Netra SPARC S7-2 Server Installation Guide

Part No: E73206-03
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Contents

Using This Documentation

- **Overview** – Provides specifications and describes how to install and power on Oracle's Netra SPARC S7-2 server for the first time.
- **Audience** – Technicians, system administrators, and authorized service providers.
- **Required knowledge** – Experience installing hardware.

Product Documentation Library

Documentation and resources for this product and related products are available at http://www.oracle.com/goto/netra-s7-2/docs.

Feedback

Provide feedback about this documentation at http://www.oracle.com/goto/docfeedback.

Understanding the Server

These topics provide an installation overview and information about the server features.

Related Information

- "Confirming Specifications" on page 17
- "Preparing for Installation" on page 27
- "Installing the Server" on page 31
- "Connecting Cables" on page 61
- "Powering On the Server for the First Time" on page 71

Installation Task Overview

Perform the following tasks to install and configure the server.

Step	Description	Links
1.	Review the product notes for any late-breaking news about the server.	*Netra SPARC S7-2 Server Product Notes*
2.	Review the server features and familiarize yourself with the server components.	"Server Overview" on page 12 "Front Panel Components (Installation)" on page 14 "Rear Panel Components (Installation)" on page 15
3.	Review the server specifications and the site requirements.	"Confirming Specifications" on page 17

Step	Description	Links
4.	Confirm that you received all the items you ordered.	“Shipping Kit Inventory” on page 27
5.	Review safety and ESD precautions.	“Handling Precautions” on page 28 “ESD Precautions” on page 29
6.	Gather the required tools.	“Tools Needed for Installation” on page 29
7.	Install any optional components that you ordered.	“Optional Components” on page 31
8.	Review the rack cautions.	“Rack Cautions” on page 32
9.	Install the server in a 4-post or 2-post rack.	“Installing the Server” on page 31
10.	Review cabling requirements and port information. Attach data and management cables to the server.	“Connecting Cables” on page 61
11.	Prepare the power cords, apply power, and start the server for the first time.	“Powering On the Server for the First Time” on page 71

Related Information

- “Server Overview” on page 12
- “Front Panel Components (Installation)” on page 14
- “Rear Panel Components (Installation)” on page 15
- *Netra SPARC S7-2 Server Service Manual*

Server Overview

The server is a carrier-grade, NEBS-certified, 2U server. This table summarizes the server's components. For detailed information about the server's features, go to `http://www.oracle.com/goto/netra-s7-2`.

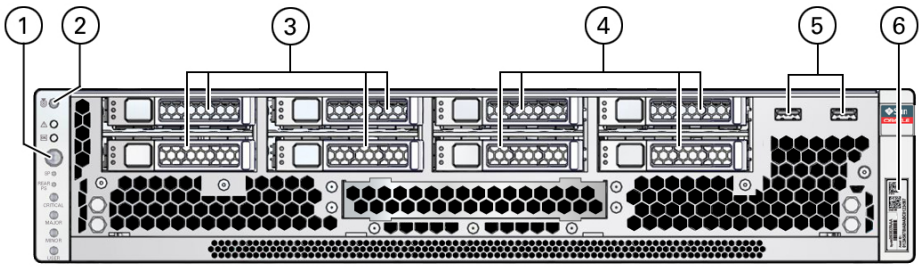
Component	Description
Processor	Up to two SPARC 4.26 GHz CPUs (3.0 GHz in NEBS mode) with the following: ■ 4x integrated memory controllers per CPU ■ 8-cores and 64 threads per CPU ■ 2x Database Accelerator (DAX) per CPU ■ Integrated memory controller **Note -** The CPU configuration is set at the factory. A single CPU server cannot be upgraded to a dual CPU configuration.
Memory	The number of DDR4-2400MHz DIMM slots depends on the CPU configuration..

Component	Description
	■ **Single Processor** – 8 slots that support 16-GB, 32-GB, or 64-GB capacities. ■ **Dual Processor** – 16 slots (8 slots per CPU) that support 16-GB, 32-GB, or 64-GB capacities. **Note -** The quantity and capacity of installed memory varies based on what was ordered.
Storage	■ Eight SFF slots for a maximum of eight SAS HDDs/SDDs ■ Four of the SFF slots can be used for NVMe SDDs
Service processor	On the motherboard, an internal SP with cryptographic acceleration that supports industry standard security ciphers. The SP runs Oracle ILOM firmware with provisions for: ■ Oracle ILOM 3.2.4 ■ Serial management (RJ-45) ■ Network management (10/100/1000BASE-T Ethernet RJ-45)
Ethernet ports	Four 100/1000Mb/10Gb BASE-T Ethernet (RJ-45) with integrated link LEDs.
PCIe slots	Six PCIe x8 Gen3 slots. Two are usable as x16 Gen3 slots, however, the electrical max remains x8, up to 25 watts per card. All PCIe expansion slots support PCIe 3.0 / Gen3 (PCIe3) signaling levels.
PCIe internal HBA card	(Optional) One internal SAS HBA PCIe controller card.
USB ports	Two front 2.0 USB ports, and one rear 3.0 USB port.
eUSB flash drive	One internal eUSB drive.
Indicators and switches	■ Power button switch ■ Locate button switch with integrated LED ■ System OK LED ■ System Fault LED ■ Alarm LEDs - Critical (Red), Major (Red), Minor (Amber), User (Amber) ■ Rear PS fault LED
Power supplies	Depending on the model, one of the following configurations: ■ 2 hot-swappable AC supplies (Oracle model A266) ■ 2 hot-swappable DC supplies (Oracle model D258) **Note -** Mixing of AC and DC power supplies is not allowed.
Cooling	Front-to-back forced air, with high efficiency active fan speed control.

Related Information

- “Installation Task Overview” on page 11
- “Front Panel Components (Installation)” on page 14
- “Rear Panel Components (Installation)” on page 15
- *Netra SPARC S7-2 Server Service Manual*

Front Panel Components (Installation)

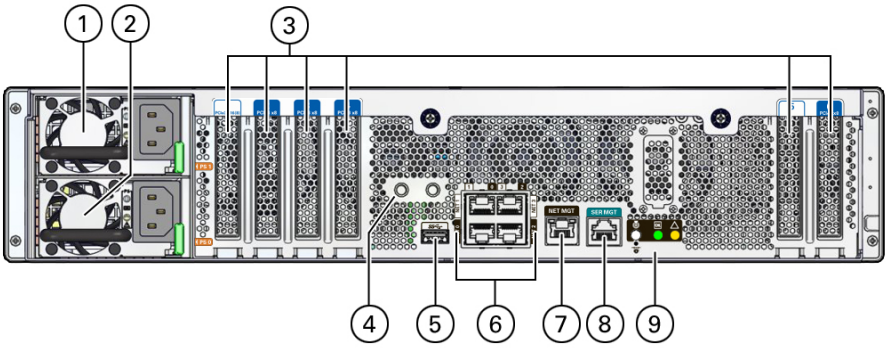


No.	Description	Links
1	Power button	"Powering On the Server for the First Time" on page 71
	Status indicators, top to bottom: ■ Locator LED and button ■ Service Required LED ■ System OK LED ■ Power button ■ Rear PS fault LED	"Interpreting LEDs" in *Netra SPARC S7-2 Server Service Manual*
	Telco alarm indicators: ■ Critical LED ■ Major LED ■ Minor LED ■ User LED	
2	Locate button	"Rear Panel LEDs" in *Netra SPARC S7-2 Server Service Manual*
3 and 4	Eight SAS drive slots, of which four can be used as NMVe slots	"Servicing SAS Drives" in *Netra SPARC S7-2 Server Service Manual*
5	Two USB 2.0 ports	"USB Ports" on page 69
6	Serial number and manufacturing information	"Find the Server Serial Number" in *Netra SPARC S7-2 Server Service Manual*

Related Information

- “Installation Task Overview” on page 11
- “Server Overview” on page 12
- “Rear Panel Components (Installation)” on page 15
- *Netra SPARC S7-2 Server Service Manual*

Rear Panel Components (Installation)



No.	Description	Links
1	Hot-swappable power supply (AC or DC), PS1	“Servicing Power Supplies” in *Netra SPARC S7-2 Server Service Manual*
2	Hot-swappable power supply (AC or DC), PS0	“Servicing Power Supplies” in *Netra SPARC S7-2 Server Service Manual*
3	PCIe slots	“Servicing PCIe Cards” in *Netra SPARC S7-2 Server Service Manual*
4	Grounding studs	“Connect the Chassis Ground Wire” on page 72
5	USB 3.0 port	“USB Ports” on page 69
6	Four 10 Gigabit Ethernet ports (NET 3, NET 2, NET 1, NET 0)	“10 Gigabit Ethernet Ports” on page 68
7	NET MGT port	“NET MGT Port” on page 67
8	SER MGT port	“SER MGT Port” on page 66
9	Status LEDs: ■ Locator LED and button	“Servicing the LED Board” in *Netra SPARC S7-2 Server Service Manual*

No.	Description	Links
	■ Service Required LED ■ Main Power OK LED	

Related Information

- “Installation Task Overview” on page 11
- “Server Overview” on page 12
- “Front Panel Components (Installation)” on page 14
- *Netra SPARC S7-2 Server Service Manual*

Confirming Specifications

These topics provide information about the server specifications.

Related Information

- “Understanding the Server” on page 11
- “Preparing for Installation” on page 27
- “Installing the Server” on page 31
- “Connecting Cables” on page 61
- “Powering On the Server for the First Time” on page 71

Physical Specifications

Description	U.S.	Metric
Rack units	2U	2U
Height	3.46 in.	88 mm
Width (chassis)	16.73 in.	425 mm

Description	U.S.	Metric
Maximum Width (from bezel front to rear protrusions)	17.52 in.	445 mm
Depth (chassis)	23.9 in.	608 mm
Maximum Depth (from bezel front to rear protrusions)	25.2 in.	640 mm
Weight (fully configured without PCIe cards)†	47.3 lb	21.5 kg
Minimum service clearance (front)	36 in.	914.4 mm
Minimum service clearance (rear)	36 in.	914.4 mm
Minimum airflow clearance (front)	2 in.	50.8 mm
Minimum airflow clearance (rear)	3 in.	76.2 mm

†Weight specifications vary based on internal options.

Related Information

- “Electrical Specifications” on page 18
- “Input Power Information” on page 19
- “DC Power Source, Power Connection, and Grounding Requirements” on page 21
- “Overcurrent Protection Requirements” on page 20
- “Environmental Requirements” on page 22
- “Acoustic Noise Emissions” on page 23
- “Airflow Precautions” on page 24

Electrical Specifications

The values in this table are for the power supplies. Use the online power calculator to determine the power consumption of a server with your configuration: `http://www.oracle.com/goto/powercalculators`.

Parameter	AC	DC
Voltage (nominal)	100-127 VAC (800W max out)	-48/-60 VDC (1200W max out)
	200 to 240 VAC (1200W max out)	40-47 VDC (900W max out)
Input current (maximum)	10A (100-127 VAC)	36A max @ -48 VDC bus
	7A (200-240 VAC)	28A max @ -60 VDC bus
Frequency (nominal)	50/60 Hz	0 Hz

Parameter	AC	DC
Input treatment	N/A	Isolated DC Return (DC-I)

Caution - The ports of this equipment or subassembly are suitable for connection to intra-building or unexposed wiring or cabling only. The intra-building port(s) of the equipment or subassembly must not be metallically connected to interfaces that connect to the outside plant wiring. These interfaces are designed for use as intra-building interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE, Issue 6) and require isolation from the exposed outside plant cabling. The addition of primary protectors is not sufficient protection in order to connect these interfaces metallically to outside plant wiring.

Caution - The intra-building port(s) of the equipment or subassembly must use shielded intra-building cabling or wiring that is grounded at both ends, except the ethernet ports.

Caution - Mixing power supply types (AC and DC) is not allowed.

Related Information

- “Physical Specifications” on page 17
- “Input Power Information” on page 19
- “DC Power Source, Power Connection, and Grounding Requirements” on page 21
- “Overcurrent Protection Requirements” on page 20
- “Environmental Requirements” on page 22
- “Acoustic Noise Emissions” on page 23
- “Airflow Precautions” on page 24

Input Power Information

The total input power for the server is divided equally among the power supplies in operation. Reversing the positive and negative inputs to the power supplies of a DC input server will not cause damage. However, the power supplies with reversed input will not operate.

The inputs to a power supply are isolated from the server chassis and the other power supply inputs. The AC or DC power inputs might be at different voltages within the acceptable range and might have different offset voltages relative to the server chassis.

Note - The server does not require an additional surge protector for the AC power configurations if the facility has a surge protector that limits voltage surges to less than 2000V. You can, however, install a surge protector if your site requires an additional protector.

Note - Converting power supply types (AC to DC or DC to AC) is allowed. However, power supplies cannot be mixed within a server or within the same rackmounted system.

Related Information

- "Physical Specifications" on page 17
- "Electrical Specifications" on page 18
- "Overcurrent Protection Requirements" on page 20
- "Environmental Requirements" on page 22
- "Acoustic Noise Emissions" on page 23
- "Airflow Precautions" on page 24

Overcurrent Protection Requirements

This product does not provide branch circuit overcurrent protection as defined by the U.S. NEC. To comply with the U.S. NEC, you must install this product on branch circuits that have overcurrent protection as defined by Article 240 of the U.S. NEC.

- Product power inputs with a current ratings of 16A or less must have a branch circuit, or a supplementary overcurrent protection device, rated at no more than 20A.
- Product power inputs with current rating of more than 16A must have a branch circuit, or a supplementary overcurrent protection device, rated at no more than 160% of the product input current rating.
- Other national or local electrical codes might apply to the installation of this product.
- For the DC input configuration, power is fed to the PSU via customer-provided double-pole 50A DC circuit breaker.

As a general guideline, overcurrent protection devices should be rated at a minimum of 125% of the product input current rating in order to provide reliable power under high temperature and transient voltage disturbance conditions. However, you must consider the characteristics of the protection device and the applicable electrical codes when selecting the rating of a protection device for the product installation.

Note - Overcurrent protection devices must meet applicable national and local electrical safety codes, and be approved for the intended application.

Related Information

- "Physical Specifications" on page 17
- "Electrical Specifications" on page 18
- "Input Power Information" on page 19
- "DC Power Source, Power Connection, and Grounding Requirements" on page 21
- "Environmental Requirements" on page 22
- "Acoustic Noise Emissions" on page 23
- "Airflow Precautions" on page 24

DC Power Source, Power Connection, and Grounding Requirements

The server power source and connections must meet the following requirements.

Note - The DC version of the server must be installed in a restricted-access location. According to the intent of the U.S. NEC, a restricted-access location is an area intended for qualified or trained personnel only and has access controlled by a locking mechanism, such as a key lock or an access card system.

Caution - The DC power source must be reliably grounded. The server chassis must be grounded with the power supply ground pins or with the chassis ground studs. It is acceptable to have both grounds connected.

Caution - You must restrict the connection of the server to the DC power source to minimize the possibility that transient energy will appear on the main input to the equipment. The DC power source must be in the same premises as the server. The server cannot be in one building with the power source in another building.

Caution - An accessible two-pole disconnect device must incorporated in the fixed wiring.

Caution - When connecting the ground wire to the power supplies, a small service loop must be kept in the ground wire to ensure that if there is strain on the supply wires, the ground wire will be the last to receive that strain.

- Suitable conductor material — use copper conductors only.
- Power supply connections through the input connector — 8 AWG (between the server and the source). There are three conductors:
  - Chassis ground connection (optional if chassis ground wire is connected).
  - -48V or -60V (negative terminal, might be marked with a minus (-) symbol).
  - -48V or -60V return (positive terminal, might be marked with a plus (+) symbol).
- Server chassis ground 8 AWG conductor (optional if power supply grounds are connected).
- Grounding cable insulation color — Green/yellow.
- Cable insulation rating — Minimum of 167˚F (75˚C). Low smoke fume, flame retardant insulation might be required in some installations.)
- Use mating connectors for proper connection to the product DC inputs. Connectors are included in the server's shipping kit.
- Branch circuit cable insulation color — According to applicable national electrical codes.
- DC power source must meet TNV-2 requirements as defined by UL 60950-1 and IEC 60950-1.

Related Information

- “Physical Specifications” on page 17
- “Electrical Specifications” on page 18
- “Input Power Information” on page 19
- “DC Power Source, Power Connection, and Grounding Requirements” on page 21
- “Overcurrent Protection Requirements” on page 20
- “Environmental Requirements” on page 22
- “Acoustic Noise Emissions” on page 23
- “Airflow Precautions” on page 24

Environmental Requirements

Caution - Netra rackmounted servers are certified to meet these worst-case operating conditions only when using an approved rackmount kit. You must strictly follow the rackmounting instructions in order to meet these environmental specifications.

Specification	Operating	Nonoperating
Ambient temperature[†]	Maximum: 5°C to 35°C (41°F to 113°F) up to 1829 meters (6000 feet)[‡] Optimal: 21°C to 23˚C (69.8°F to 73.4°F) Short-term maximum: -5°C to 55°C (23°F to 131°F)	−40°C to 70°C (−40°F to 158°F)
Relative humidity	5% to 85% RH, noncondensing, not to exceed 0.024 kg water/ kg dry air (0.053 lb. water/2.205 lbs. dry air) Short-term: 5% to 90% RH, noncondensing, not to exceed 0.024 kg of water per kg of dry air (0.053 lb. water/2.205 lbs. dry air)	93%, non condensing, 40°C (104°F) maximum wet bulb
Elevation (company requirement)	Maximum 3000 meters (9840 feet) at 40°C (104°F)	Maximum 12,000 meters (39,370 feet)
Elevation (NEBS requirement)	-60 meters to 1800 meters (-200 feet to 5905 feet) at 40°C (104° F) 1800 meters to 4000 meters (5905 feet to 13,123 feet) at 30°C (86°F)	Up to 12,000 meters (39,370 feet)

[†]Does not apply to removable media devices.

[‡]Maximum ambient operating temperature is derated by 1°C per 500m elevation.

Related Information

- “Physical Specifications” on page 17
- “Electrical Specifications” on page 18
- “Input Power Information” on page 19
- “DC Power Source, Power Connection, and Grounding Requirements” on page 21
- “Overcurrent Protection Requirements” on page 20
- “Acoustic Noise Emissions” on page 23
- “Airflow Precautions” on page 24

Acoustic Noise Emissions

The declared noise emissions for the server are in accordance with ISO 9296 standards.

Parameter	Operating Noise Emissions
Acoustic sound power LwA (dBA)	75 dBA (AC server) 75 dBA (DC server)

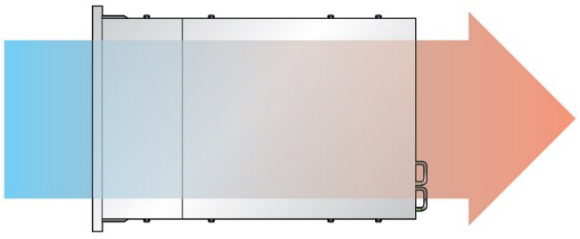
Related Information

- “Physical Specifications” on page 17
- “Electrical Specifications” on page 18
- “Input Power Information” on page 19
- “DC Power Source, Power Connection, and Grounding Requirements” on page 21
- “Overcurrent Protection Requirements” on page 20
- “Environmental Requirements” on page 22
- “Airflow Precautions” on page 24

Airflow Precautions

Caution - Proper airflow is essential for keeping the server's internal temperatures within a safe operating range.

Air flows from the front to the rear of the server.



Follow these guidelines to ensure unrestricted airflow in the server:

- Adhere to the minimum airflow clearance specifications. See “Physical Specifications” on page 17.
- Install the server so the front faces the cool aisle and the rear faces the warm aisle.
- Do not direct warm air into the server.
- Prevent recirculation of air within a rack or cabinet.
- When servicing server internal components, ensure that air ducts, baffles, and filler panels are properly installed.
- Route cables so they do not interfere with airflow.

Related Information

- “Physical Specifications” on page 17
- “Electrical Specifications” on page 18
- “Input Power Information” on page 19
- “DC Power Source, Power Connection, and Grounding Requirements” on page 21
- “Overcurrent Protection Requirements” on page 20
- “Environmental Requirements” on page 22
- “Airflow Precautions” on page 24

Preparing for Installation

These topics describe how to prepare to install the server.

Related Information

- “Understanding the Server” on page 11
- “Confirming Specifications” on page 17
- “Installing the Server” on page 31
- “Connecting Cables” on page 61
- “Powering On the Server for the First Time” on page 71

Shipping Kit Inventory

Standard system components are installed at the factory. Options such as a PCIe cards or a monitor are shipped separately.

Note - Inspect the shipping cartons for evidence of physical damage. If a shipping carton appears damaged, request that the carrier's agent be present when the carton is opened. Keep all contents and packing material for the agent's inspection.

Verify that you have received all the parts of your server:

- Server

- Rackmount kit
- Package of mounting screws and nuts in assorted sizes to fit various types of racks and cabinets
- Earth grounding lug and two M5 nuts
- Hardware, cables, documents, and connectors
- Any optional components that were ordered with the server

Related Information

- “Handling Precautions” on page 28
- “ESD Precautions” on page 29
- “Tools Needed for Installation” on page 29
- “Rack Cautions” on page 32
- “Stabilize the Rack” on page 33

Handling Precautions

Caution - Deploy the antitilt bar on the equipment rack before beginning an installation.

Caution - The server is heavy. Two people are required to lift and mount this server into a rack enclosure when using the procedures in this document. See “Physical Specifications” on page 17.

Caution - When completing a two-person procedure, always communicate your intentions clearly before, during, and after each step to minimize confusion.

Related Information

- “Shipping Kit Inventory” on page 27
- “ESD Precautions” on page 29
- “Tools Needed for Installation” on page 29
- “Optional Components” on page 31
- “Rack Cautions” on page 32
- “Stabilize the Rack” on page 33

ESD Precautions

Electronic equipment is susceptible to damage by static electricity. Use a grounded antistatic wrist strap or foot strap, or equivalent safety equipment to prevent ESD when you install or service the server.

Caution - To protect electronic components from electrostatic damage, which can permanently disable the server or require repair by service technicians, place components on an antistatic surface, such as an antistatic discharge mat, an antistatic bag, or a disposable antistatic mat. Wear an antistatic grounding strap connected to a metal surface on the chassis when you work on server components.

Related Information

- “Shipping Kit Inventory” on page 27
- “Handling Precautions” on page 28
- “Tools Needed for Installation” on page 29
- “Optional Components” on page 31
- “Rack Cautions” on page 32
- “Stabilize the Rack” on page 33

Tools Needed for Installation

To install the server, you must have the following tools:

- No. 2 Phillips screwdriver

- ESD mat and grounding strap
- For DC power supply, a 7mm socket wrench or nut driver

For the initial installation configuration, you must provide a terminal device for use as a console device. You can use these types of devices:

- ASCII terminal
- Workstation
- Terminal server
- Computer, such as a laptop running terminal emulation software
- Patch panel connected to a terminal server
- Cables needed to connect the console device to the SER MGT port

Related Information

- “Shipping Kit Inventory” on page 27
- “Handling Precautions” on page 28
- “ESD Precautions” on page 29
- “Optional Components” on page 31
- “Rack Cautions” on page 32
- “Stabilize the Rack” on page 33

Installing the Server

These topics describe how to install the server into an equipment rack.

Step	Description	Links
1.	Install optional components.	“Optional Components” on page 31
2.	Review cautions.	“Handling Precautions” on page 28
3.	Stabilize the rack.	“Stabilize the Rack” on page 33
4.	Install the server in a rack.	■ “Installing the Standard 19-Inch Hardmount Kit (4-Post Rack)” on page 33 ■ “Installing the 19-Inch Sliding Rail Kit With the CMA” on page 40 ■ “Installing the 19-Inch Hardmount Kit (2-Post Rack)” on page 51

Related Information

- “Understanding the Server” on page 11
- “Confirming Specifications” on page 17
- “Preparing for Installation” on page 27
- “Connecting Cables” on page 61
- “Powering On the Server for the First Time” on page 71

Optional Components

Optional components, such as additional memory or PCIe cards that were ordered as part of the server, are installed in the server at the factory before the server is shipped. Any options not ordered with the server are shipped separately. If possible, install these components prior to installing the server in a rack.

Except for rackmount kits, if you ordered any options that are not factory-installed, refer to the *Netra SPARC S7-2 Server Service Manual* and the component's documentation for installation instructions.

Related Information

- "Shipping Kit Inventory" on page 27
- "Rack Cautions" on page 32

Rack Cautions

Caution - Equipment Loading. Always load equipment into a rack from the bottom up so that the rack does not become top-heavy and tip over. Deploy your rack's antitip bar to prevent the rack from tipping during equipment installation.

Caution - Elevated Operating Ambient Temperature. If the server is installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment might be greater than room ambient temperature. Therefore, install the equipment only in an environment compatible with the Tma specified for the server.

Caution - Reduced Air Flow. Install the equipment in a rack so that the amount of air flow is adequate for the safe operation of the equipment.

Caution - Mechanical Loading. Mount the equipment in the rack so that the weight is distributed evenly. A hazardous condition can exist with uneven mechanical loading.

Caution - Circuit Overloading. Do not overload the power supply circuits. Before connecting the server to the supply circuit, review the equipment nameplate power ratings and consider the effect that circuit overloading might have on overcurrent protection and supply wiring.

Caution - Reliable Grounding. Maintain reliable grounding of rackmounted equipment. Give particular attention to supply connections other than direct connections to the branch circuit (for example, use of power strips).

Caution - Do not use slide rail mounted equipment as a shelf or a work space.

Related Information

- “Handling Precautions” on page 28
- “ESD Precautions” on page 29
- “Stabilize the Rack” on page 33

▼ Stabilize the Rack

Caution - To reduce the risk of personal injury, stabilize the rack cabinet and extend all antitilt devices before installing the server.

Refer to your rack documentation for detailed instructions for the following steps.

Note - In this document, the term *rack* means either an open rack or a closed cabinet.

1. **Open and remove the front and rear doors from the rack cabinet.**
2. **To prevent the rack cabinet from tipping during the installation, stabilize the cabinet using all antitilt mechanisms provided.**
3. **If there are leveling feet beneath the rack cabinet to prevent it from rolling, extend these leveling feet fully downward to the floor.**
4. **Fully extend the rack cabinet's antitilt legs or antitilt bar, which are located at the bottom front of the rack cabinet.**

Related Information

- Documentation for your rack cabinet
- *Netra SPARC S7-2 Server Safety and Compliance Guide, Compliance Model No.: 9600*
- “Shipping Kit Inventory” on page 27
- “Handling Precautions” on page 28

Installing the Standard 19-Inch Hardmount Kit (4-Post Rack)

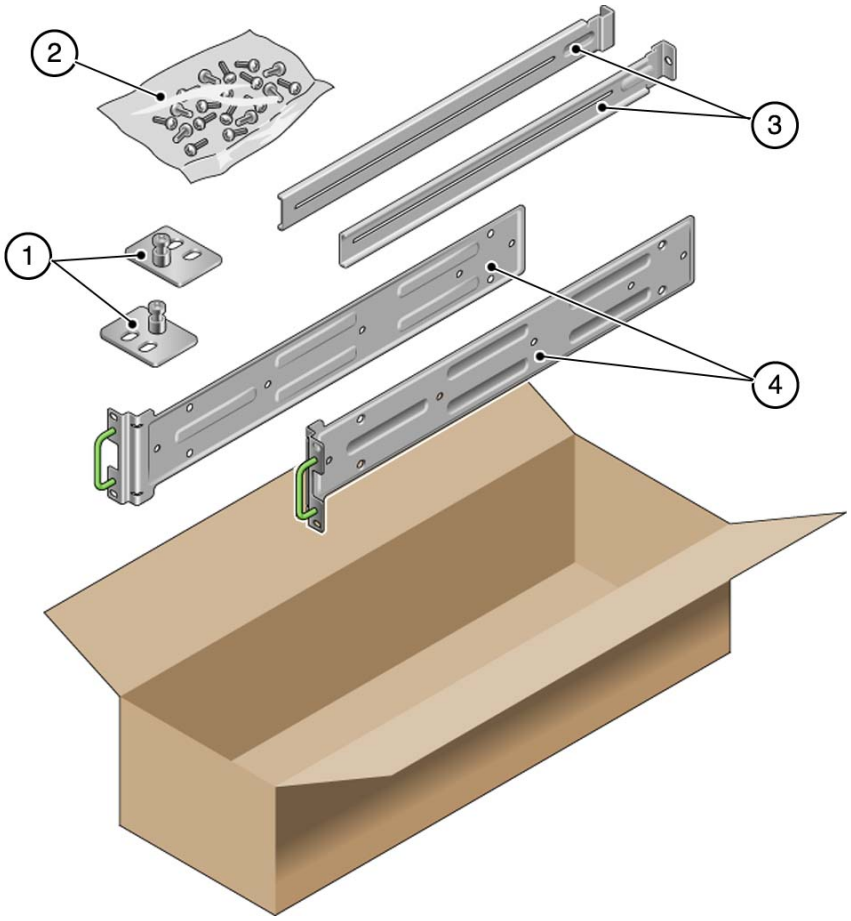
These topics provide installation instructions for the 19-inch, 4-post hardmount kit that ships with the server.

- “19-Inch Hardmount Kit (4-Post Rack) Components” on page 35
- “Install the Server (4-Post, 19-Inch Hardmount Rack Kit)” on page 36

Related Information

- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

19-Inch Hardmount Kit (4-Post Rack) Components



No.	Description
1	Rear mount flanges (2)
2	Screws
3	Rear mount support brackets (2)
4	Hardmount brackets (2)

Related Information

- “Install the Server (4-Post, 19-Inch Hardmount Rack Kit)” on page 36
- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

▼ Install the Server (4-Post, 19-Inch Hardmount Rack Kit)

Caution - You *must* install the server into a rack following these instructions for the 4-post, 19-inch hardmount kit. If you deviate from these instructions when installing the server, your installation will not be supported.

1. **Gather the required tools.**

   See “Tools Needed for Installation” on page 29.

2. **Read the server cautions.**

   See “Handling Precautions” on page 28 and “ESD Precautions” on page 29.

3. **Read the rack cautions and stabilize the rack.**

   See “Rack Cautions” on page 32 and “Stabilize the Rack” on page 33.

4. **If you are changing the rack kit on an existing server in your data center, perform these steps:**

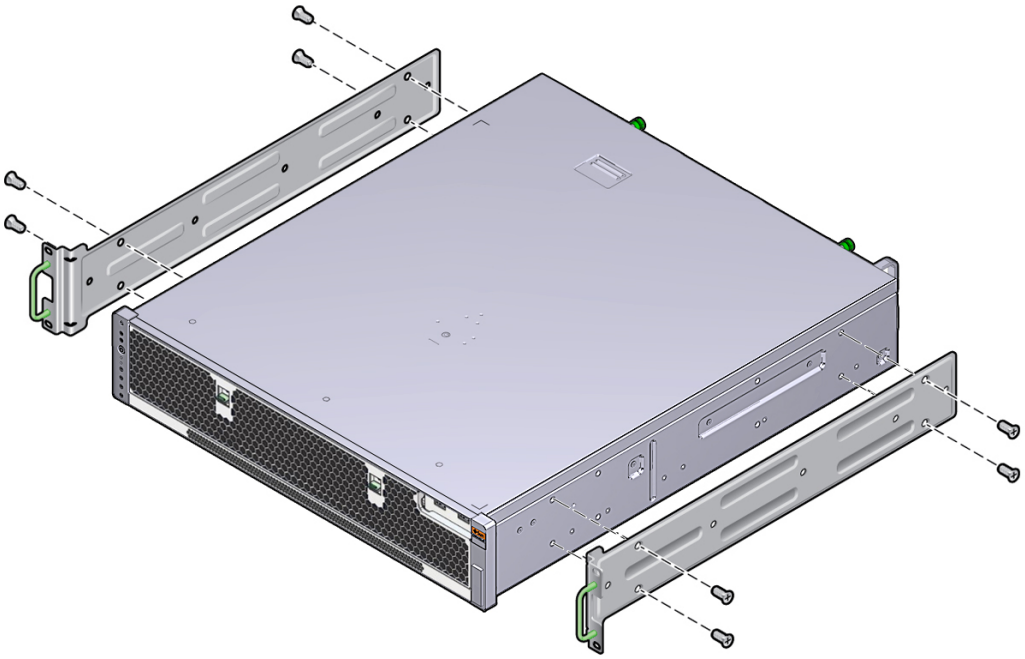
   a. **Shut down the server, and remove the power and data cables.**

   b. **Remove the server from the rack, and place it on an antistatic mat.**

   c. **Remove the existing mounting brackets from the server and rack, if applicable.**

5. **Secure the hardmount brackets to the sides of the server.**

Use four M5 x 4.5 mm flathead Phillips screws for each bracket.

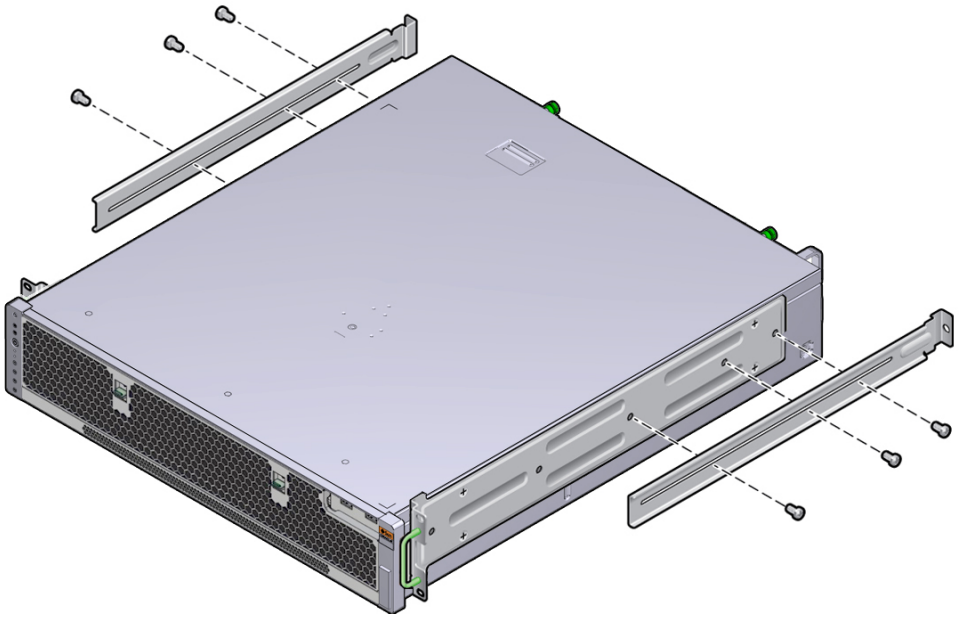


6. **Measure the depth of the rack.**

   The measurement is used in the next step.

7. **Install the rear mount support brackets at the rear of the server, extending the rear mount support brackets to the measured depth of the rack.**

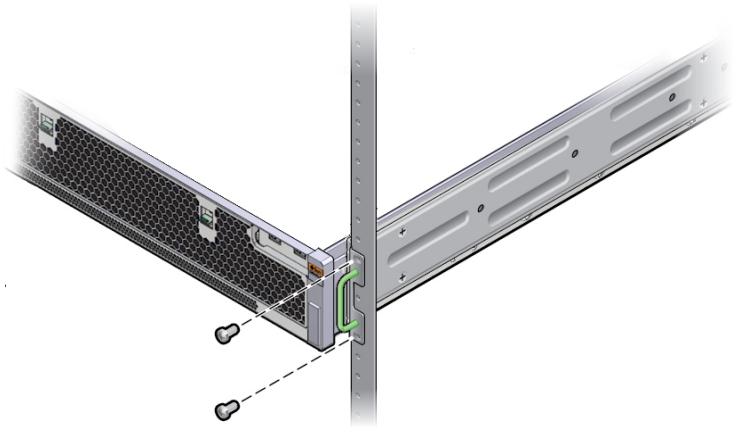
Use two to three of the supplied M4 x 0.5 x 5 mm panhead Phillips screws for each bracket, depending on the rack depth.



8. **Lift the server to the desired location in the rack.**

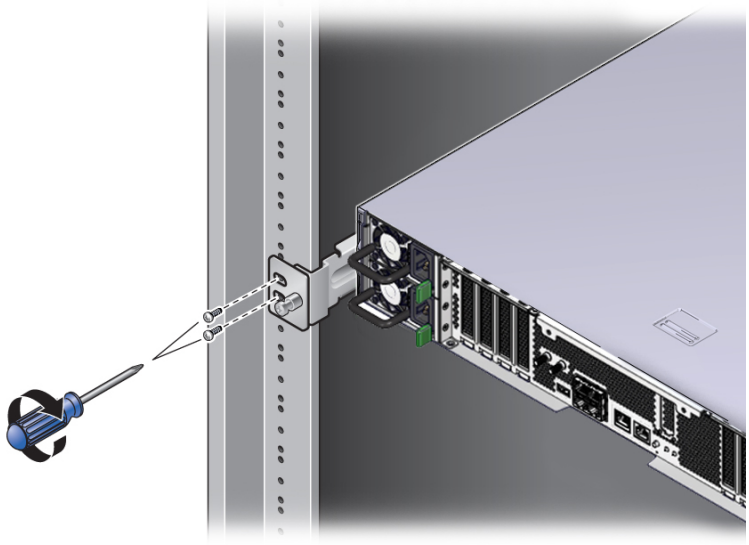
9. **Secure the front of the hardmount brackets.**

Use two screws for each post.



10. **Secure the rear mount support brackets to the rear of the rack.**

    Use two screws for each rear mount support bracket.



11. **Connect required and optional cables.**

    See “Connecting Cables” on page 61.

12. **Consider your next step:**

    - **For an existing server, return the server to operation by following the steps in the service manual.**
    - **For a new server, continue the installation by following the steps in this guide.**

Related Information

- “19-Inch Hardmount Kit (4-Post Rack) Components” on page 35
- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

Installing the 19-Inch Sliding Rail Kit With the CMA

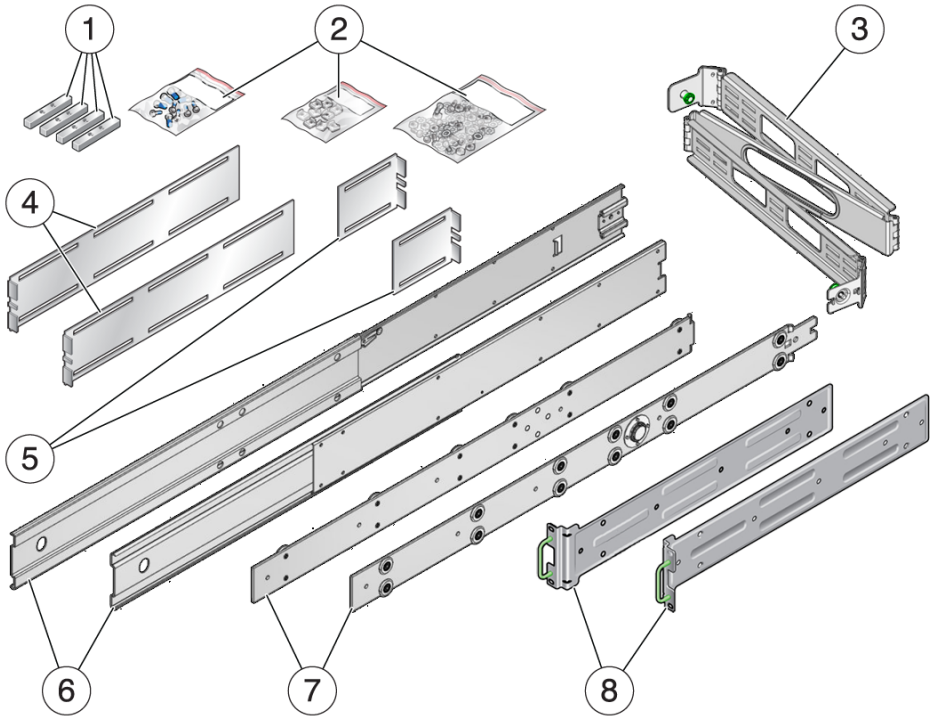
These topics describe how to install the server using the optional 19-inch sliding rail kit with the CMA.

- “19-Inch Sliding Rail Kit With the CMA Components” on page 41
- “Install the Server (4-Post, 19-Inch Sliding Rails With CMA Rack Kit)” on page 42

Related Information

- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

19-Inch Sliding Rail Kit With the CMA Components



No.	Description
1	Threaded screw plates (4)
2	Screw and nut packages
3	Cable management arm
4	Rear L-brackets (2)
5	Front L-Brackets (2)
6	Slide assemblies (2)
7	Glide assemblies (2)
8	Hardmount brackets (2) from standard rail kit

Related Information

- “Install the Server (4-Post, 19-Inch Sliding Rails With CMA Rack Kit)” on page 42
- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

▼ Install the Server (4-Post, 19-Inch Sliding Rails With CMA Rack Kit)

Caution - You *must* install the server into a rack following these instructions for the 4-post, 19-inch sliding rails with CMA kit. If you deviate from these instructions when installing the server, your installation will not be supported.

1. **Gather the required tools.**

   See “Tools Needed for Installation” on page 29.

2. **Read the server cautions.**

   See “Handling Precautions” on page 28 and “ESD Precautions” on page 29.

3. **Read the rack cautions and stabilize the rack.**

   See “Rack Cautions” on page 32 and “Stabilize the Rack” on page 33.

4. **If you are changing the rack kit on an existing server in your data center, perform these steps:**

   a. **Shut down the server, and remove the power and data cables.**

   b. **Remove the server from the rack, and place it on an antistatic mat.**

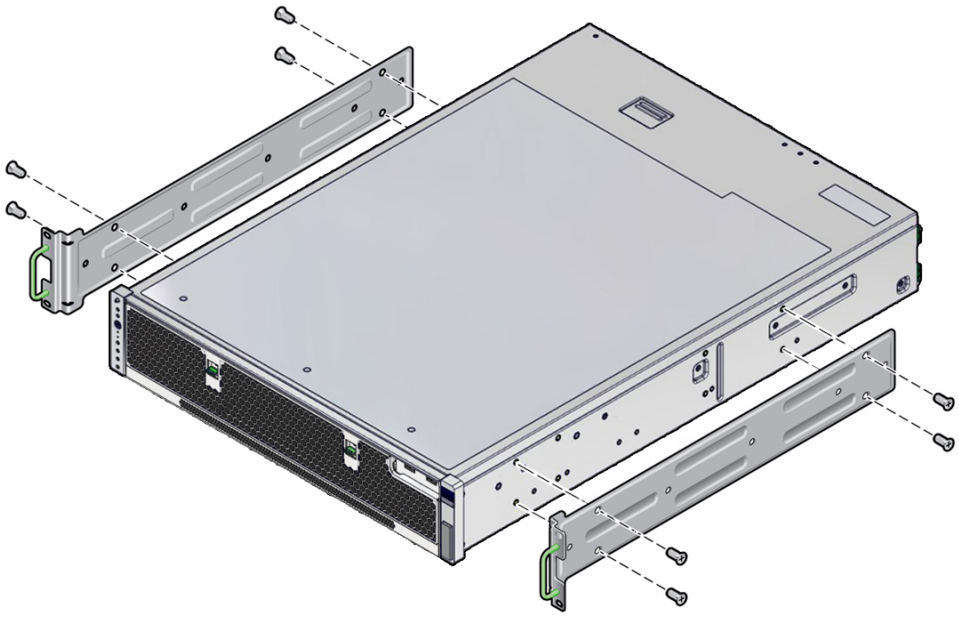
   c. **Remove the existing mounting brackets from the server and rack, if applicable.**

5. **Open the standard hardmount rail kit and the sliding rail kit with the CMA, and confirm that all of the components are present.**

   Remove the hardmount brackets and four M5 x 4.5 mm flathead Phillips screws from the standard hardmount kit.

6. **Attach the front, right and left hardmount brackets to the sides of the server.**

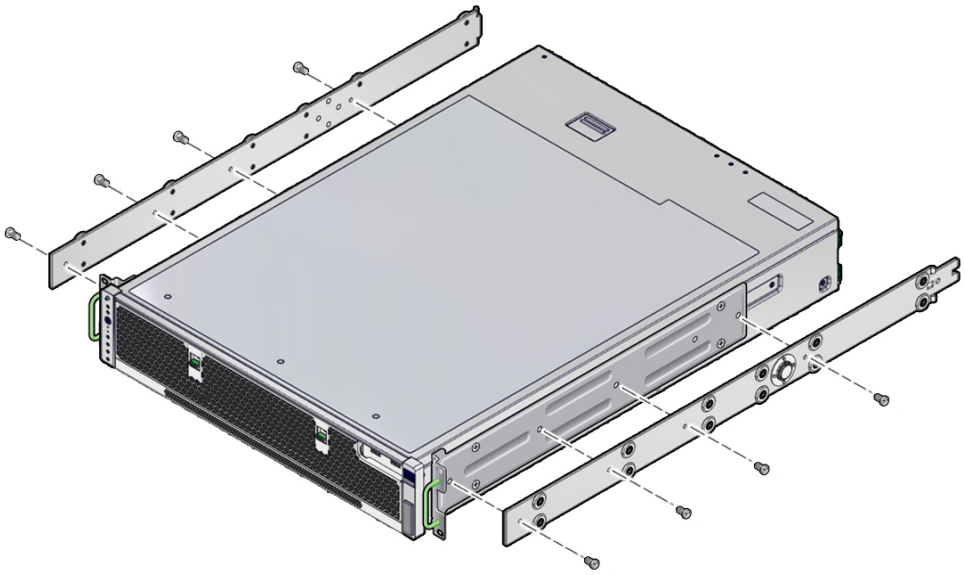
   Use four M5 x 4.5 mm flathead Phillips screws for each side.



7. **Disassemble the sliding rails by pressing the release buttons and pulling the rail glides out of the sliding rails.**

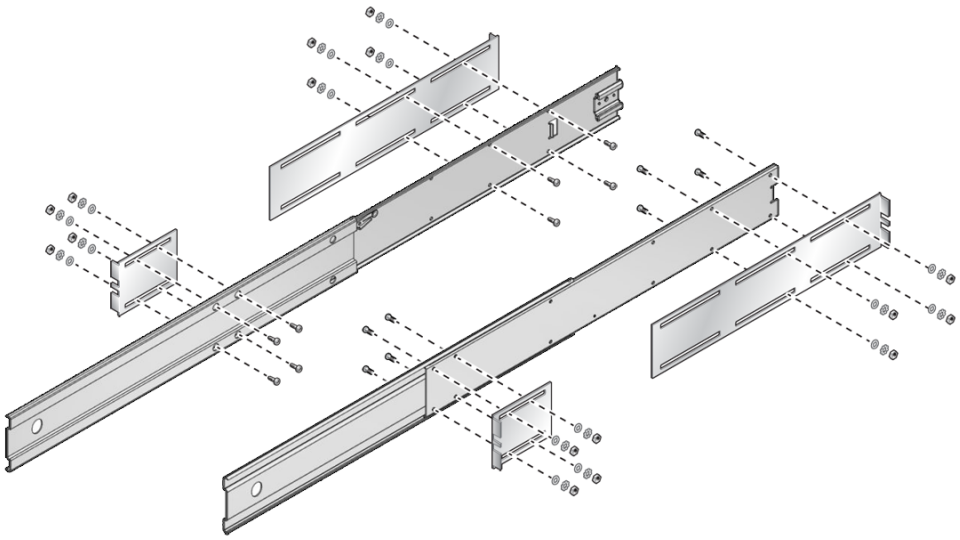
8. **Attach the rail glides to the hardmount brackets.**

Use four M5 x 4.5 mm panhead screws for each rail glide.



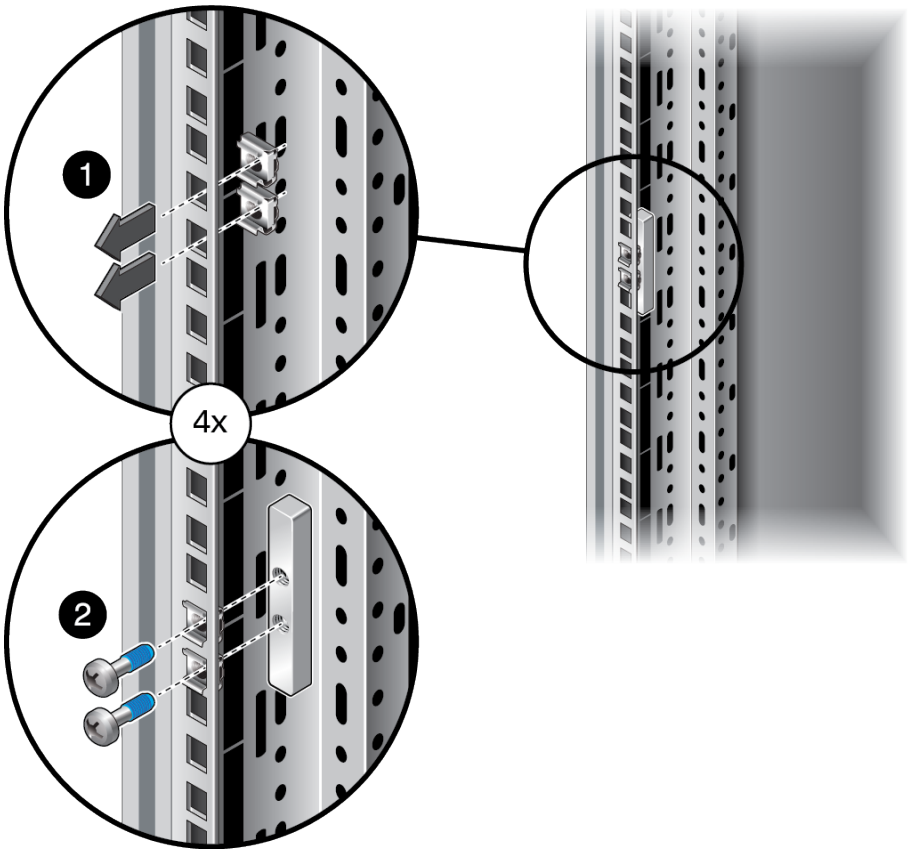
9. **Loosely install the L-brackets to the sliding rails.**

Use four M5 x 12 mm panhead screws, four flat washers, four star washers, and four nuts for each L-bracket.



10. **Loosely install the threaded screw plate and cage nuts in the four posts at the appropriate height.**

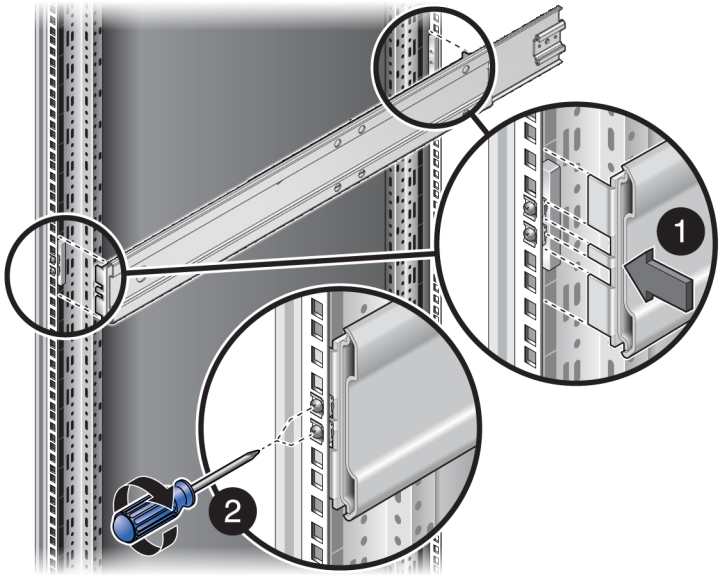
Use two cage nuts and two M6 shoulder screws for each threaded screw plate.



11. Install two cage nuts, used to secure the server into the rack, into the two front posts.

Align the cage nuts with the screw holes in the hardmount bracket (upper and lower). The security screws go through each of the hardmount brackets and into the cage nuts mounted to the rails.

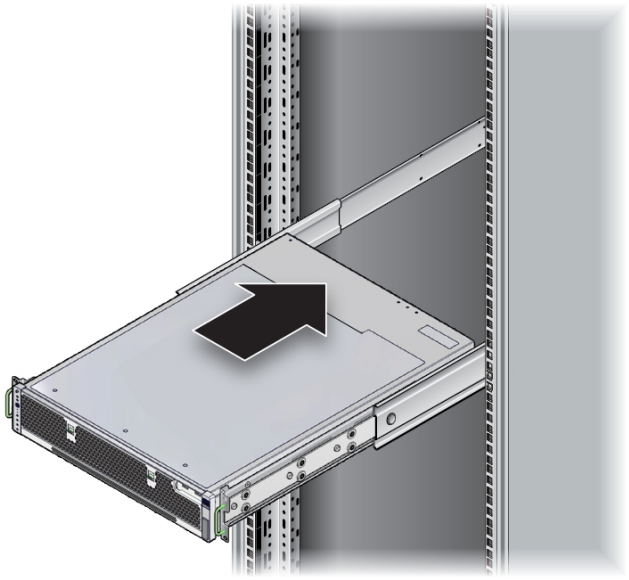
12. **Install the sliding rail, L-bracket assemblies into the threaded screw plates.**



13. **Secure the L-bracket assemblies to the posts.**

14. **Tighten the sliding rail screws.**

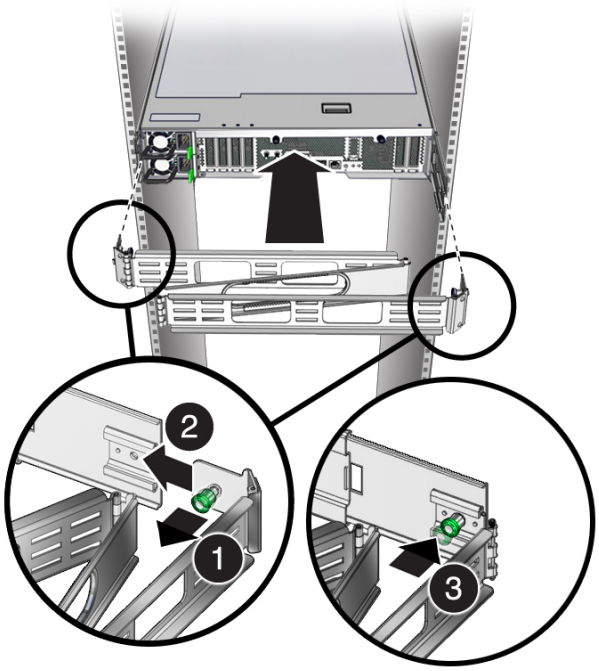
15. **Extend the slide assemblies until they lock open, and slowly install the server into the slide assemblies.**



16. **Press the release buttons, and slide the server completely into the rack.**

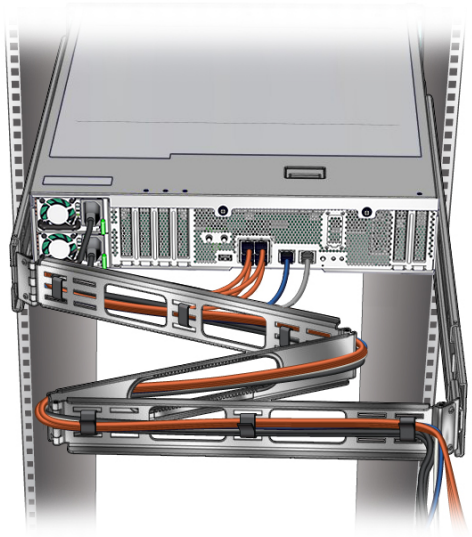
17. **Attach the right and left sides of the CMA to the rear of the slide assembly (right) and server (left).**

The green, spring-loaded handles should point inward. Pull the green handles out and release it when the holes are aligned. The left CMA flange fits into key-hole notches on the end of the left glide rail.



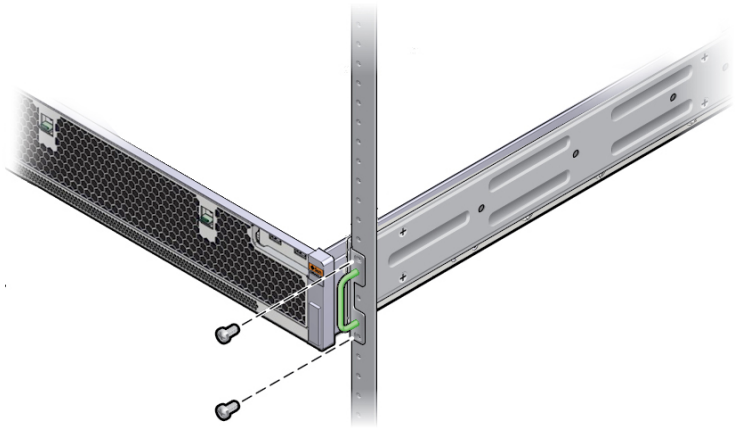
18. **Extend the server to the service position to ensure that the CMA expands properly.**

19. **Route and secure the cables in the CMA.**



20. **Install the security screws to secure the server into the rack.**

Illustration is shown without the slide rails for clarity.



21. **Consider your next step:**

    - **For an existing server, return the server to operation by following the steps in the service manual.**
    - **For a new server, continue the installation by following the steps in this guide.**

Related Information

- “19-Inch Sliding Rail Kit With the CMA Components” on page 41
- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

Installing the 19-Inch Hardmount Kit (2-Post Rack)

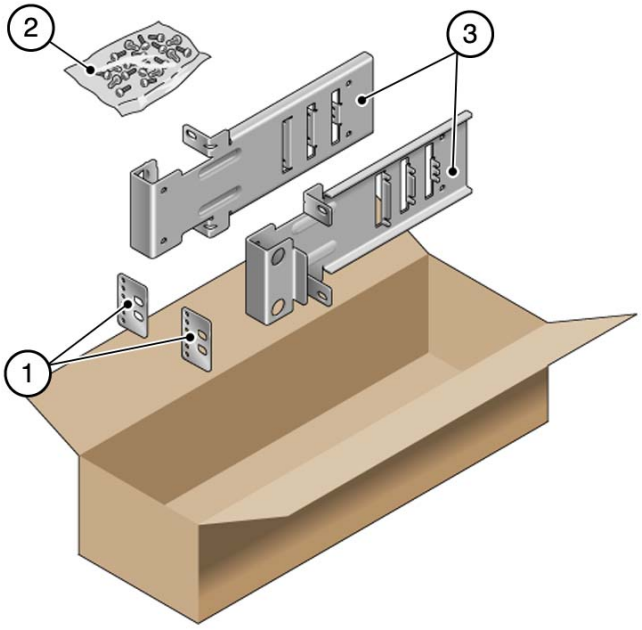
Use these topics to install the server using an optional 19-inch hardmount rack kit into a 19-inch wide, 2-post rack.

- “19-Inch Hardmount Rack Kit (2-Post Rack) Components” on page 52
- “Install the Server (2-Post, 19-Inch Hardmount Rack Kit)” on page 53

Related Information

- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

19-Inch Hardmount Rack Kit (2-Post Rack) Components



No.	Description
1	Rear plates (2)
2	Screws
3	Side brackets (2)

Related Information

- “Install the Server (2-Post, 19-Inch Hardmount Rack Kit)” on page 53
- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

▼ Install the Server (2-Post, 19-Inch Hardmount Rack Kit)

Note - The 19-inch, 2-post rackmount kit supports rack web thicknesses (the width of the rack post) of 3 in. (76.20 mm), 4 in. (101.6 mm), and 5 in. (127 mm).

Caution - You *must* install the server into a rack following these instructions for the 2-post, 19-inch hardmount kit. If you deviate from these instructions when installing the server, your installation will not be supported.

1. **Gather the required tools.**

   See “Tools Needed for Installation” on page 29.

2. **Read the server cautions.**

   See “Handling Precautions” on page 28 and “ESD Precautions” on page 29.

3. **Read the rack cautions and stabilize the rack.**

   See “Rack Cautions” on page 32 and “Stabilize the Rack” on page 33.

4. **If you are changing the rack kit on an existing server in your data center, perform these steps:**

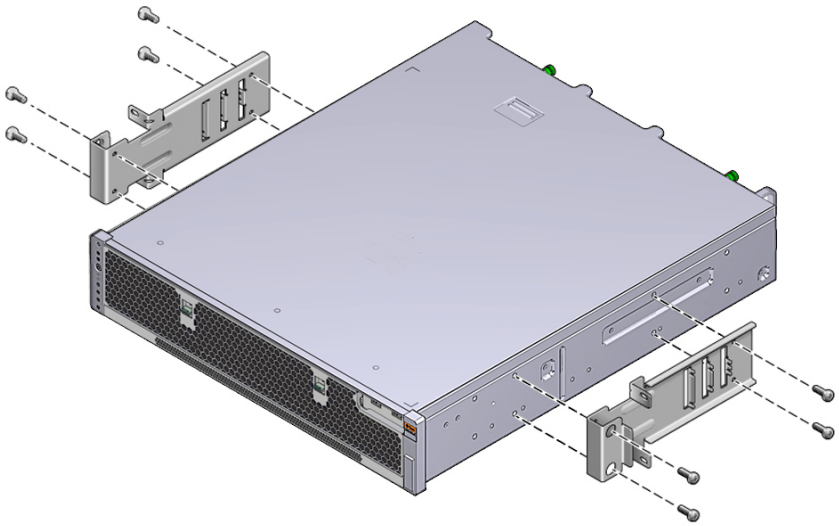
   a. **Shut down the server, and remove the power and data cables.**

   b. **Remove the server from the rack, and place it on an antistatic mat.**

   c. **Remove the existing mounting brackets from the server and rack, if applicable.**

5. **Secure the side brackets to the sides of the server.**

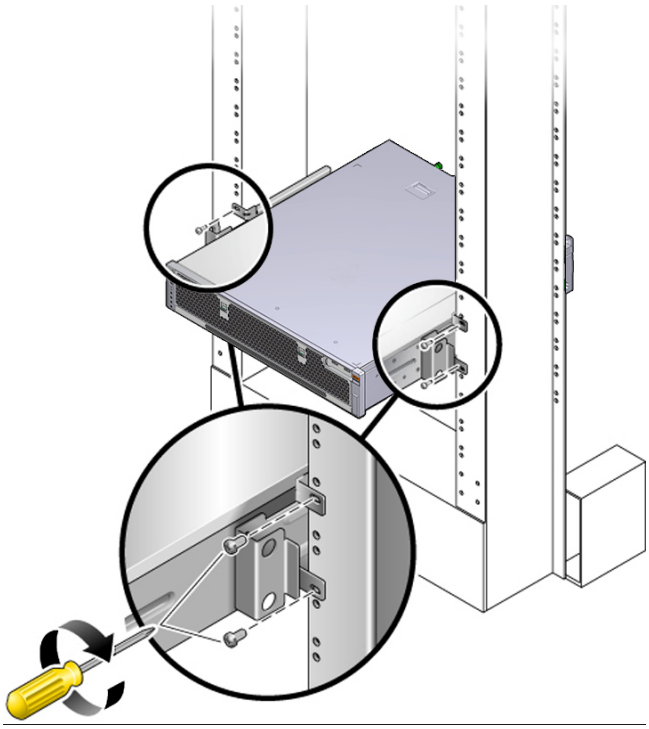
Use four M5 x 7 SEM screws for each side bracket.



6. **Lift the server into the rack.**

7. **Using two screws for each bracket, secure the front of the server to the front of the rack.**

The size of the screws varies, depending on your rack.

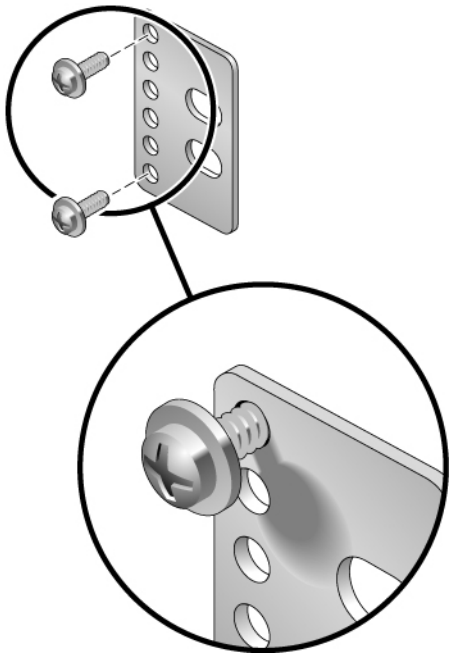


8. **(Optional) If your environment contains especially high vibrations, use the rear plates to further secure the server to the rack.**

   The rear plates attach to the rear of the post and to one of the three sets of eyelets on each side bracket, depending on the thickness of the post.

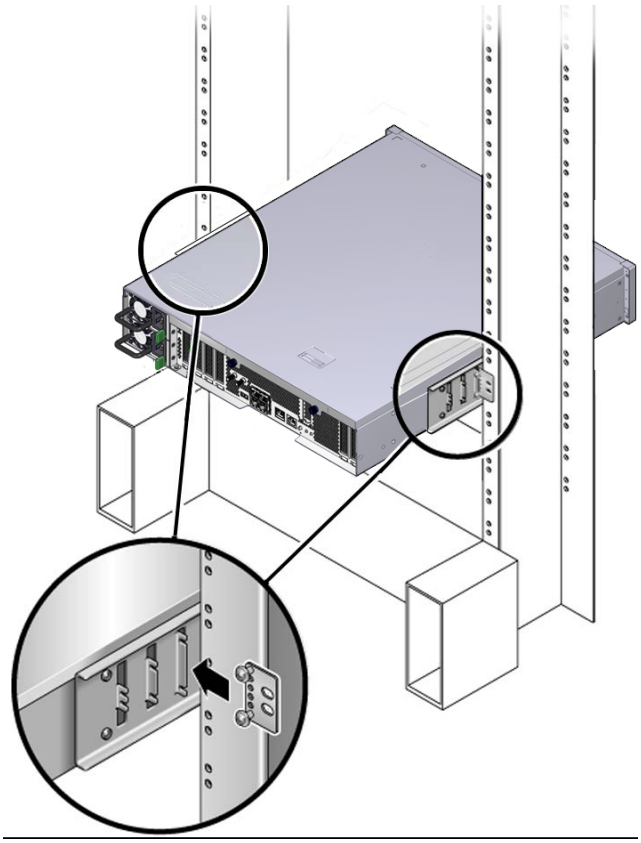
   a. **Loosely install the screws in one of the six positions on the rear plate.**

Use two M3 x 8 SEM screws for each rear plate. The position varies depending on the thickness of the rail in the rack. For example, this figure shows where to install the screws for the optimum rack position on the rear plate.



b. Slide the rear plate in so that the screws slide into position into one set of the eyelets.

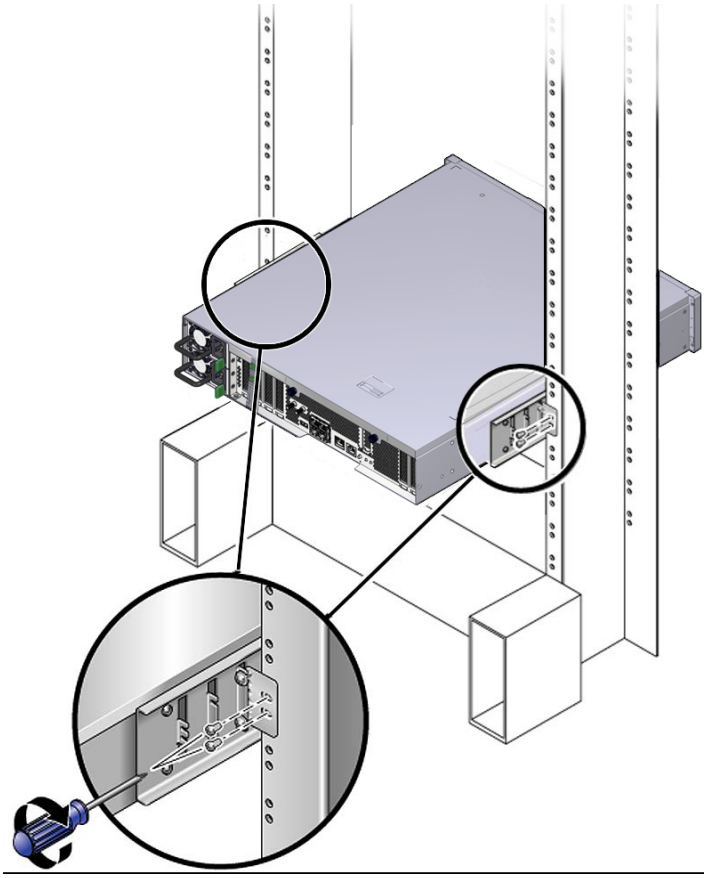
The screw heads should be facing the rear of the server. The other side of the rear plate should be in front of the rack post.



c. Tighten the screws to secure the rear plate to the set of eyelets on the side bracket.

d. Secure the other side of the rear plates to the back of the posts.

Use two screws per post. The size of the screws varies, depending on your rack.



9. **Connect required and optional cables.**

   See “Connecting Cables” on page 61.

10. **Consider your next step:**

    - **For an existing server, return the server to operation by following the steps in the service manual.**
    - **For a new server, continue the installation by following the steps in this guide.**

Related Information

- “Tools Needed for Installation” on page 29
- “Handling Precautions” on page 28
- “Rack Cautions” on page 32

Connecting Cables

Perform the following tasks to connect and configure the network and serial ports before you apply power to the server.

Step	Description	Links
1.	Review the available connections.	“Available Connections” on page 61
2.	Cable the SP.	“Cable the SP” on page 64 “SER MGT Port” on page 66 “NET MGT Port” on page 67 “USB Ports” on page 69
3.	Cable the Ethernet ports.	“Cable the Ethernet Ports” on page 64 “10 Gigabit Ethernet Ports” on page 68
4.	(Optional) Connect other data cables.	“Connect Other Data Cables” on page 65 “USB Ports” on page 69 Documentation for your PCIe cards

Related Information

- “Understanding the Server” on page 11
- “Confirming Specifications” on page 17
- “Preparing for Installation” on page 27
- “Installing the Server” on page 31
- “Powering On the Server for the First Time” on page 71

Available Connections

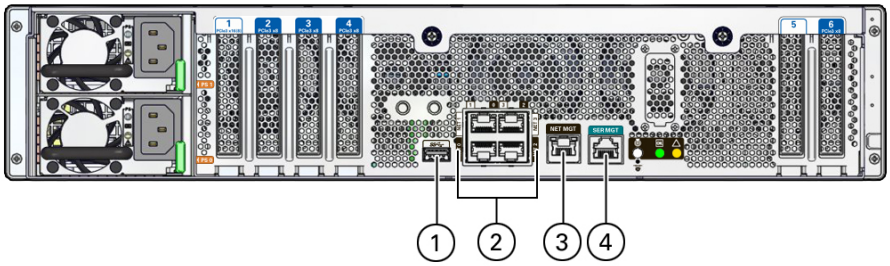
Before applying power to the server, provide connectivity to the SP and server.

Use the information in this topic to plan for these connections. Then gather the required network addresses and cables.

Caution - To comply with NEBS lightning requirements, all I/O connections (except the Ethernet and power connections) must be made using shielded cables, and both ends of the shield must be grounded.

Caution - All data cable connections are restricted to intra-building interfaces and must be isolated from the exposed outside plant cabling. Using primary protectors does not eliminate this restriction. Ensure that these connections do not connect metallically to interfaces that connect to the outside plant or its wiring.

This figure and table describe available ports and lists what you need to use them.



No.	Port	Description	Needed
1	USB	Provides USB connection to the host. Additionally, two USB ports are available on the front of the server.	■ USB keyboard ■ USB mouse For pinout information, see "USB Ports" on page 69.
2	NET (0 - 3)	Four 10 Gigabit Ethernet ports enable you to connect the server to your network.	■ An Ethernet cable to connect to the NET 0 port to your network. ■ Network parameters such as an IP address (can be provided by DHCP services or assigned a static address in the OS). ■ Additional cables and Ethernet addresses as needed for additional connections to NET 1 - 3. For pinout information, see "10 Gigabit Ethernet Ports" on page 68.

No.	Port	Description	Needed
3	NET MGT	A 10/100/1000BASE-T Ethernet connection through an RJ-45 connector. This port supports remote connections to the SP using the Oracle ILOM CLI and web interface. By default, this port is configured to use DHCP or an IPv6 router to automatically obtain an IP address. Alternatively, you can assign a static IP address to this port. To use this port, it must have its network settings configured. Once configured, you use the NET MGT port IP address to login to the SP using a browser or secure shell.	■ An Ethernet cable to connect to the NET MGT port to your network. ■ An IP address for this port (required from DHCP or a static address) For pinout information, see "NET MGT Port" on page 67. **Note -** If your environment does not provide DHCP services, first use the SER MGT port to configure the NET MGT port parameters.
4	SER MGT	A serial connection through an RJ-45 connector. This port supports local connections to the SP and is limited to CLI interaction with Oracle ILOM. These are the default settings: ■ 8N1— eight data bits, no parity, one stop bit ■ 9600 baud ■ Disable hardware flow control (CTS/RTS) ■ Disable software flow control (XON/XOFF)	■ A terminal device – can be a terminal, a connection to a terminal server, or computer such as a laptop running terminal emulation software. ■ A cable to connect the terminal device to the SER MGT port. For pinout information, see "SER MGT Port" on page 66

Related Information

- "Cable the SP" on page 64
- "Cable the Ethernet Ports" on page 64
- "Connect Other Data Cables" on page 65
- "Identifying Ports" on page 65
- "Rear Panel Components (Installation)" on page 15

Connecting Data and Management Cables

These topics describe which ports you must cable before applying power to the server.

- "Available Connections" on page 61
- "Cable the SP" on page 64
- "Cable the Ethernet Ports" on page 64
- "Connect Other Data Cables" on page 65

Related Information

- “Identifying Ports” on page 65
- “Rear Panel Components (Installation)” on page 15

Cable the SP

The SP is integrated into the motherboard. Connection to the SP is through the SER MGT port on the rear of the server.

- **Determine which of these connections works in your environment and establish the connection:**

  - SER MGT port
  - NET MGT port
  - USB keyboard and mouse

  You can configure any combination of these connections. See “Available Connections” on page 61.

Related Information

- “Available Connections” on page 61
- “Cable the Ethernet Ports” on page 64
- “Connect Other Data Cables” on page 65
- “Identifying Ports” on page 65
- “Rear Panel Components (Installation)” on page 15

Cable the Ethernet Ports

Once the server is running the OS, these connections provide Ethernet access to the server. See “10 Gigabit Ethernet Ports” on page 68.

Note - The Oracle ILOM sideband management feature enables you to access the SP using one of these Ethernet ports. Refer to the *Oracle ILOM Administor's Guide for Configuration and Maintenance For Release 3.2.x* at `http://www.oracle.com/goto/ilom321/docs` for instructions.

---

1. **Connect a Category 6 (or better) cable from your network switch or hub to Ethernet port 0 (NET 0) on the rear of the chassis.**
2. **(Optional) Connect Category 6 (or better) cables from your network switch or hub to the remaining Ethernet ports.**

Related Information

- “Available Connections” on page 61
- “Cable the SP” on page 64
- “Connect Other Data Cables” on page 65
- “Identifying Ports” on page 65
- “Rear Panel Components (Installation)” on page 15

▼ Connect Other Data Cables

- **If your installation includes optional PCIe cards, USB devices, or alarms, make the appropriate connections to those devices.**

  Gather the cables and equipment to make these connections, based on your server options:

  - **PCIe cards** — refer to PCIe device documentation
  - **USB devices** — see “USB Ports” on page 69

Related Information

- “Available Connections” on page 61
- “Cable the SP” on page 64
- “Cable the Ethernet Ports” on page 64
- “Identifying Ports” on page 65
- “Rear Panel Components (Installation)” on page 15

Identifying Ports

These topics provide connector descriptions and pinouts. See “Rear Panel Components (Installation)” on page 15 for the locations of the ports.

- “SER MGT Port” on page 66

- "NET MGT Port" on page 67
- "10 Gigabit Ethernet Ports" on page 68
- "USB Ports" on page 69

Related Information

- "Available Connections" on page 61
- "Connecting Data and Management Cables" on page 63

SER MGT Port

The SER MGT RJ-45 port, located on the rear panel, provides an TIA/EIA-232 serial Oracle/Cisco standard connection to the SP. For DTE-to-DTE communications, you can use the supplied RJ-45 to DB-9 crossover adapter with a standard RJ-45 cable to achieve the required null modem configuration.

By default, this port is configured with these parameters:

- 8N1– eight data bits, no parity, one stop bit
- 9600 baud
- Disable hardware flow control (CTS/RTS)
- Disable software flow control (XON/XOFF)

Pin	Signal Description	Pin	Signal Description
1	Clear to Send	5	Ground
2	Data Carrier Detect	6	Receive Data
3	Transmit Data	7	Data Terminal Ready
4	Ground	8	Ready to Send

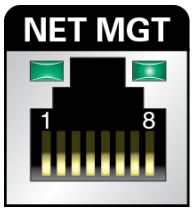
Caution - Do not attach a modem to this port.

Related Information

- “Available Connections” on page 61
- “Rear Panel Components (Installation)” on page 15
- “NET MGT Port” on page 67
- “10 Gigabit Ethernet Ports” on page 68
- “USB Ports” on page 69

NET MGT Port

The NET MGT RJ-45 port, located on the rear panel, provides an optional Ethernet connection to the SP. The service processor network management port uses an RJ-45 cable for a 10/100BASE-T connection. If your network does not use a DHCP server, this port will not be available until you configure network settings through the SER MGT port. This port does not support connections to Gigabit networks.



Pin	Signal Description	Pin	Signal Description
1	Transmit Data +	5	No Connect
2	Transmit Data -	6	Receive Data -
3	Receive Data +	7	No Connect
4	No Connect	8	No Connect

Related Information

- “Available Connections” on page 61

- “Rear Panel Components (Installation)” on page 15
- “SER MGT Port” on page 66
- “10 Gigabit Ethernet Ports” on page 68
- “USB Ports” on page 69

10 Gigabit Ethernet Ports

The server has four RJ-45 10-Gigabit Ethernet (10GbE) network connectors, labeled NET 3, NET 2, NET 1, and NET 0 on the rear panel. Use these ports to connect the server to the network.

The LEDs located above each NET port are Link/Activity indicators for each port described in this table.

Connection Type	IEEE Terminology	Transfer Rate
Fast Ethernet	100BASE-TX	100 Mbits/sec
Gigabit Ethernet	1000BASE-T	1000 Mbits/sec
10 Gigabit Ethernet	10GBASE-T	10000 Mbits/sec

Note - The Oracle ILOM sideband management feature enables you to access the SP using one of these Ethernet ports. Refer to the *Oracle ILOM Administor's Guide for Configuration and Maintenance For Release 3.2.x* at `http://www.oracle.com/goto/ilom321/docs` for instructions.

Pin	Signal Description	Pin	Signal Description
1	Transmit/Receive Data 0 +	5	Transmit/Receive Data 2 -

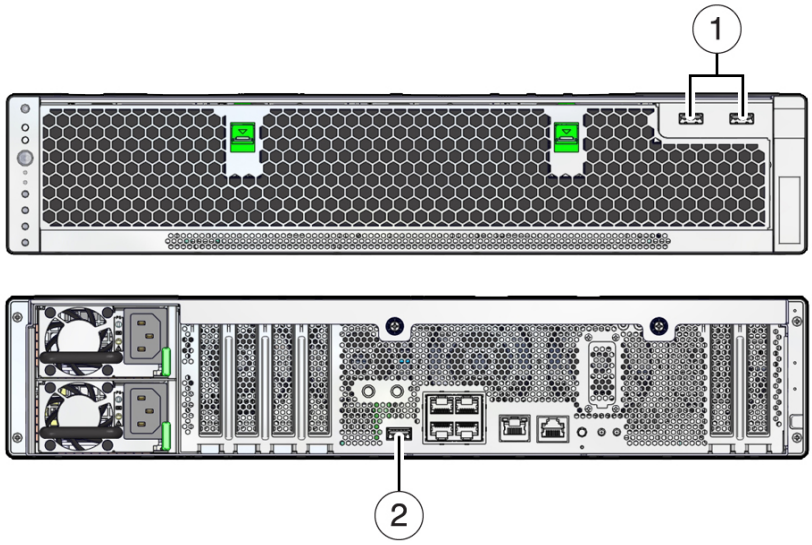
Pin	Signal Description	Pin	Signal Description
2	Transmit/Receive Data 0 -	6	Transmit/Receive Data 1 -
3	Transmit/Receive Data 1 +	7	Transmit/Receive Data 3 +
4	Transmit/Receive Data 2 +	8	Transmit/Receive Data 3 -

Related Information

- “Available Connections” on page 61
- “Rear Panel Components (Installation)” on page 15
- “SER MGT Port” on page 66
- “NET MGT Port” on page 67
- “USB Ports” on page 69

USB Ports

You can access two USB ports from the front of the server and one USB port from the rear of the server. The USB ports support hot-plugging. You can connect and disconnect USB cables and peripheral devices while the server is running, without affecting server operations.



No.	Description
1	Front USB ports. The maximum USB cable length for connecting to the server's front USB 2.0 ports is 5 meters (16.4 ft).
2	Rear USB port. The maximum USB cable length for connecting to the rear USB 3.0 ports is 1.8 meters (6 ft). When more than 1.8 meters (6 ft) of cable is needed, you must use an USB 3.0 Hub.

Note - You can connect up to 126 devices to each of the three USB controllers (two ports in front, one port in rear).

Pin	Signal Description	Pin	Signal Description
1	+5V supply	3	Data +
2	Data -	4	Ground

Related Information

- “Available Connections” on page 61
- “Rear Panel Components (Installation)” on page 15
- “SER MGT Port” on page 66
- “NET MGT Port” on page 67
- “10 Gigabit Ethernet Ports” on page 68

Powering On the Server for the First Time

These topics include instructions for powering on the server for the first time and configuring the Oracle Solaris OS.

Step	Description	Links
1.	Review power requirements.	"Electrical Specifications" on page 18 "Input Power Information" on page 19 "Overcurrent Protection Requirements" on page 20 "DC Power Source, Power Connection, and Grounding Requirements" on page 21
2.	Connect the chassis grounding wire (optional for AC input power).	"Connect the Chassis Ground Wire" on page 72
3.	Connect power cords.	"Connect AC Power Cords" on page 74 "Assembling and Connecting DC Power Cords" on page 75
4.	Connect a serial terminal device or terminal server to the SER MGT Port.	"Connect a Terminal or Emulator to the SER MGT Port" on page 81 "Oracle ILOM System Console" on page 82
5.	Power on the server and start the Oracle ILOM system console.	"Power on the Server for the First Time" on page 83 or "Configure the Preinstalled OS" on page 86
6.	Configure the preinstalled OS, or install a fresh OS.	"Configure the Preinstalled OS" on page 86 or "Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)" on page 88
7.	Set the configuration parameters for the Oracle Solaris OS.	"Oracle Solaris OS Configuration Parameters" on page 91
8. (Optional)	Configure the NET MGT port to use a static IP address.	"Assign a Static IP Address to the NET MGT Port" on page 92
9. (Optional)	Activate Oracle Auto Service Request for the server.	"Oracle Auto Service Request Software Activation" on page 94

Related Information

- “Preparing for Installation” on page 27
- “Installing the Server” on page 31
- “Connecting Cables” on page 61

▼ Connect the Chassis Ground Wire

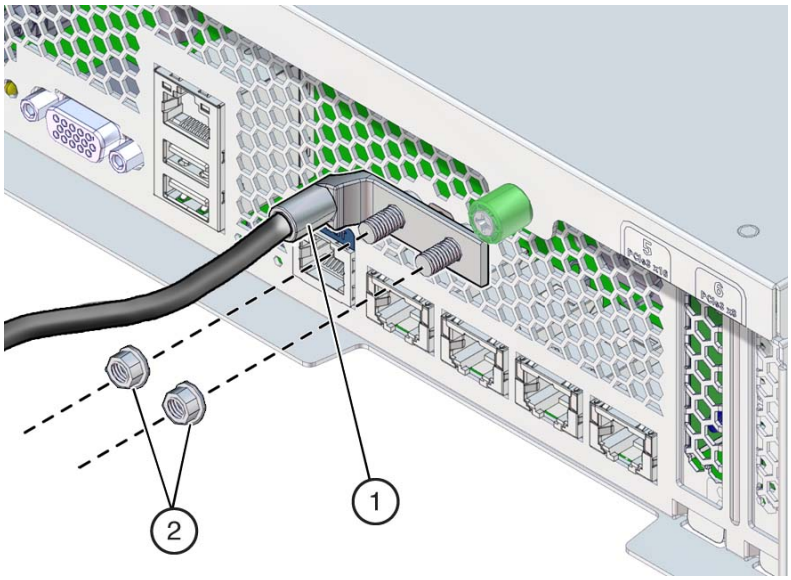
The server shipping kit contains a grounding lug for connecting a chassis grounding wire to the rear of the server. You must supply the grounding wire.

Caution - The DC power source must be reliably grounded. The server chassis must be grounded with the power supply ground pins or with the chassis ground studs. It is acceptable to have both grounds connected.

This procedure is optional for servers with AC input power, however, it is highly recommended. For AC input power, it is acceptable to ground the server through the supplies and chassis ground wire.

1. **Retrieve the grounding lug and two M5 nuts from the shipping kit.**
2. **Insert the grounding wire into the barrel receptacle of the grounding lug, and use a crimping tool or solder gun to secure the wire.**
3. **Go to the back of the server and locate the two grounding studs.**

4. **Position and align the grounding lug on the two grounding studs at the rear of the chassis.**



No.	Description
1	Earth ground cable secured in the grounding lug
2	M5 nuts

5. **Secure the grounding lug to the grounding studs using the two M5 nuts.**

6. **Secure the other end of the grounding wire to the earth ground in the building.**

   You can secure the grounding wire to a proper grounding point on the rack, as long as the rack is properly grounded to the earth ground in the building.

7. **Consider your next step:**

   - **Connect the AC input power cord.**

     See

   - **Assemble the DC input power cord.**

     See “Assemble the DC Input Power Cords” on page 76.

Related Information

- “Assemble the DC Input Power Cords” on page 76
- “Connect DC Power Source” on page 80
- “Power on the Server for the First Time” on page 83

▼ Connect AC Power Cords

Prepare the power cords by routing them from the AC power source to the server.

Caution - Do not attach power cables to the power supplies until you have connected the server to a serial terminal or a terminal emulator (PC or workstation). The server goes into Standby mode and Oracle ILOM on the SP initializes as soon as a power cable connects a power supply to an external power source. System messages might be lost after 60 seconds if a terminal or terminal emulator is not connected to the SER MGT port before power is applied.

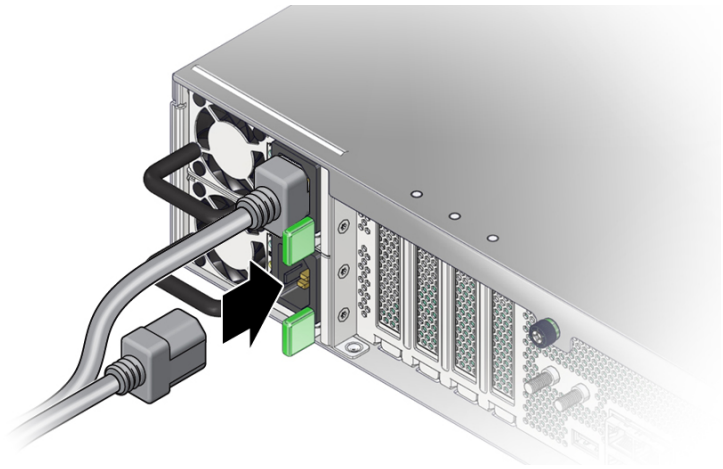
Note - Oracle ILOM signals a fault if both power supplies are not cabled at the same time, since it will be a nonredundant condition. Do not be concerned with this fault in this situation.

1. **(Optional) Connect the chassis ground studs to earth ground.**

   See “Connect the Chassis Ground Wire” on page 72.

2. **Route the power cords from the AC power source to the rear of the server.**

Do not attach the power cords to the power supplies at this time.



3. **Connect a device to the SER MGT port.**

   See “Connect a Terminal or Emulator to the SER MGT Port” on page 81.

Related Information

- “Connect the Chassis Ground Wire” on page 72
- “Rear Panel Components (Installation)” on page 15
- “Powering On the Server for the First Time” on page 71

Assembling and Connecting DC Power Cords

These topics describe how to assemble DC power cords and apply power.

Step	Description	Links
1.	Build the DC power cords and connect them to the server.	“Assemble the DC Input Power Cords” on page 76
2.	Connect the chassis ground wire.	“Connect the Chassis Ground Wire” on page 72
3.	Connect the DC power cords to the DC power source.	“Connect DC Power Source” on page 80

Step	Description	Links
4.	Connect a terminal or emulator to the SER MGT port.	“Connect a Terminal or Emulator to the SER MGT Port” on page 81

Related Information

- “DC Power Source, Power Connection, and Grounding Requirements” on page 21
- “Power on the Server for the First Time” on page 83

▼ Assemble the DC Input Power Cords

1. **Prepare as follows:**

   a. **Install a DC power source that meets the server's input power specifications.**
   See “Electrical Specifications” on page 18.

   b. **Obtain DC power cords that meet the server's power cabling specifications.**
   See “DC Power Source, Power Connection, and Grounding Requirements” on page 21.

   c. **Obtain a crimping tool or a soldering gun and supplies.**

   d. **Obtain heat-shrink tubing in colors matching the ground, positive, and negative cord designations.**

2. **Ensure that no DC power is present on the cords being installed.**

Caution - Do not proceed with these instructions until you are sure that there is no voltage present on the DC cords and their power source.

3. **Route the power cords from the power source to the server.**

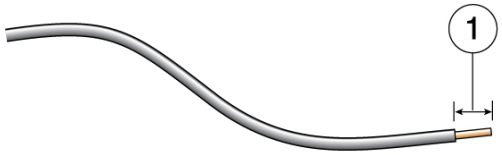
4. **Locate the three wires coming from your DC power source that will be used for the connections to your server.**

   - -48V or -60V Return (positive terminal)
   - -48V or -60V (negative terminal)
   - Chassis ground

Note - Depending on the DC power source, the positive terminal might be marked with a positive (+) symbol, and the negative terminal might be marked with a minus (-) symbol.

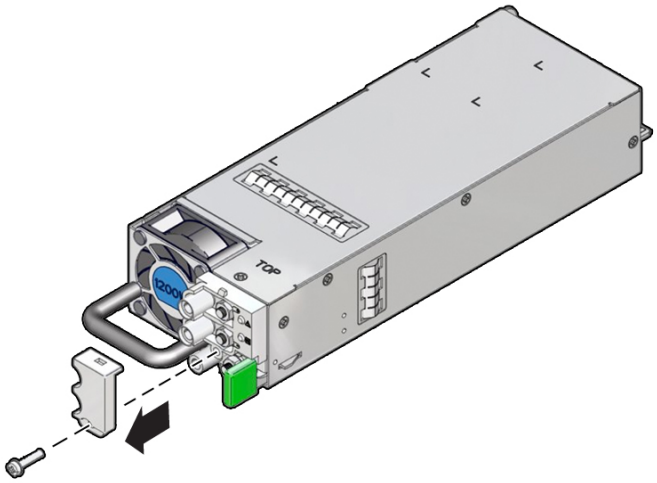
5. **Strip 1/2 in. (13 mm) of insulation from each of the wires.**

   Do not strip more than 1/2 in. (13 mm) from each wire. Doing so leaves uninsulated wire exposed from the DC connector after the assembly is complete.

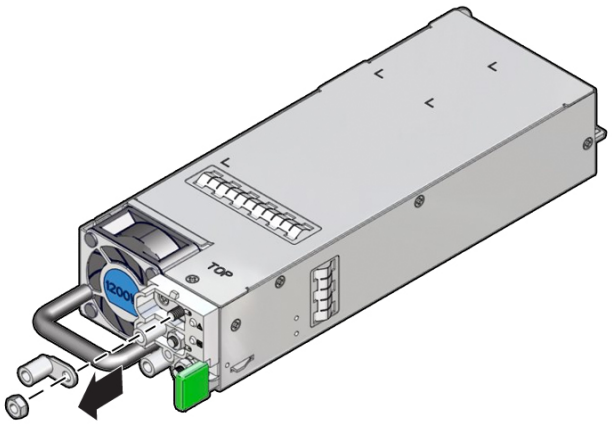


No.	Description
1	1/2 in. (13 mm) maximum

6. **Using a Phillips screwdriver, remove the terminal housing cover.**



7. **Using a 7mm socket wrench or nut driver, remove the three ring load terminals and nuts.**



8. **Place heat-shrink tubing over the cords:**

   a. **Cut a 4 cm piece of heat-shrink tubing, then slide it over each input wire, using the corresponding color (ground, negative or positive) on each wire.**

   b. **Push the tubing at least 15 cm away from the end of the wire, so that crimping or soldering does not damage the tubing.**

9. **Insert the stripped end of a cord into the barrel of a ring terminal, then either crimp the barrel or solder the wire to the inside of the barrel.**

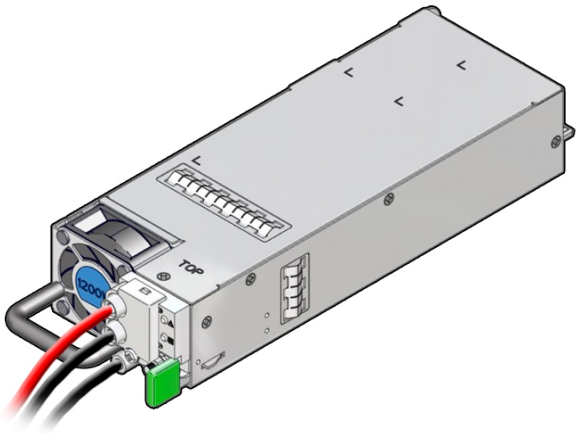
10. **Repeat the procedure for the other two wires.**

11. **Lower the heat-shrink tubing over each of the ring terminal barrels, then shrink fit the tubing with a heat gun.**

12. **Observing correct polarity designations for the attached cords, use the lug nuts to install the ring terminal barrels to the three terminal posts.**

13. **Verify that the cords are installed with the correct polarities.**

14. **Install the terminal housing cover.**



15. **Insert the completed power supply unit into the server.**

16. **Repeat this procedure to create as many DC power supply units as you need for your system.**

17. **Connect the DC power source.**

See “Connect DC Power Source” on page 80.

Related Information

- “Connect the Chassis Ground Wire” on page 72
- “Assemble the DC Input Power Cords” on page 76
- “Power on the Server for the First Time” on page 83

▼ Connect DC Power Source

1. **Connect the chassis ground wire to the facility ground, and ensure that the connections are properly tightened.**

   See “Connect the Chassis Ground Wire” on page 72.

2. **Connect the -48V or -60V return and source wires to the circuit breaker or fuse panel, if they are not already connected.**

Caution - Do not turn on the circuit breakers at this time.

3. **Connect a device to the SER MGT port.**

   See “Connect a Terminal or Emulator to the SER MGT Port” on page 81.

Note - The server will enter Standby mode and the Oracle ILOM SP will initialize as soon as a power source is connected. System messages might be lost after 60 seconds if a terminal or terminal emulator is not connected to the SER MGT port before power is applied.

Note - Oracle ILOM will signal a fault if power is not applied to both supplies, because that is a nonredundant condition.

Related Information

- “Connect the Chassis Ground Wire” on page 72
- “Assemble the DC Input Power Cords” on page 76
- “Power on the Server for the First Time” on page 83

▼ Connect a Terminal or Emulator to the SER MGT Port

Prior to powering on the server for the first time, make a serial connection to the SP. After making this serial connection, you will be able to view the system messages when you connect the power cords.

1. **Confirm that you have completed the following tasks.**

   a. **Completed the preparation for installation.**

   See “Preparing for Installation” on page 27.

   b. **Completed the installation of the server in a rack.**

   See “Installing the Server” on page 31.

   c. **Connected the necessary cables.**

   See “Connecting Cables” on page 61.

   d. **Connected power cords.**

   See “Connect AC Power Cords” on page 74 or “Assembling and Connecting DC Power Cords” on page 75.

2. **Connect a terminal or a terminal emulator (PC or workstation) to the server SER MGT port.**

3. **Configure the terminal or terminal emulator with these settings:**

   - 9600 baud
   - 8 bits
   - No parity
   - 1 Stop bit
   - No handshake

   A null modem configuration is needed, meaning the transmit and receive signals are reversed (crossed over) for DTE to DTE communications. You can use the supplied RJ-45 crossover adapters with a standard RJ-45 cable to achieve the null modem configuration.

Note - If you power on the server for the first time and do not have a terminal or terminal emulator (PC or workstation) connected to the SP SER MGT port, you will not see system messages.

---

4. **(Optional) Connect an Ethernet cable between the server's NET MGT port and the network to which future connections to the SP and host will be made.**

   Configure the system for the first time through the SER MGT port. After the initial configuration, you can set up communication between the SP and host through this Ethernet interface.

5. **Connect an Ethernet cable between one of the server's NET ports and the network to which the server will communicate.**

6. **When you are ready to apply power, turn on the circuit breakers to the power cords, and verify that the green input LED is illuminated on each power supply.**

   Power is immediately supplied to the SP, and the front panel SP OK/Fault LED flashes (see "Front Panel Components (Installation)" on page 14). The SP then runs diagnostics and initializes the Oracle ILOM firmware.

   After the Oracle ILOM firmware initializes, the SP OK/Fault LED remains lit, the main power OK/Fault LED slowly flashes, and the SP login prompt displays on the terminal device. However, the host is not initialized or powered on yet.

7. **Continue with the installation by powering on the server for the first time.**

   See "Powering On the Server for the First Time" on page 71.

Related Information

- "Connect Other Data Cables" on page 65
- "Configure the Preinstalled OS" on page 86
- "Reach a State to Install a Fresh OS (Oracle ILOM CLI)" on page 87
- "Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)" on page 88

Oracle ILOM System Console

When you power on the server, the boot process begins under the control of the Oracle ILOM system console. The system console displays status and error messages generated by firmware-based tests that are run during system startup.

Note - To see these status and error messages, connect a terminal or terminal emulator to the SER MGT before applying power to the server. See "Connect a Terminal or Emulator to the SER MGT Port" on page 81.

After the system console finishes its low-level system diagnostics, the SP initializes and runs a suite of higher level diagnostics. When you access the SP using a device connected to the SER MGT port, you see the output of the Oracle ILOM diagnostics.

By default, the SP configures the NET MGT port automatically, retrieving network configuration settings using DHCP and allowing connections using SSH.

For a more detailed discussion on configuring the system console and connecting terminals, refer to the administration guide for your server.

Related Information

- *SPARC and Netra SPARC S7-2 Series Servers Administration Guide*
- Oracle ILOM documentation
- “Configure the Preinstalled OS” on page 86
- “Reach a State to Install a Fresh OS (Oracle ILOM CLI)” on page 87
- “Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)” on page 88
- “Assign a Static IP Address to the NET MGT Port” on page 92

▼ Power on the Server for the First Time

1. **Connect a terminal device to the server's SER MGT port.**

   See “Connect a Terminal or Emulator to the SER MGT Port” on page 81.

2. **At the terminal device, log in to the SP.**

```
login: root
Password: changeme
. . .
->
```

After a brief delay, the Oracle ILOM prompt is displayed (`->`).

Note - The server is provided with a default Administrator account (`root`) and a default password (`changeme`) to enable first-time login and access to Oracle ILOM. To build a secure environment, you must change the default password of the default Administrator account as soon as possible after your initial login to Oracle ILOM. If you find this default Administrator account has already been changed, contact your system administrator to obtain an Oracle ILOM user account with Administrator privileges.

For more information about the administration tasks such as changing passwords, adding accounts, and setting account privileges, refer to the Oracle ILOM documentation.

Note - By default, the SP is configured to use DHCP to obtain an IP address. If you plan to assign a static IP address to the SP, see "Assign a Static IP Address to the NET MGT Port" on page 92 for more instructions.

---

3. **Power on the server using one of the following methods.**

   - **Press the System Power button.**
   - **At the Oracle ILOM prompt, type:**

     ```
     -> start /System
     Are you sure you want to start /System (y/n)? y
     ```

   The server initialization might take several minutes to complete.
   To cancel the initialization, press the #. (Hash+Dot) keys to return to the Oracle ILOM prompt. Then type: `stop /System`

4. **(Optional) Redirect the host output to display on the serial terminal device.**

   ```
   -> start /HOST/console
   Are you sure you want to start /SP/console (y/n)? y
   Serial console started.
   . . .
   ```

5. **(Optional) Execute other Oracle ILOM commands while the server initializes.**

   a. **To display the Oracle ILOM prompt, press the #. (Hash+Dot) keys.**

   b. **To see information about available Oracle ILOM commands, type:** `help`
   To see information about a specific command, type help command-name

   c. **To return to displaying host output from the server initialization, type:**

      ```
      -> start /HOST/console
      ```

6. **(Optional) If you do not need NEBS mode and want to improve performance, disable NEBS mode.**
   See "Disable NEBS Mode" on page 85.

7. **Continue with the installation by installing the OS.**

See “Installing the OS” on page 86.

Related Information

- “Connect Other Data Cables” on page 65
- “Oracle ILOM System Console” on page 82
- “Configure the Preinstalled OS” on page 86
- “Reach a State to Install a Fresh OS (Oracle ILOM CLI)” on page 87
- “Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)” on page 88

▼ Disable NEBS Mode

NEBS mode is enabled by default, which places the maximum power state to P7, so that the server will not reduce speed when high temperatures are detected. If you prefer full performance over NEBS, disable this feature.

1. **To disable NEBS mode, type:**

```
->cd /HOST
    /HOST
    -> ls
     /HOST
        Targets:
            ...
        Properties:
            autorestart = reset
            ...
            nebs_mode = enabled
            ...
->set nebs_mode=disabled
```

2. **Continue with the installation by installing the OS.**

   See “Installing the OS” on page 86.

Related Information

- “Oracle ILOM System Console” on page 82
- “Configure the Preinstalled OS” on page 86
- “Reach a State to Install a Fresh OS (Oracle ILOM CLI)” on page 87
- “Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)” on page 88

Installing the OS

Use these topics to either configure the preinstalled OS or use an alternative OS.

Related Information

▼ Configure the Preinstalled OS

1. **Determine which OS you will use.**

   - **If you plan to use the preinstalled OS, proceed to step 2.**
   - **If you do not plan to use the preinstalled OS, go to "Reach a State to Install a Fresh OS (Oracle ILOM CLI)" on page 87 or "Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)" on page 88.**

2. **When prompted, follow the onscreen instructions for configuring the Oracle Solaris OS on your host.**

   You are prompted to confirm the configuration several times, enabling confirmation and changes. If you are not sure how to respond to a particular value, you can accept the default and make future changes when the Oracle Solaris OS is running. See "Oracle Solaris OS Configuration Parameters" on page 91 for a description of the Oracle Solaris OS parameters you must provide during initial configuration.

3. **Log in to the server.**

   You can now enter Oracle Solaris OS commands at the prompt. For more details, refer to the Oracle Solaris 11 OS man pages and documentation at:

   `http://www.oracle.com/goto/solaris11/docs`

Related Information

- "Connect a Terminal or Emulator to the SER MGT Port" on page 81
- "Power on the Server for the First Time" on page 83
- "Oracle Solaris OS Configuration Parameters" on page 91

▼ Reach a State to Install a Fresh OS (Oracle ILOM CLI)

If you do not plan to use the preinstalled OS, use this procedure to prevent the server from booting from the preinstalled OS.

1. **Prepare the appropriate boot media according to your installation method.**

   There are many methods by which you can install the OS. For example, you can boot and install the OS from DVD media or from another server on the network.

   For more information about the methods, refer to *Installing Oracle Solaris 11 Systems*, comparing installation options at:

   `http://www.oracle.com/goto/Solaris11/docs`

2. **From Oracle ILOM, set the OpenBoot `auto-boot?` parameter to `false`.**

   ```
   -> set /HOST/bootmode script="setenv auto-boot? false"
   ```

   This setting prevents the server from booting from the preinstalled OS. When you use `bootmode`, the change applies only to a single boot and expires in 10 minutes if the power on the host is not reset.

3. **When you are ready to initiate the OS installation, reset the host.**

   ```
   -> reset /System
   Are you sure you want to reset /System (y/n)? y
   Performing reset on /System
   ```

4. **Switch communication to the server host.**

   ```
   -> start /HOST/console
   Are you sure you want to start /HOST/console (y/n)? y
   Serial console started. To stop, type #.
   ```

   The server might take several minutes to complete POST, and then the OpenBoot prompt (`ok`) is displayed.

5. **Boot from the appropriate boot media for your installation method.**

For more information, refer to the section on comparing installation methods in *Installing Oracle Solaris 11 Systems* that corresponds to your desired release at:

http://www.oracle.com/goto/solaris11/docs

For a list of valid boot commands that you can enter at the OpenBoot prompt, type:

```
{0} ok help boot
boot <specifier>  ( -- )    boot kernel ( default ) or other file
  Examples:
    boot                    - boot kernel from default device.
                              Factory default is to boot
                              from DISK if present, otherwise from NET.
    boot net                - boot kernel from network
    boot cdrom              - boot kernel from CD-ROM
    boot disk1:h            - boot from disk1 partition h
    boot tape               - boot default file from tape
    boot disk myunix -as    - boot myunix from disk with flags "-as"
dload <filename>  ( addr -- )     debug load of file over network at address
  Examples:
     4000 dload /export/root/foo/test
     ?go        - if executable program, execute it
                  or if Forth program, compile it
```

6. **During the installation, supply the configuration parameters as directed.**

   See “Oracle Solaris OS Configuration Parameters” on page 91.

Related Information

- “Configure the Preinstalled OS” on page 86
- “Reach a State to Install a Fresh OS (Oracle ILOM CLI)” on page 87
- “Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)” on page 88
- “Assign a Static IP Address to the NET MGT Port” on page 92

▼ Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)

If you do not plan to use the preinstalled OS, use this procedure to prevent the server from booting from the preinstalled OS.

1. **Prepare the appropriate boot media according to your installation method.**

There are many methods by which you can install the OS. For example, you can boot and install the OS from DVD media or from another server on the network.

For more information about the methods, refer to *Installing Oracle Solaris 11 Systems*, comparing installation options at:

`http://www.oracle.com/goto/solaris11/docs`

2. **If you have not done so, perform these tasks to access the Oracle ILOM web interface on the server.**

   a. **In a browser on the same network as the system, type the IP address.**

   b. **Log in to Oracle ILOM by typing your user name and password.**

3. **In the Oracle ILOM web interface, in the left navigation pane, choose Host Management → Host Boot Mode.**

   The Host Boot Mode page is displayed.

4. **Apply these changes to the Host Boot Mode Settings.**

   a. **For State, select: Reset NVRAM.**

      This setting applies a one-time NVRAM (OpenBoot) change based on the script setting, then resets the NVRAM to default settings on the next host reset.

   b. **For Script, type:** `setenv auto-boot? false`

      This setting configures the host to stop at the `ok` prompt instead of automatically booting the preinstalled OS.

   c. **Click Save.**

Note - You have 10 minutes to perform the next step. After 10 minutes, the state is automatically returned to normal.

---

5. **In the left navigation panel, click on Host Management → Power Control.**

6. **Select Reset from the pull-down menu, and click Save.**

7. **In the left navigation panel, click on Remote Control → Redirection.**

8. **Select Use Serial Redirection, and click Launch Remote Console.**

As the host resets, messages are displayed in the serial console. The reset activity takes a few minutes to complete. When the `ok` prompt is displayed, continue to the next step.

9. **At the `ok` prompt, boot from the appropriate boot media for your installation method.**

   For more information, refer to the *Installing Oracle Solaris 11 Systems*, comparing installation options at:

   `http://www.oracle.com/goto/solaris11/docs`

   For a list of valid boot commands that you can enter at the OpenBoot prompt, type:

```
{0} ok help boot
boot <specifier>  ( -- )    boot kernel ( default ) or other file
  Examples:
    boot                    - boot kernel from default device.
                              Factory default is to boot
                              from DISK if present, otherwise from NET.
    boot net                - boot kernel from network
    boot cdrom              - boot kernel from CD-ROM
    boot disk1:h            - boot from disk1 partition h
    boot tape               - boot default file from tape
    boot disk myunix -as    - boot myunix from disk with flags "-as"
dload <filename>  ( addr -- )     debug load of file over network at address
  Examples:
     4000 dload /export/root/foo/test
     ?go        - if executable program, execute it
                  or if Forth program, compile it
```

10. **During the installation, supply the configuration parameters as directed.**

    See “Oracle Solaris OS Configuration Parameters” on page 91.

Related Information

- “Configure the Preinstalled OS” on page 86
- “Reach a State to Install a Fresh OS (Oracle ILOM CLI)” on page 87
- “Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)” on page 88
- “Assign a Static IP Address to the NET MGT Port” on page 92

Oracle Solaris OS Configuration Parameters

When configuring the Oracle Solaris OS, you are prompted for the following configuration parameters. For more information about these settings, refer to the Oracle Solaris documentation.

Parameter	Description
Language	Select a number from the displayed language list.
Locale	Select a number from the displayed locale list.
Terminal Type	Select a terminal type that corresponds with your terminal device.
Network?	Select Yes.
Multiple Network Interfaces	Select the network interfaces that you plan to configure. If you are not sure, select the first one in the list.
DHCP?	Select Yes or No according to your network environment.
Host Name	Type the host name for the server.
IP Address	Type the IP address for this Ethernet interface.
Subnet?	Select Yes or No according to your network environment.
Subnet Netmask	If your answer to Subnet? was Yes, type the netmask for the subnet for your network environment.
IPv6?	Specify whether or not to use IPv6. If you are not sure, select No to configure the Ethernet interface for IPv4.
Security Policy	Select either standard UNIX security (No) or Kerberos Security (Yes). If you are not sure, select No.
Confirm	Review the onscreen information and change it if needed. Otherwise, continue.
Name Service	Select the name service according to your network environment. If you select a name service other than None, you will be prompted for additional name service configuration information.
NFSv4 Domain Name	Select the type of domain name configuration according to your environment. If you are not sure, select `Use the NFSv4 domain derived by the system`.
Time Zone (Continent)	Select your continent.
Time Zone (Country or Region)	Select your country or region.
Time Zone	Select the time zone.
Date and Time	Accept the default date and time, or change the values.
root Password	Type the `root` password twice. This password is for the superuser account for the Oracle Solaris OS on this server. This password is not the SP password.

Related Information

- Oracle Solaris OS documentation
- “Configure the Preinstalled OS” on page 86

- "Reach a State to Install a Fresh OS (Oracle ILOM CLI)" on page 87
- "Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)" on page 88

Assign a Static IP Address to the NET MGT Port

If you plan to connect to the SP through its NET MGT port, the SP must have a valid IP address.

By default, the server is configured to obtain an IP address from DHCP services in your network. If the network your server is connected to does not support DHCP for IP addressing, perform this procedure.

Note - To configure the server to support DHCP, refer to the Oracle ILOM documentation.

1. **Connect to the Oracle ILOM on the SP using the SER MGT port.**

   If you are not already connected through the SER MGT port, perform steps as needed in "Connect a Terminal or Emulator to the SER MGT Port" on page 81.

2. **Set the SP to accept a static IP address.**

```
->set /SP/network pendingipdiscovery=static
Set 'pendingipdiscovery' to 'static'
```

3. **Set the IP address for the SP.**

   - **To change the default IPv4 DHCP property and set property values for a static IPv4 address, type `IPv4_address`.**
   - **To change the default IPv6 DHCP property and set property values for a static IPv6 address, type `IPv6_address`.**

```
->set /SP/network pendingipaddress=service-processor-IPaddr
Set 'pendingipaddress' to 'service-processor-IPaddr'
```

4. **Set the IP address for the SP gateway.**

```
-> set /SP/network pendingipgateway=gateway-IPaddr
Set 'pendingipgateway' to 'gateway-IPaddr'
```

5. **Set the netmask for the SP.**

```
-> set /SP/network pendingipnetmask=255.255.255.0
```

```
Set 'pendingipnetmask' to '255.255.255.0'
```

This example uses 255.255.255.0 to set the netmask. Your network environment subnet might require a different netmask. Use a netmask number most appropriate to your environment.

6. **Verify that the parameters were set correctly.**

   This example shows parameters that have been set to convert a SP from a DHCP configuration to a static configuration.

```
-> show /SP/network -display properties
  /SP/network
     Targets:
     Properties:
        commitpending = (Cannot show property)
        dhcp_clientid = xxx.xxx.xxx.xxx
        dhcp_server_ip = xxx.xxx.xxx.xxx
       ipaddress = xxx.xxx.xxx.xxx
       ipdiscovery = dhcp
       ipgateway = xxx.xxx.xxx.xxx
       ipnetmask = 255.255.255.0
       macaddress = xx:xx:xx:xx:xx:xx
       managementport = MGMT
       outofbandmacaddress = xx:xx:xx:xx:xx:xx
        pendingipaddress = service-processor-IPaddr
       pendingipdiscovery = static
        pendingipgateway = gateway-IPaddr
       pendingipnetmask = 255.255.255.0
       pendingmanagementport = MGMT
       sidebandmacaddress = xx:xx:xx:xx:xx:xx
       state = enabled
->
```

7. **Set the changes to the SP network parameters.**

```
-> set /SP/network commitpending=true
Set 'commitpending' to 'true'
```

Note - You can type the `show /SP/network` command again to verify that the parameters have been updated.

8. **Set the static IP address when you configure the Oracle Solaris OS.**

   See “Configure the Preinstalled OS” on page 86.

Related Information

- *Server Administration*

- “Configure the Preinstalled OS” on page 86
- “Reach a State to Install a Fresh OS (Oracle ILOM CLI)” on page 87
- “Reach a State to Install a Fresh OS (Oracle ILOM Web Interface)” on page 88
- “Oracle Solaris OS Configuration Parameters” on page 91
- Oracle ILOM documentation

Oracle Auto Service Request Software Activation

When you have completed initial installation and Oracle Solaris configuration, you can activate Oracle Auto Service Request (Oracle ASR) software for the server.

Oracle ASR software provides the ability to resolve problems faster by automatically opening service requests for Oracle's qualified server, storage, and Engineered System products when specific faults occur.

Parts are dispatched upon receipt of a service request sent by Oracle ASR. In many cases, Oracle engineers are already working to resolve an issue before you're even aware that a problem exists.

Oracle products with Oracle ASR securely transport electronic fault telemetry data to Oracle automatically to help expedite the diagnostic process. The one-way event notification requires no incoming Internet connections or remote access mechanism. Only the information needed to solve a problem is communicated to Oracle.

Oracle ASR is a feature of the Oracle hardware warranty, Oracle Premium Support for Systems, and Oracle Platinum Services.

- https://www.oracle.com/support/premier/index.html
- https://www.oracle.com/support/premier/engineered-systems/platinum-services.html

Oracle ASR is integrated with My Oracle Support (https://support.oracle.com). You must use My Oracle Support to activate your ASR assets, such as a new server.

To activate automated support for a server, download software and find additional information at:

http://www.oracle.com/us/support/auto-service-request/index.html

Some of resources available for Oracle ASR through that site are:

- Oracle Auto Service Request Documentation

  http://docs.oracle.com/cd/E37710_01/index.htm
- *How to Approve Pending ASR Assets In My Oracle Support* (DOC ID 1329200.1)

  https://support.oracle.com/rs?type=doc&id=1329200.1

Related Information

- Oracle Auto Service Request Documentation

  http://docs.oracle.com/cd/E37710_01/index.htm

Index

L

M

N

O

P

T

U

V

W