Chapter 6

Rack Installation

This chapter provides instructions for installing the chassis into a rack.

6-1 Unpacking the System

You should inspect the box the chassis was shipped in, and note if it was damaged in any way. If the chassis itself shows damage, you should file a damage claim with the carrier who delivered it.

Mounting rails are an option for the SC748 chassis. Be sure you have ordered and received the correct type.

6-2 Preparing for Setup

Decide on a suitable location for the rack unit that will hold your chassis. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. Place it near a grounded power outlet.

Choosing a Setup Location

- Leave enough clearance in front of the rack to enable you to open the front door completely (~25 inches).
- Leave approximately 30 inches of clearance in the back of the rack to allow for sufficient airflow and ease in servicing.
- This product is for installation only in a Restricted Access Location (dedicated equipment rooms, service closets and similar environments).

Rack Precautions

- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
- In single rack installation, stabilizers should be attached to the rack.
- In multiple rack installations, the racks should be coupled together.
- Always make sure the rack is stable before extending a component from the rack.
- You should extend only one component at a time--extending two or more simultaneously may cause the rack to become unstable.
- When initially installing the server to a rack, test that the rail locking tabs engage to prevent the server from being overextended. Have a rack lift in place as a precaution in case the test fails.
- In any instance of pulling the system from the rack, always use a rack lift and follow all associated safety precautions.

General Server Precautions

- Review the electrical and general safety precautions that came with the components you are adding to your chassis.
- Determine the placement of each component in the rack *before* you install the rails.
- Install the heaviest server components on the bottom of the rack first, and then work up.
- Use a regulating uninterruptible power supply (UPS) to protect the server from power surges, voltage spikes and to keep your system operating in case of a power failure.
- Allow the hot plug hard drives and power supply modules to cool before touching them.
- Always keep the rack's front door and all panels and components on the servers closed when not servicing to maintain proper cooling.

6-3 Rack Mounting Considerations

Ambient Operating Temperature

If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (TMRA).

Reduced Airflow

Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.

Mechanical Loading

Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.

Circuit Overloading

Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Reliable Ground

A reliable ground must be maintained at all times. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (for example, the use of power strips, and other devices).



Warning: To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

6-4 Procedure for Rack Mounting

There are a variety of rack units on the market, which may mean the assembly procedure differs slightly. You should also refer to the installation instructions for the rack unit you are using.

By default, the chassis is shipped configured as a tower. The tower top cover and bottom feet must be removed to mount in a rack. Also, the control panel/drive module should be rotated 90 degrees. See Chapter 4 for this procedure.

Removing the Tower Cover and Feet

The SC748 chassis is shipped with the chassis cover and feet installed. Both must be removed for before installing the rails.

Removing the Tower Top Cover

1. Locate the chassis cover lock (blue lever) at the rear of the chassis cover.
2. Slide the chassis cover lock to the right and push chassis cover forward.
3. Lift the chassis top cover off the chassis.

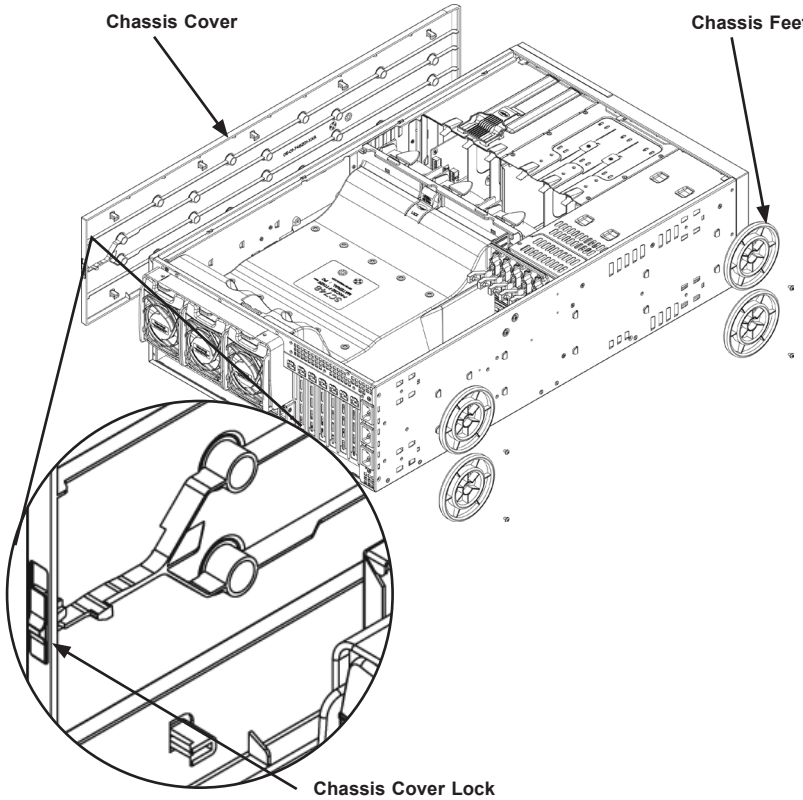


Figure 6-1. Remove Feet and Chassis Top Cover

Removing the Chassis Feet

1. Place the chassis on its side with the chassis side cover facing upward.
2. Remove the screw holding a chassis foot in place.
3. The foot lock is a tab located in the center of the foot that prevents the foot from sliding. Using a flat head screwdriver, **gently** lift the foot lock upward and slide the foot toward the rear of the chassis.
4. Repeat steps 2 and 3 with each remaining foot.

Identifying the Sections of the Rack Rails

The rail package includes two rack rail assemblies in the rack mounting kit. Each assembly consists of two sections: an inner fixed chassis rail that secures directly to the server chassis and an outer fixed rack rail that secures directly to the rack itself.

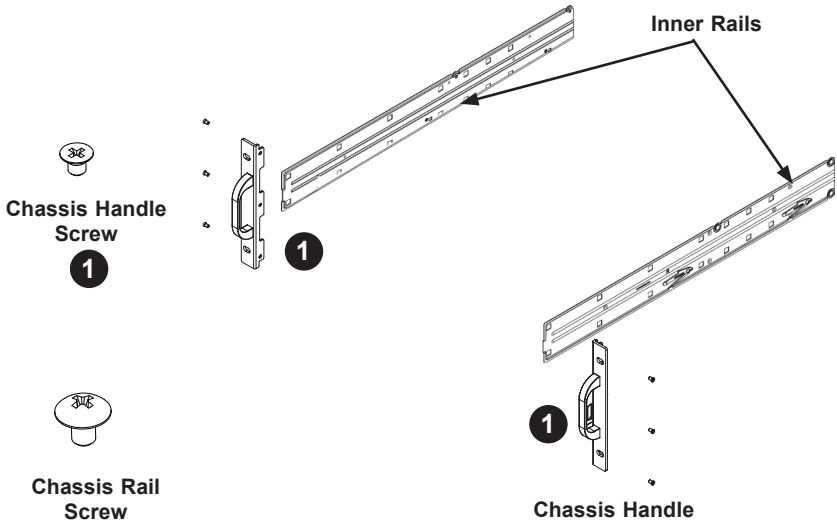


Figure 6-2. Identifying the Inner Rails and Chassis Handles

Installing the Chassis Handles and Inner Rails

1. Locate the chassis handles (2) and handle screws (6).

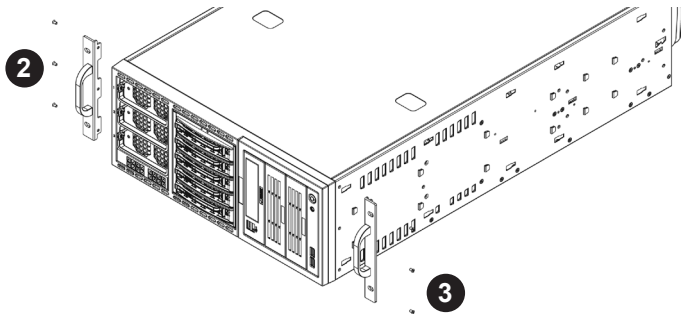


Figure 6-3. Identifying the Inner Rails and Chassis Handles

2. Align the chassis handle with the front of the chassis and secure with the three chassis handle screws.
3. Repeats steps 1 and 2 with the other handle.

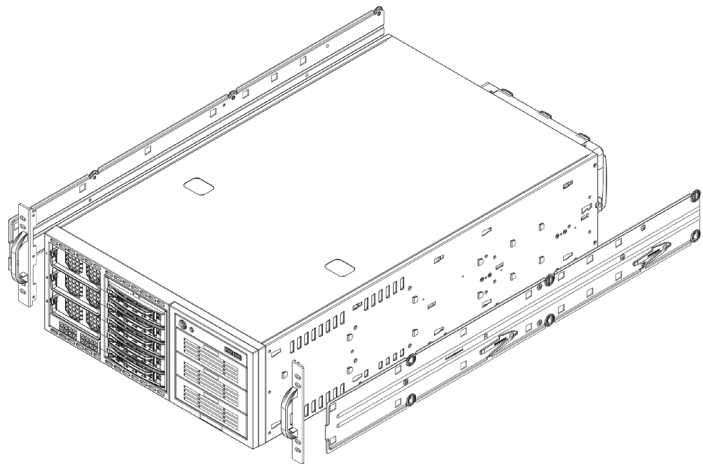


Figure 6-4. Installing the Inner Rack Rails

4. Locate the inner rails (2) and screws (12) in the shipping package.
5. Align the inner rails against the chassis, as shown. Confirm that the rails are flush against the edge of the chassis.
6. Tighten the screws. Do not over tighten.
7. Repeat steps 5 and 6 with the other inner rail.

Installing the Outer Rails to the Rack

1. Attach the front and rear short brackets to the outside of the long bracket. Both bracket ends must face the same direction.
2. Adjust both the brackets to the proper distance so that the rail fits snugly into the rack.

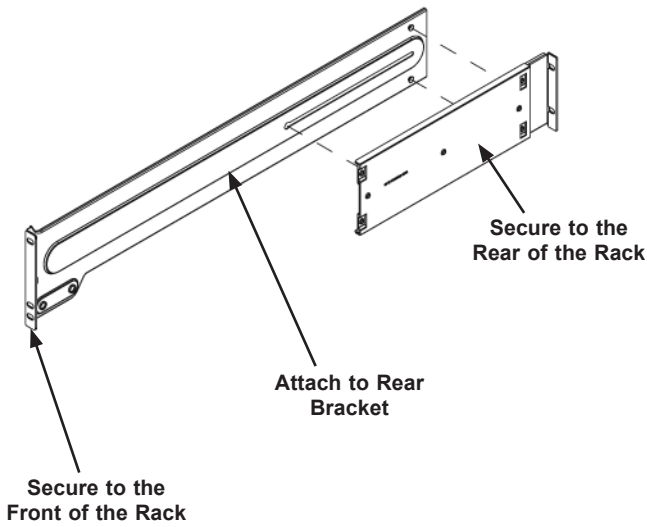


Figure 6-5. Assembling the Outer Rails
(The right side rail is pictured.)

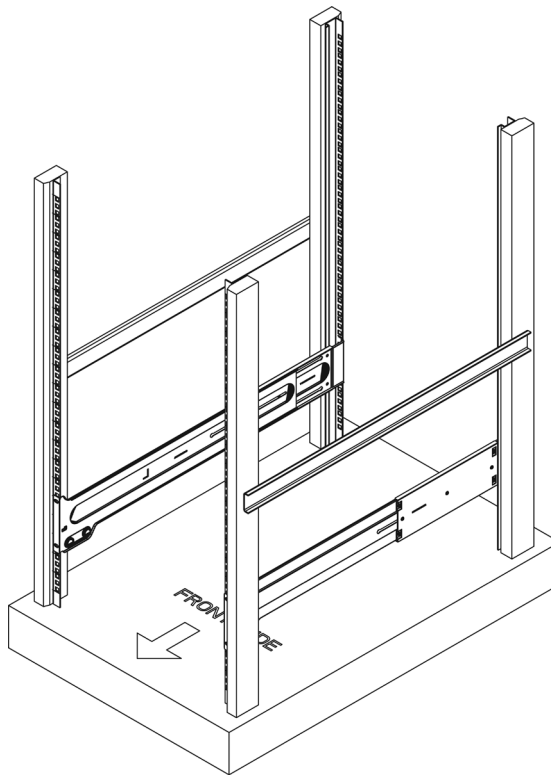


Figure 6-6. Installing the Rack Rails

Note: Figures are for illustrative purposes only. Always install servers into racks from the bottom up.

3. Secure the front side of the outer rail with two M5 screws and the rear side of the outer rail with three M5 screws. **Note:** The outer rail is adjustable from approximately 26" to 38.25".

4. Repeat steps 1-3 for the left outer rail.

Stability hazard. The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over.

Installing the Chassis into a Rack

1. Confirm that chassis includes the inner rails and the outer rails.
2. Line chassis rails with the front of the rack rails (C).
3. Slide the chassis rails into the rack rails, keeping the pressure even on both sides (you may have to depress the locking tabs when inserting). When the server has been pushed completely into the rack, you should hear the locking tabs "click".

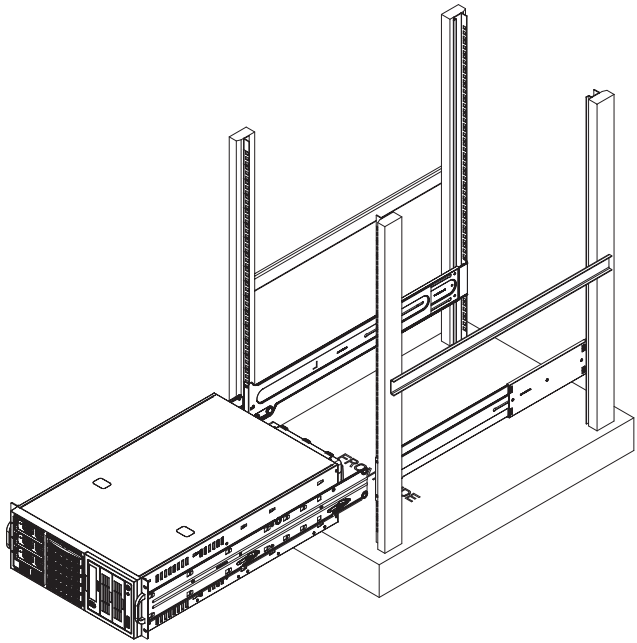


Figure 6-7. Installing the Chassis into a Rack

Warning: Do not pick up the server by the front handles. They are designed to pull the system from a rack only.