Estimate the length required to fit the left rail pair into the rack.
- c. Place the left rail pair into the rack. Slide the rails to adjust to the depth of the rack.
Place the bracket on the inside of the rack. Place the flanges on the outside edges of the rack rails.
- d. Using a No. 2 Phillips screwdriver and two of the provided screws, fasten the front and rear rail pieces together.
Feed the screw from the inside track of the rails, then tighten
- e. Place the right front rail into the right rear rail.
- f. Using the completed left rail pair as a template, measure the length required for the right rail pair, adjust and fasten.

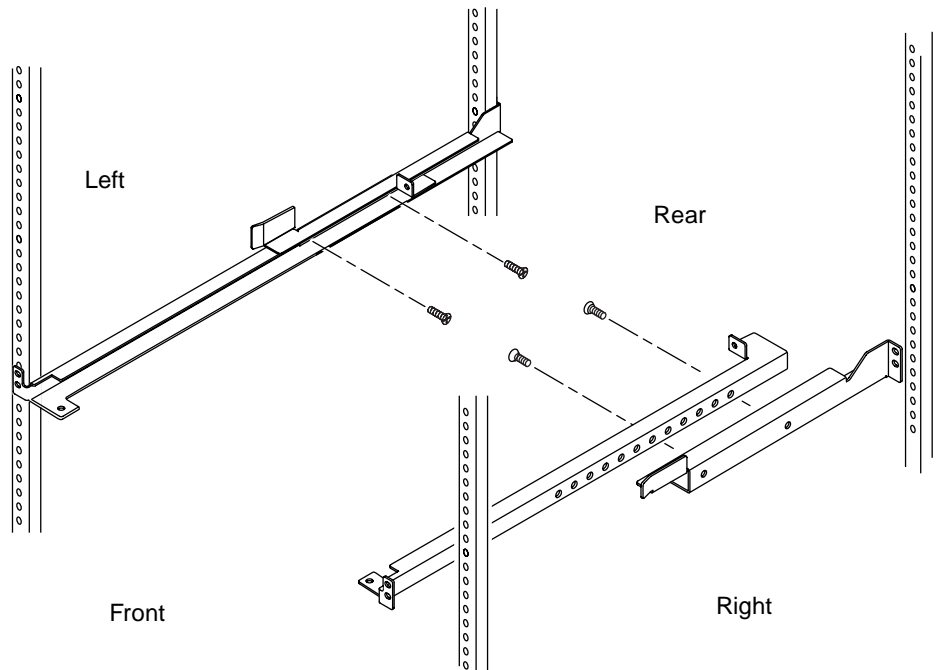


FIGURE 4 Assembling the Mounting Rails

2. Fasten the rails to the rack (FIGURE 5).



Caution – If you are installing multiple systems, install the lower rack-mount kits (and system) first, then work toward the top. This prevents the rack from being top-heavy and tipping.

- a. **Mark one rack hole on each rack column to ensure horizontal spacing for the rails and tray.**
Typical racks are numbered in increments of 5 rack holes. Use these markers to align your rails.
- b. **Using four of the provided screws, fasten the left rail assembly to the left side of the rack.**
- c. **Align the right side rail assembly with the left side rail.**
- d. **Using four of the provided screws, fasten the right rail assembly to the right side of the rack.**

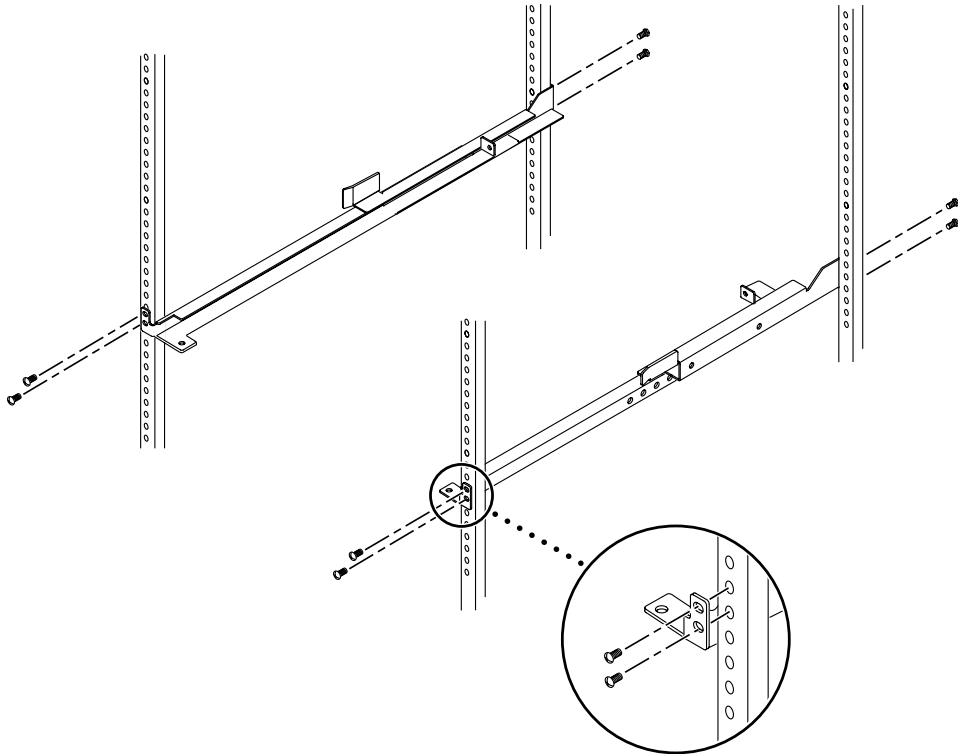


FIGURE 5 Installing Rails into the Rack

3. Slide the tray into the installed rails.

Gripping the tray from the front, insert and slide the tray along the inside of the rails until the front and rear flanges stop the tray (FIGURE 6).

The tray is a fixed length. The mounting rails extend beyond the tray.

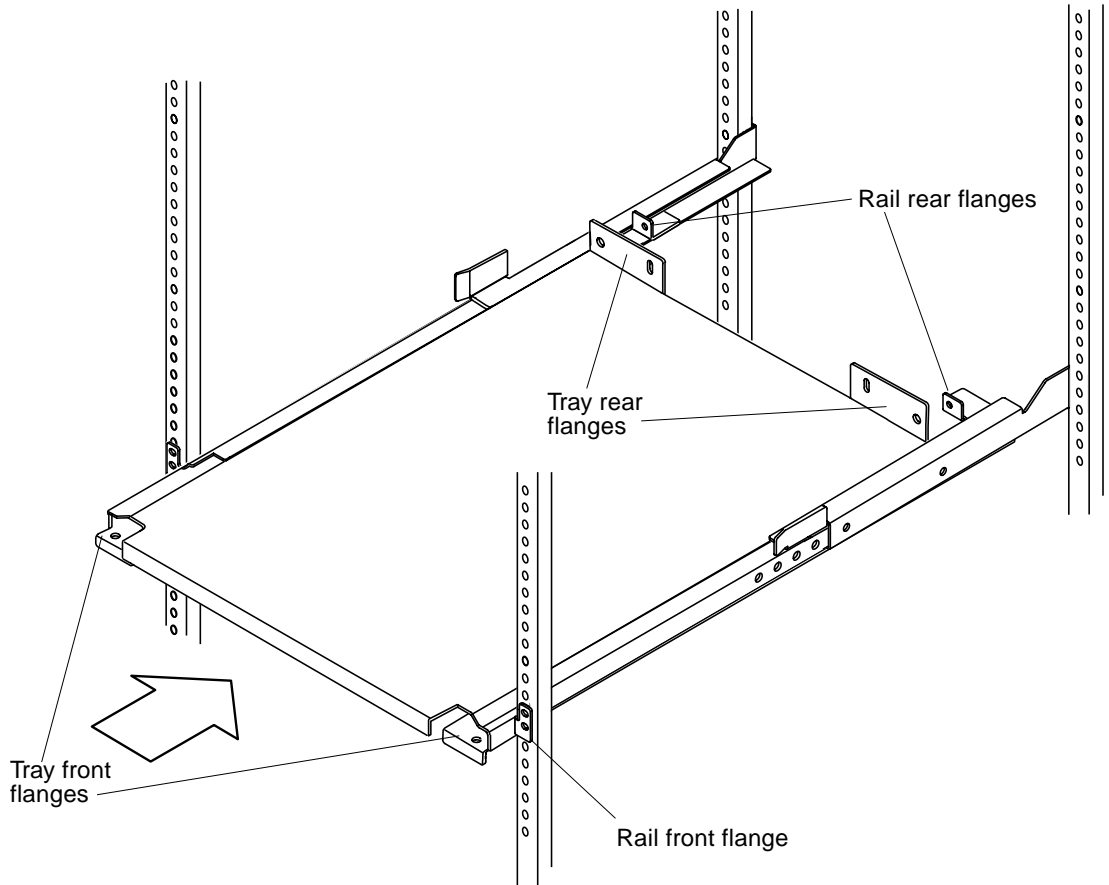


FIGURE 6 Assembling the Rack-Mounting Tray



Caution – Do not place the system on the tray before the tray is in place and fully secured. The rails are not designed to support the weight of a system on an extended tray. Do not use the tray as a 'sliding shelf'.

4. Fasten the mounting tray to the mounting rails.

a. Using two of the provided screws, fasten the rear of the tray to the rails.

Feed the screws through the flanges from the rear side of the flange. This helps to align the fastening holes in the front flanges.

b. Using two of the provided screws, fasten the front of the tray to the rails.

The screws should be fed through the tray flange into the rail flange from the top.

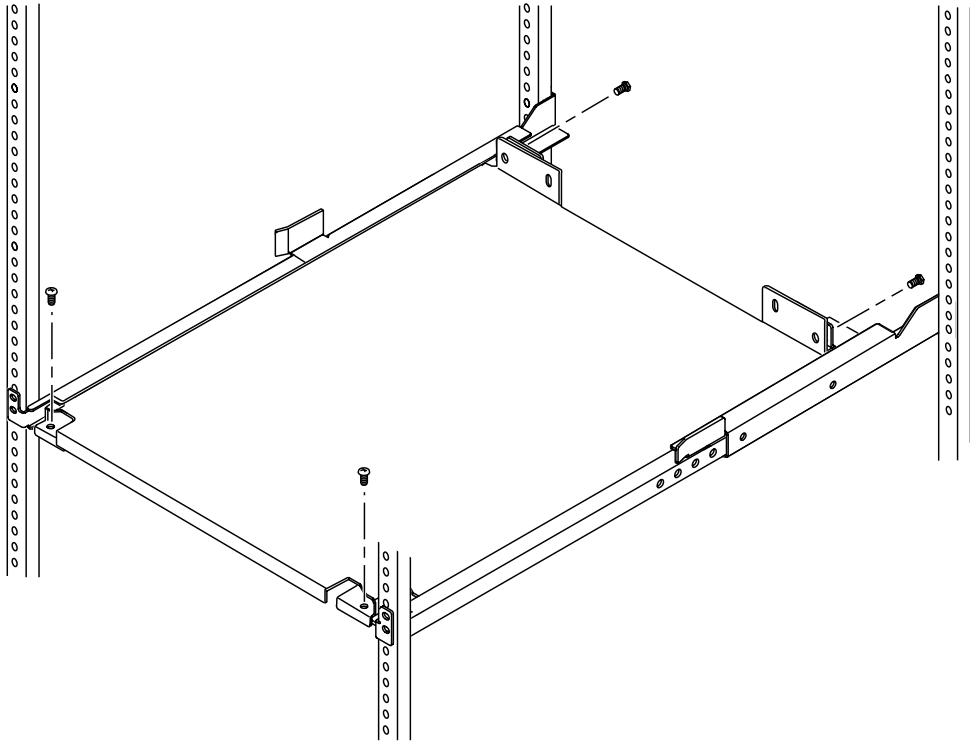


FIGURE 7 Fastening the Mounting Tray to the Mounting Rails

Preparing the System

1. Lay the system on its side.

Facing the back of the system, tip the unit to the left so the feet are to the right.

Note – Place the system on the power supply side. Do not place the system on the access panel side.

2. Remove the three screws from the base of the power supply at the back of the system. Set the screws aside (FIGURE 8).

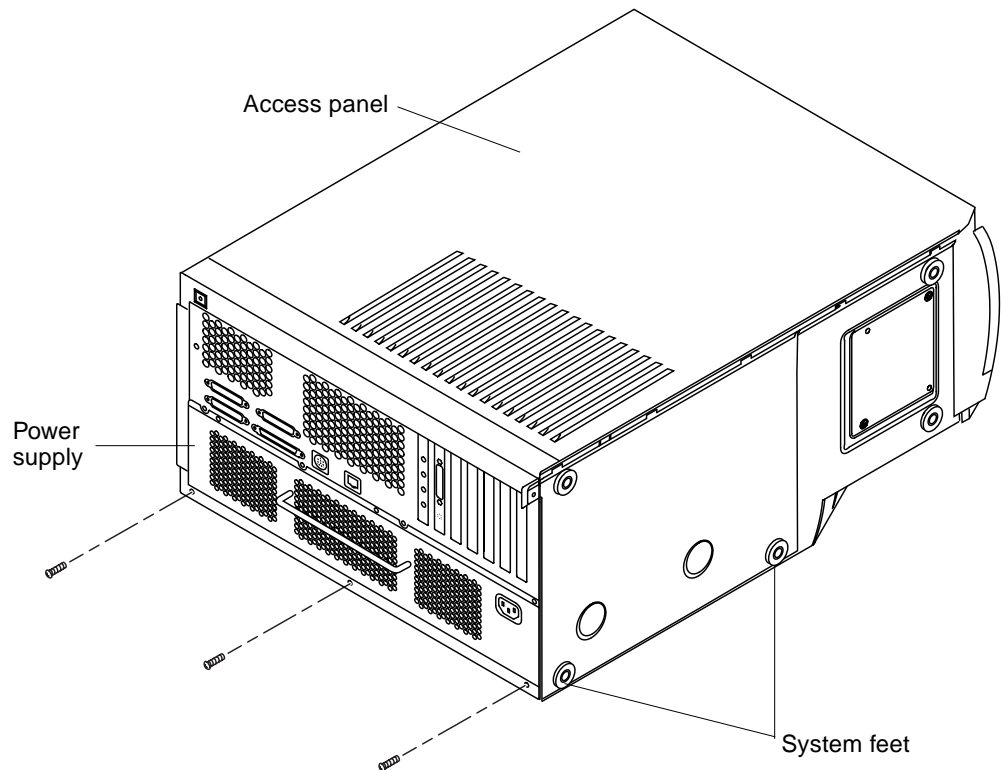


FIGURE 8 Removing the Power Supply Screws

3. Using the three screws you set aside in the previous step, fasten the mounting bar to the system (FIGURE 9).
- Face the open channel of the mounting bar downward.
 - Feed the power supply screws through the mounting bar's open channel cutouts.

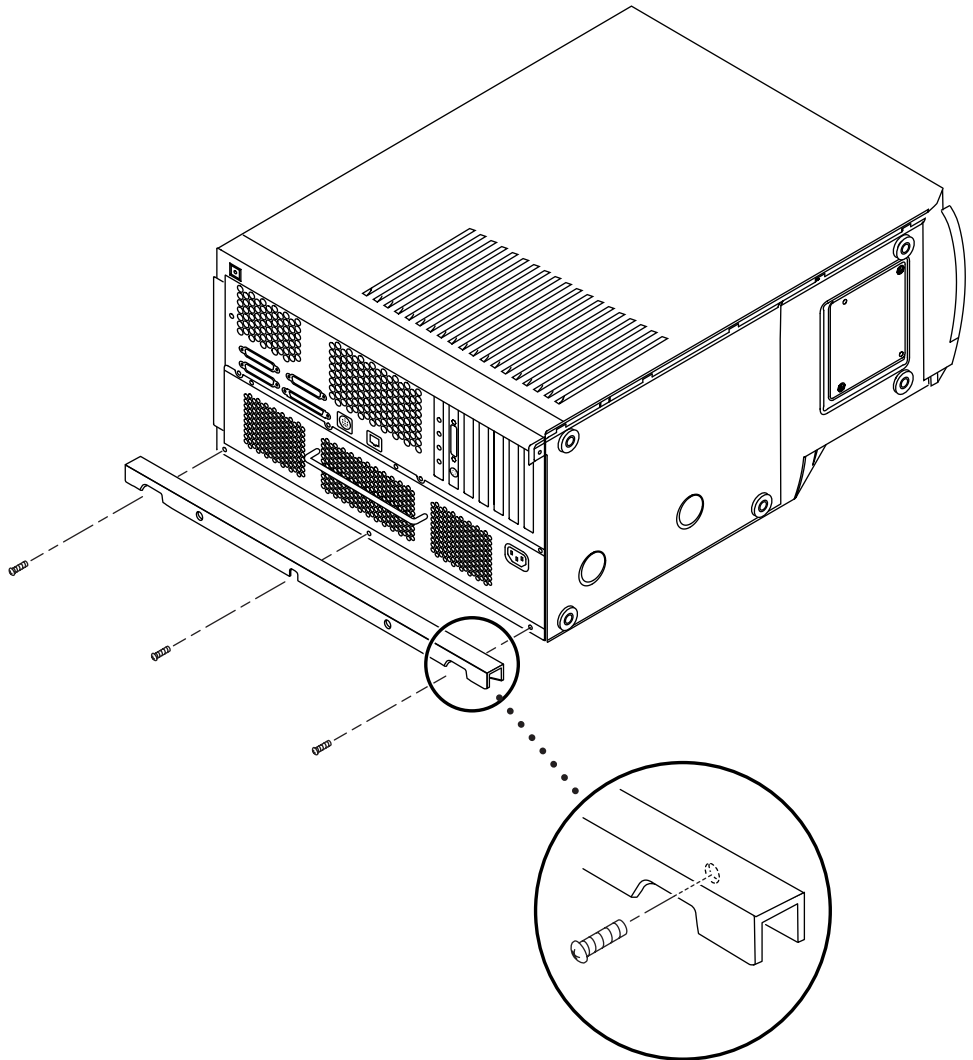


FIGURE 9 Fastening the Mounting Bar to the System

Installing the System

1. If your rack has stabilizing bars, extend these prior to installing the system.



Caution – If you are installing multiple systems, install the lower units first, then work toward the top. This prevents the rack from being top-heavy and tipping.

2. Facing the front of the system and the front of the rack, place the system on the mounting tray.



Caution – The system weighs over 65 pounds. **Always** ensure that *two people* lift the system.

3. Slide the system back until it is flush with the rear flanges on the mounting tray (FIGURE 10).

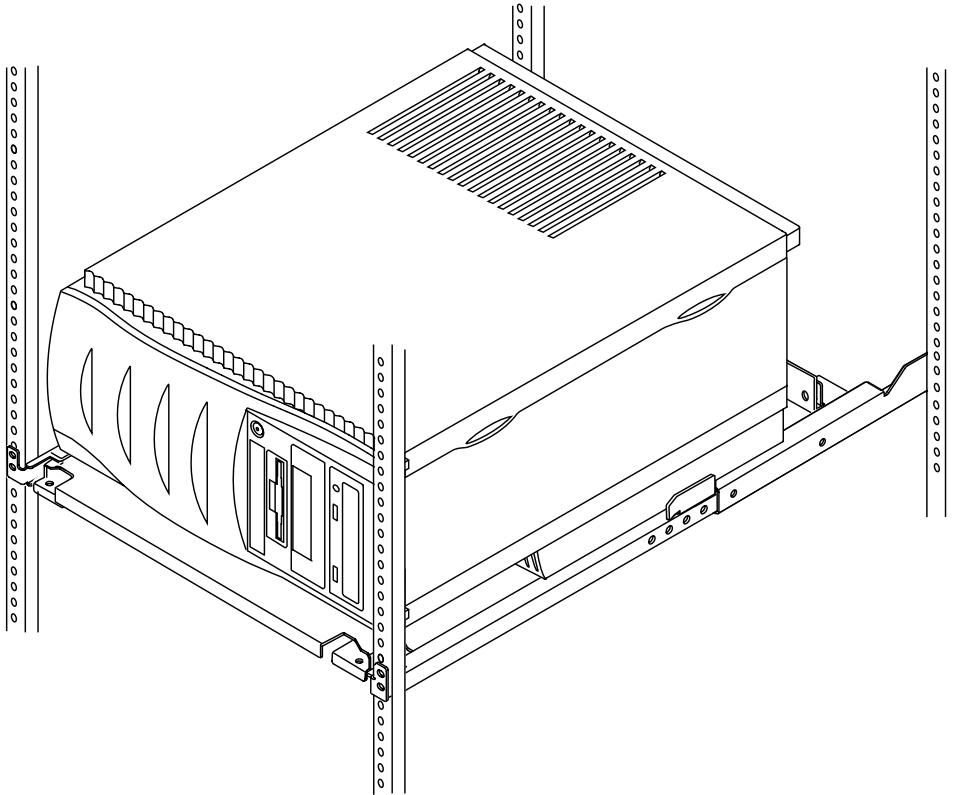


FIGURE 10 Placing the System in the Rack

4. Using two of the provided screws, fasten the rear of the mounting tray to the mounting bar (FIGURE 11).

Feed the screws through the mounting tray flange and fasten them to the mounting bar. These screws do not fasten to the system. They fasten to the *mounting bar*.

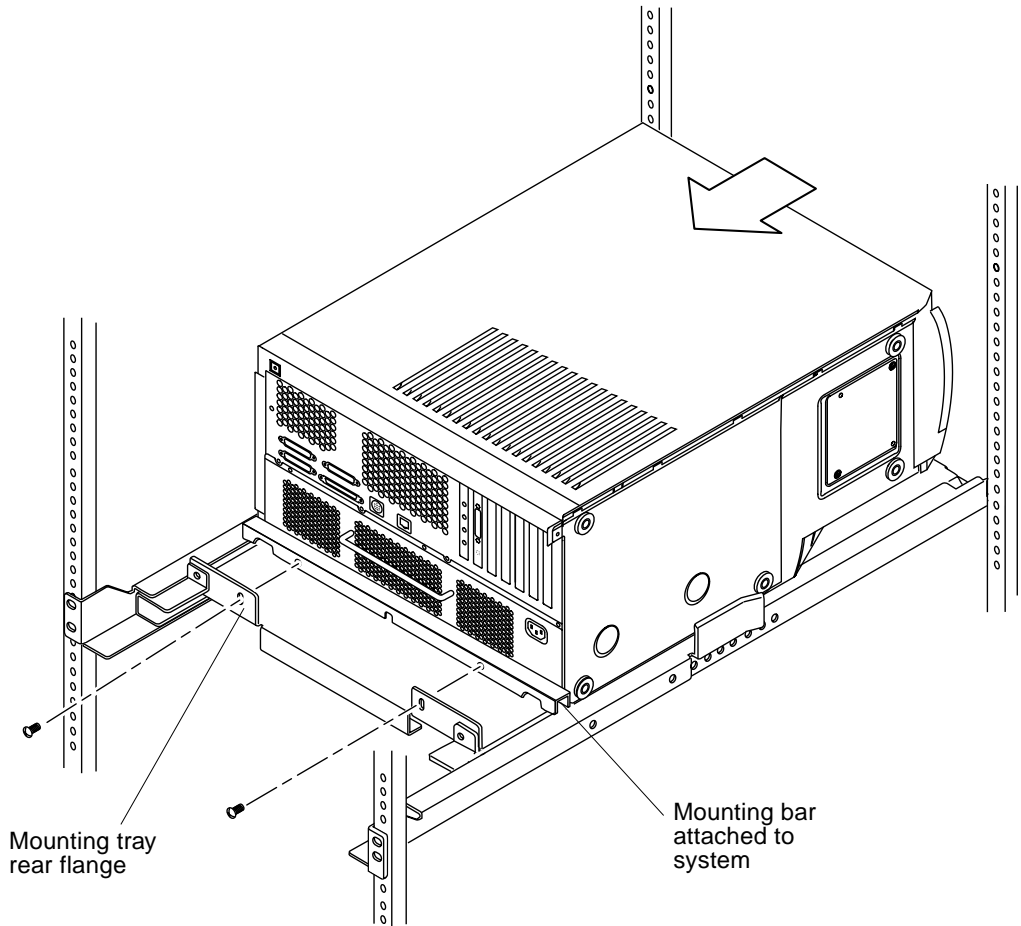


FIGURE 11 Fastening the System to the Mounting Tray

5. **Slide the left front bracket onto the left side of the system until the bracket flanges meet the rack.**

Place the bracket so it fits snugly above the system, while maintaining alignment with the rack rail holes.

6. **Using two of the provided screws, fasten the left front bracket to the rack** (FIGURE 12).

7. **Slide the right front bracket onto the right side of the system until the bracket flanges meet the rack.**

Place the bracket so it fits snugly above the system, while maintaining alignment with the rack rail holes.

8. **Using two of the provided screws, fasten the right front bracket to the rack** (FIGURE 12).

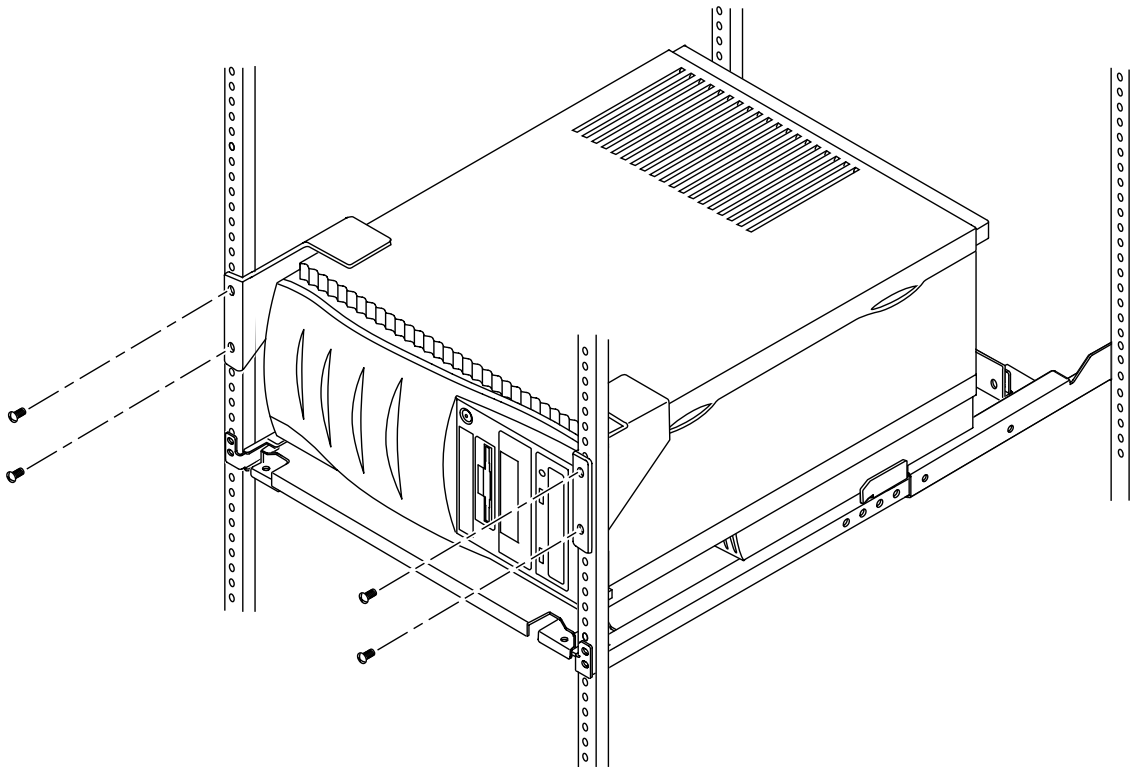


FIGURE 12 Fastening the Left and Right Front Brackets

9. Connect power and cables as needed (FIGURE 13).

Your system is ready for you to continue with your system-specific installation processes. Refer to your system documentation for further instructions.

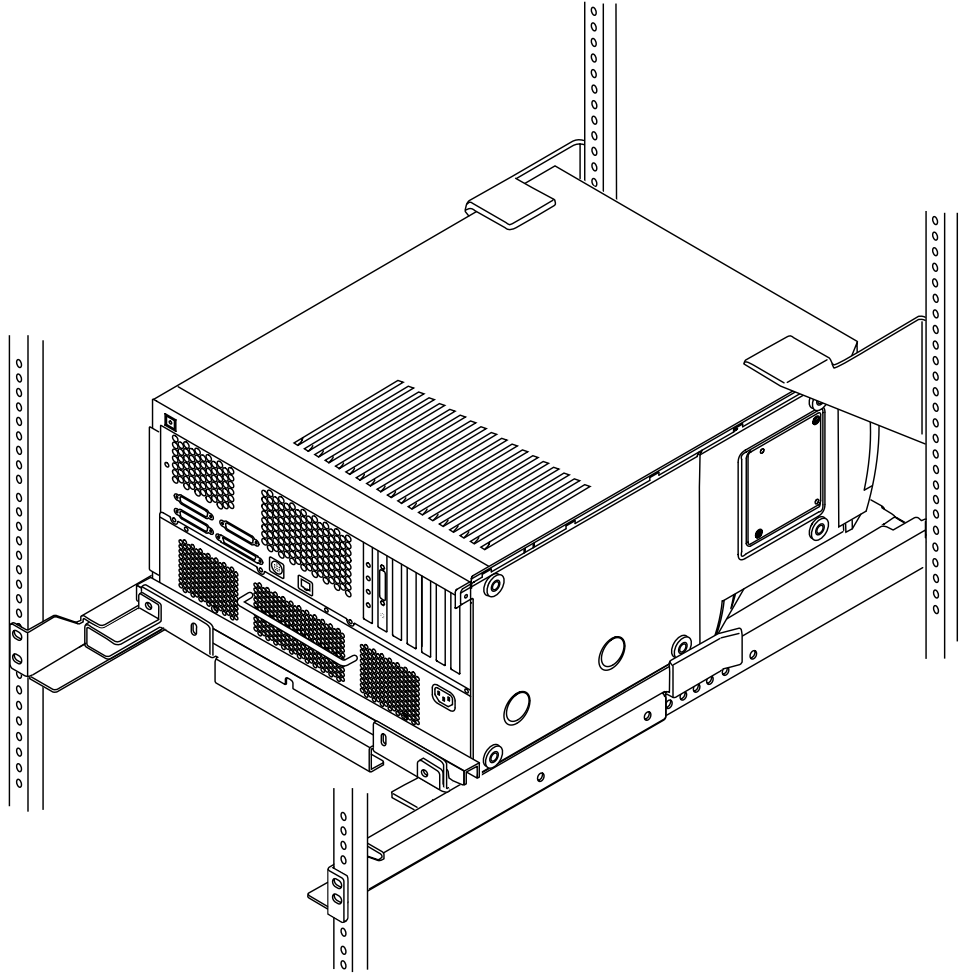


FIGURE 13 System Installed and Ready for Cabling

