Enterasys Matrix® N7

7C107 Chassis

Hardware Installation Guide

P/N 9033851-06

enterasys®



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Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.

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Produktsicherheit

Dieses Produkt entspricht den folgenden Richtlinien: UL 60950, CSA C22.2 No. 60950, 2006/95/EC, EN 60950, IEC 60950, EN 60825, 21 CFR 1040.10.

Electromagnetic Compatibility (EMC)

This product complies with the following: 47 CFR Parts 2 and 15, CSA C108.8, 2004/108/EC, EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55024, AS/NZS CISPR 22, VCCI V-3.

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Este producto de Enterasys cumple con lo siguiente: 47 CFR Partes 2 y 15, CSA C108.8, 2004/108/EC, EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3, AS/NZS CISPR 22, VCCI V-3.

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金属部件 (Metal Parts)	×	○	○	×	○	○
电路模块 (Circuit Modules)	×	○	○	×	○	○
电缆及电缆组件 (Cables & Cable Assemblies)	×	○	○	×	○	○
塑料和聚合物部件 (Plastic and Polymeric parts)	○	○	○	○	○	×
电路开关 (Circuit Breakers)	○	○	×	×	○	○

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Safety Information
Class 1 Laser Transceivers

The single mode interface modules use Class 1 laser transceivers.
Read the following safety information before installing or operating these modules.

The Class 1 laser transceivers use an optical feedback loop to maintain Class 1 operation limits. This control loop eliminates the need for maintenance checks or adjustments. The output is factory set, and does not allow any user adjustment. Class 1 Laser transceivers comply with the following safety standards:

- 21 CFR 1040.10 and 1040.11 U.S. Department of Health and Human Services (FDA).
- IEC Publication 825 (International Electrotechnical Commission).
- CENELEC EN 60825 (European Committee for Electrotechnical Standardization).

When operating within their performance limitations, laser transceiver output meets the Class 1 accessible emission limit of all three standards. Class 1 levels of laser radiation are not considered hazardous.

When the connector is in place, all laser radiation remains within the fiber. The maximum amount of radiant power exiting the fiber (under normal conditions) is -12.6 dBm or 55 x 10^{-6} watts.

Removing the optical connector from the transceiver allows laser radiation to emit directly from the optical port. The maximum radiance from the optical port (under worst case conditions) is 0.8 W cm^{-2} or 8 x 10^{3} W m^{2} sr-1.

Do not use optical instruments to view the laser output. The use of optical instruments to view laser output increases eye hazard. When viewing the output optical port, power must be removed from the network adapter.

Declaration of Conformity

Application of Council Directive(s):	**2004/108/EC** **2006/95/EC**
Manufacturer's Name:	**Enterasys Networks, Inc.**
Manufacturer's Address:	**50 Minuteman Road** **Andover, MA 01810** **USA**
European Representative Address:	**Enterasys Networks, Ltd.** **Nexus House, Newbury Business Park** **London Road, Newbury** **Berkshire RG14 2PZ, England**
Conformance to Directive(s)/Product Standards:	**EC Directive 2004/108/EC** **EN 55022** **EN 61000-3-2** **EN 61000-3-3** **EN 55024** **EC Directive 2006/95/EC** **EN 60950** **EN 60825**
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About This Guide

Welcome to the *Enterasys Matrix® N7 7C107 Chassis Hardware Installation Guide*. This guide lists the features and options of theN7 7C107 chassis and explains how to remove and reinstall its fan tray, install the cable management bar, and power supplies.

USING THIS GUIDE

Read through this guide completely to familiarize yourself with its contents and to gain an understanding of the features and capabilities of the N7 chassis. A general working knowledge of data communications networks is helpful when setting up the Enterasys Matrix N7 7C107 chassis.



Note: In this guide, the Enterasys Matrix N7 7C107 chassis is also referred to as the Matrix N7, the N7 chassis, or simply the chassis.

STRUCTURE OF THIS GUIDE

This guide is organized as follows:

This preface provides preliminary information to help you use this guide and a brief summary of each chapter. It also discusses the Matrix N7 Series manual set and defines conventions used throughout this document.

Chapter 1, **Introduction**, describes the features and capabilities of the N7 chassis, and how to get help.

Chapter 2, **Installation Requirements and Guidelines**, lists the installation site requirements that must be met before installing the N7 chassis in a cabinet or rack. This chapter also includes configuration guidelines, and operating specifications for the N7 chassis enclosure and power supply modules.

Chapter 3, **Enterasys Matrix N7 Chassis Setup**, contains instructions for a standalone or rackmount installation of the N7 chassis. It also provides instructions for installing the cable management bar, installing the power supply modules, removing and reinstalling the fan tray, and powering up the N7 chassis.

Appendix A, **Specifications and Regulatory Compliance**, lists environmental and operating specifications for the N7 chassis and power supply modules.

USING THE ENTERASYS MATRIX N7 7C107 CHASSIS SERIES MANUAL SET

Separate manuals have been developed for the 7xxxxx series DFE modules that can be installed in the N7 chassis.



Note: The N7 chassis supports the DFE (Distributed Forwarding Engine) 7xxxxx series of modules and does not support the older 6x1xx, 6x2xx, and 6x3xx series of modules.

The 7xxxxx series manuals explain how to install the modules into the N7 chassis, how to attach cable segments to the modules, and how to configure the modules using Local Management after installation is complete. The specifications for modules are included in each manual.

Each manual in this set assumes that the qualified personnel installing the module has a general working knowledge of data communications networks and their physical layer components.

Manuals can be accessed on the World Wide Web, using the following URL:

http://www.enterasys.com/support/manuals/

DOCUMENT CONVENTIONS

The following conventions are used in this guide:



Note: Calls the reader's attention to any item of information that may be of special importance.



Caution: Contains information essential to avoid damage to the equipment.

Precaución: Contiene información esencial para prevenir dañar el equipo.

Achtung: Verweißt auf wichtige Informationen zum Schutz gegen Beschädigungen.



Warning: Warns against an action that could result in personal injury or death.

Advertencia: Advierte contra una acción que pudiera resultar en lesión corporal o la muerte.

Warnhinweis: Warnung vor Handlungen, die zu Verletzung von Personen oder gar Todesfällen führen können!



Electrical Hazard: Warns against an action that could result in personal injury or death due to an electrical hazard.

Riesgo Electrico: Advierte contra una acción que pudiera resultar en lesión corporal o la muerte debido a un riesgo eléctrico.

Elektrischer Gefahrenhinweis: Warnung vor sämtlichen Handlungen, die zu Verletzung von Personen oder Todesfällen – hervorgerufen durch elektrische Spannung – führen können!

1

Introduction

This chapter provides an overview of the Enterasys Matrix N7 chassis and its features. Also covered in this chapter are the instructions on how to obtain additional help from Enterasys Networks if needed.

1.1 OVERVIEW

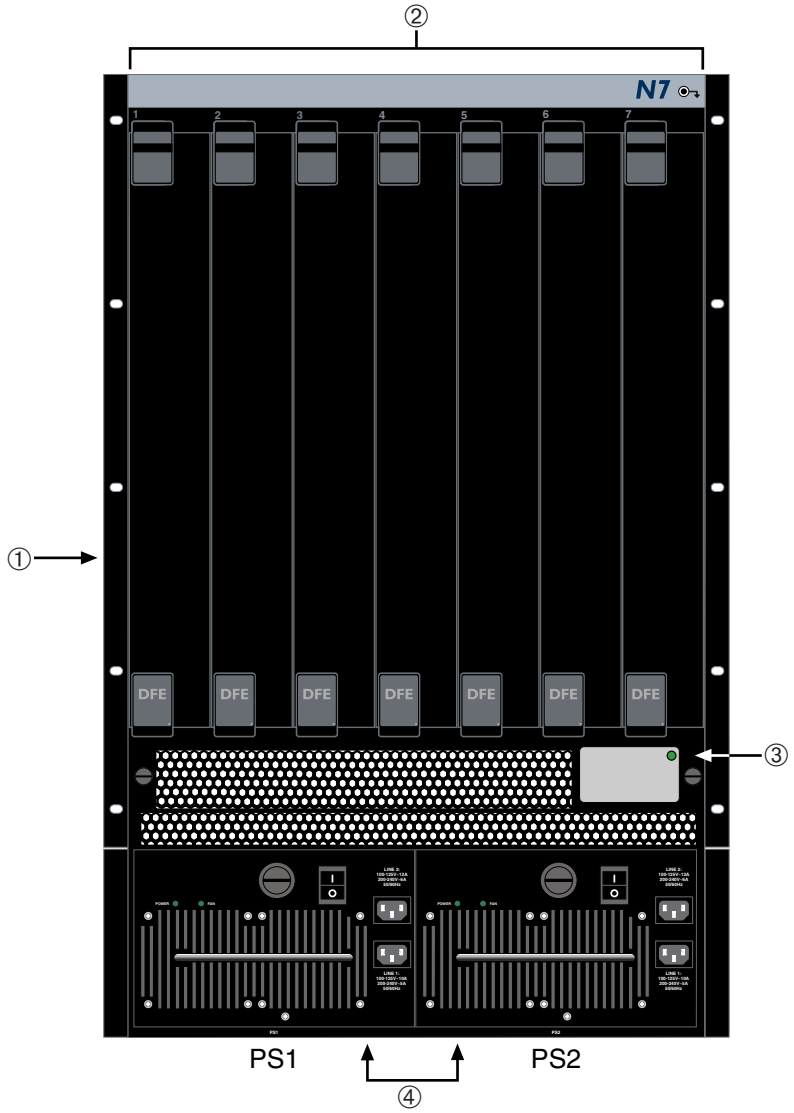
The N7 chassis design provides seven slots for a new advanced generation of modules, the Matrix DFE series modules. All DFE modules installed in the N7 chassis operate as a system with a single IP address.

The N7 chassis

- uses a distributed switching architecture,
- allows hot swapping of the DFE modules,
- supports redundant power supplies, and
- can be installed as a freestanding unit or installed into a standard 48.26-centimeter (19-inch) rack.

All chassis components (power supplies, fan tray, and modules) are installed from the front of the chassis for ease of maintenance. All LED indicators are observable from the front of the chassis to aid in monitoring network operational status and performing maintenance. Figure 1-1 illustrates the Enterasys Matrix N7 chassis equipped with two 1600-Watt, 6C207-3 redundant power supplies.

Figure 1-1 The N7 7C107 Chassis with Redundant Power Supplies



1 Chassis (7C107)
2 Module slots (7 total)
3 Fan tray (6C407)
4 Redundant power supplies (6C207-3) (2)

1.2 FEATURES

The following provides an overview of the chassis features.



NOTE: The N7 chassis supports the DFE (Distributed Forwarding Engine) 7xxxxx series of modules and does not support the older 6x1xx, 6x2xx, and 6x3xx series of modules.

N7 7C107 Chassis Modules

The N7 chassis has seven slots for the new Matrix DFE series of modules.

Redundant Power Supplies

The N7 chassis supports two 6C207-3 power supplies that reside in the lower section of the chassis, in slots labeled PS1 and PS2. The second power supply provides redundancy and load sharing.

6C207-3

The 6C207-3 is a 1600-Watt power supply, which has two front-panel ac input power connectors. The type of power cords shipped with the unit is country-dependent. Each power cord must be plugged into an independent power circuit.



NOTE: Both power cords must be connected to the 6C207-3 for it to operate, and connected to two independent ac power sources to handle the input power requirements.

The 6C207-3 is capable of load sharing 50% (+/- 5%) of the Enterasys Matrix N7 chassis power load. If one power supply fails, the other power supply supports the entire load of the chassis without interruption to network traffic. Refer to Section 2.1 for power outlet requirements.

Power Supply LANVIEW LEDs

Each power supply comes equipped with LANVIEW® LEDs for at-a-glance diagnostics that indicate individual power supply status and overall chassis redundancy status. Refer to Chapter 2, **Installation Requirements and Guidelines**, for a full explanation of the power supply LEDs and their definitions.

Power Supply Status Using Management

The N7 chassis power supplies report information to the DFE modules installed in the chassis regarding their present operating status as well as the fan tray status. This information includes the following:

- Power Supply ID (PS1, PS2)
- Power Supply Status (normal/fault/not installed)
- Power Supply Redundancy indication (redundant/not available)
- Fan Status (normal/fault)

Refer to the module-specific Configuration User's Guide for instructions on how to access power supply status information using Local Management.

Auto-Ranging Power Supplies

The N7 chassis power supplies automatically adjust to the input voltage and frequency, which allows for an input voltage of 100 to 220 Vac, and a frequency between 50 and 60 Hz. See the operating specifications in Appendix A. No additional adjustments are necessary. For installations in North America two 15 A power cords are required. See Section 3.3 for more details.

Power Supply Replacement

To reduce network downtime, a power supply may be removed after it has been powered down. When two power supplies are installed, this allows the removal of one power supply without powering down the chassis and interrupting network traffic.

The N7 7C107 Chassis Cooling System

The N7 chassis features a removable fan tray that is accessible from the front of the unit. This unit is hot swappable, which allows it to be replaced without powering down the chassis. The fan tray has one LANVIEW LED located on the front of the unit. This LED indicates the status of the fan tray (normal/fault/not installed). Refer to Chapter 2 for a full description of the fan tray LED states.

Standalone or Rack Mountable Chassis

The N7 chassis can be installed as a freestanding unit on a shelf or table. The N7 chassis can also be mounted into a standard 48.26-centimeter (19-inch) equipment rack. An equipment shelf is shipped with the chassis that you install prior to installing the chassis. The N7 chassis can then be slid onto the shelf into place and then fastened to the chassis. Refer to Section 2.1 for requirements on ventilation and cooling.

1.3 GETTING HELP

For additional support related to the modules or this document, contact Enterasys Networks using one of the following methods:

World Wide Web	www.enterasys.com/support/
Phone	1-800-872-8440 (toll-free in U.S. and Canada) or 1-978-684-1000 For the Enterasys Networks Support toll-free number in your country: www.enterasys.com/services/support/contact/
Internet mail	support@enterasys.com To expedite your message, please type **[N-SERIES]** in the subject line.
To send comments or suggestions concerning this document to the Technical Publications Department: techpubs@enterasys.com To expedite your message, include the document Part Number in the Email message.	

Before contacting Enterasys Networks for technical support, have the following information ready:

- Your Enterasys Networks service contract number
- A description of the failure
- A description of any action(s) already taken to resolve the problem (e.g., changing mode switches, rebooting the unit, etc.)
- The serial and revision numbers of all involved Enterasys Networks products in the network
- A description of your network environment (layout, cable type, etc.)
- Network load and frame size at the time of trouble (if known)
- The device history (i.e., have you returned the device before, is this a recurring problem, etc.)
- Any previous Return Material Authorization (RMA) numbers

2

Installation Requirements and Guidelines

This chapter describes the following:

- Site guidelines that must be met before installing an Enterasys Matrix N7 chassis into a rack or cabinet
- Enterasys Matrix N7 chassis configuration guidelines
- Operating specifications for the Enterasys Matrix N7 chassis enclosure and power supply modules



Electrical Hazard: Only qualified personnel should perform installation procedures.

Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.

Elektrischer Gefahrenhinweis: Installationen sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.

2.1 SITE GUIDELINES

The following guidelines must be followed when a site is selected for the N7 chassis. If the guidelines are not followed, unsatisfactory network performance may result.

- To allow proper cooling within the rack, there must be 7.62 centimeters (3 inches) of clearance above the unit and 5.08 centimeters (2 inches) of clearance on either side of the unit.
- To install the N7 chassis as a freestanding unit on a shelving unit, the shelf must be able to support 80 kilograms (176 pounds) of static weight.
- To install the N7 chassis as a rack mounted unit, care must be taken to ensure that the rack used will support the unit and that the rack remains stable.
- The 6C207-3 ac power supplies for the N7 chassis require two three-pronged power receptacles capable of delivering the current and voltage specified in Section A.2. Two ac outlets on independently fused circuits are required for each 6C207-3, and must be located within 182 centimeters (6 feet) from the site. The power cord used and type of outlet is dependent on the country. In the United States, two power cords with NEMA 5-15P plugs are provided with each 6C207-3.

- Ambient temperature at the installation site must be maintained between 5° and 40°C (41° to 104°F). Temperature changes must be maintained within 10°C (18°F) per hour.

2.2 CONFIGURATION GUIDELINES

The N7 chassis has seven slots that accept DFE modules. The slots are numbered 1 to 7 beginning with the leftmost slot. There are two slots near the bottom of the chassis that are strictly for power supplies. These slots are labeled PS1 and PS2.

The DFE modules for the N7 chassis are equipped with a firmware-based management tool, which provides the capability to configure one or more DFE modules; and access chassis, power supply, and fan tray information.

2.3 LANVIEW LEDs

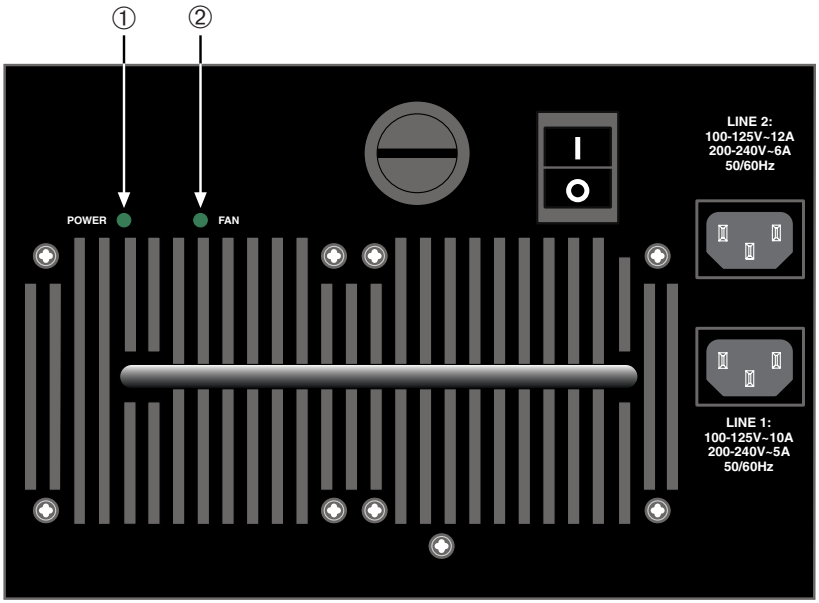
The following sections describe the LANVIEW LED indications for the following:

- 6C207-3 power supply module
- Fan tray unit

2.3.1 Power Supply LEDs

There are two LEDs on the power supply. Refer to Figure 2-1 for the location of the power supply LEDs. Table 2-1 describes the different states of the power supply LEDs under six different conditions. The power supplies are installed in chassis slots PS1 and PS2 in the front-bottom part of the chassis.

Figure 2-1 6C207-3 Power Supply LEDs



1 POWER LED **2** FAN LED

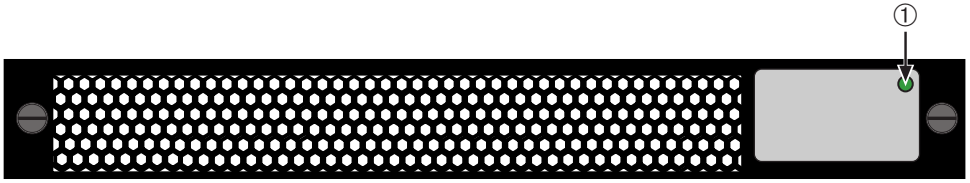
Table 2-1 Power Supply (PS) LED Status Definitions

Condition	PS1	PS2	Load	PS1 LEDs		PS2 LEDs	
				POWER	FAN	POWER	FAN
1	ON	OFF		Amber	Green	Red	Red
2	OFF	ON		Red	Red	Amber	Green
3	ON	Out of chassis		Green	Green	Off	Off
4	Out of chassis	ON		Off	Off	Green	Green
5	ON	ON	<50%	Green	Green	Green	Green
6	ON	ON	>50%	Amber	Green	Amber	Green

2.3.2 Fan Tray LED

Refer to Figure 2-2 for the location of the fan tray LED. Table 2-2 describes the different states of the fan tray LED.

Figure 2-2 Fan Tray LED



1 Fan tray LED

Table 2-2 Fan Tray LED States and Their Definitions

LED Color	Status
Green	All fans are operating normally.
Red	One or more fan failures have occurred.

Note: When the N7 chassis is first powered up, the Fan Tray LED will display red briefly, until the fans are operating at the proper speed.

3

Enterasys Matrix N7 Chassis Setup

This chapter contains instructions on setting up the Enterasys Matrix N7 chassis.

Equipment needed:

- Phillips screwdriver
- Flat blade screwdriver



Electrical Hazard: Only qualified personnel should install or service this unit.

Riesgo Eléctrico: Nada mas personal capacitado debe de instalar o darle servicio a esta unida.

Elektrischer Gefahrenhinweis: Installationen oder Servicearbeiten sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.

A Phillips screwdriver is needed to install the unit in a 48.26-centimeter (19-inch) equipment rack and to install the cable management bar. A large flat blade screwdriver is needed to secure the power supplies and to remove and reinstall the fan tray. Refer to Chapter 2 for the guidelines that must be followed to install the N7 chassis.

3.1 UNPACKING THE ENTERASYS MATRIX N7 CHASSIS



Note: Unpack the N7 chassis components only as needed. Leave the components in their respective shipping cartons until you are ready to install that component. Save all shipping materials in the event that the chassis has to be repacked.

The N7 chassis is packed and shipped on a skid. Before unpacking the chassis, examine the outside packaging for obvious damage. To unpack the N7 chassis, refer to Figure 3-1, which includes numbers that correspond to the steps below, and proceed as follows:

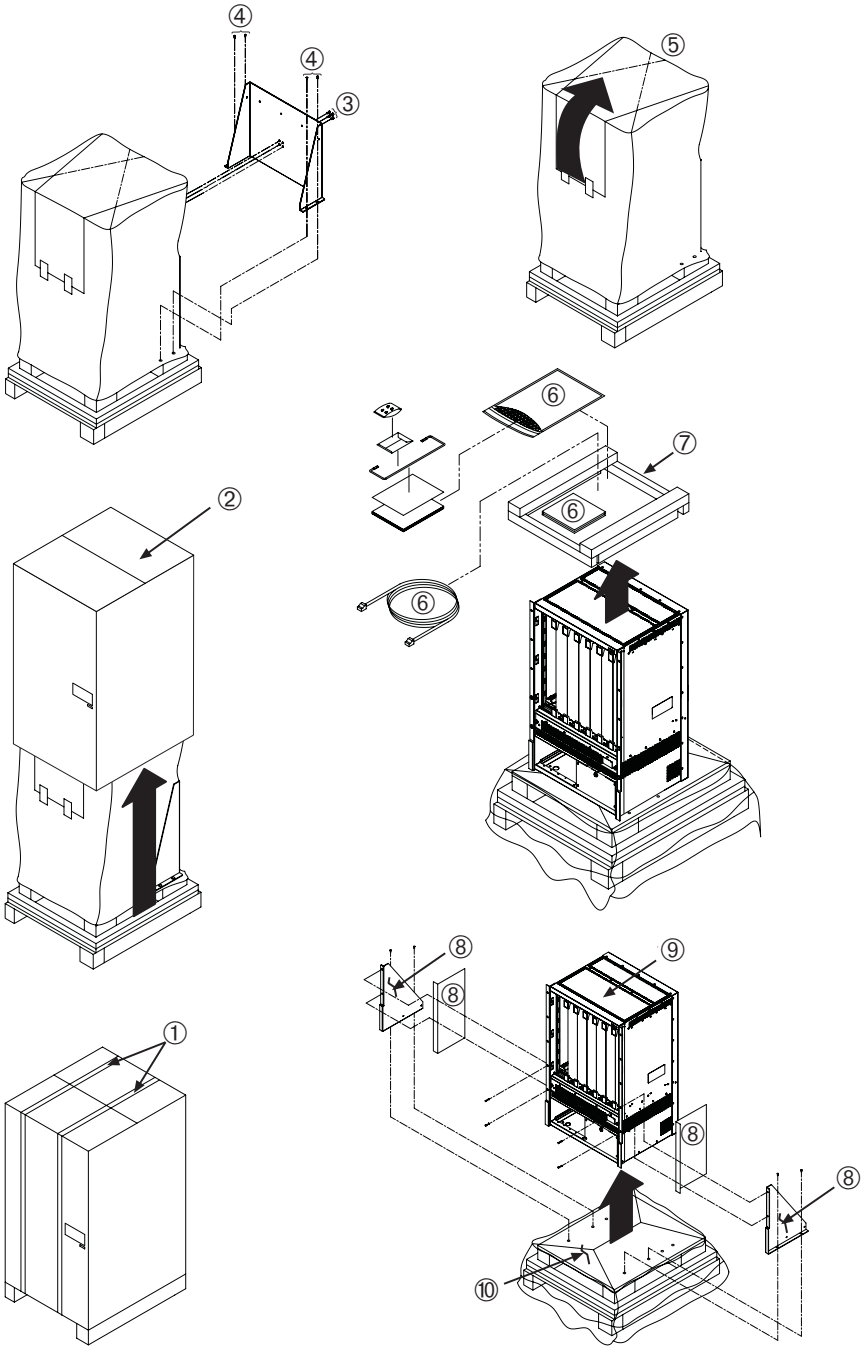
1. Cut the two shipping straps fastening the corrugated box to the skid.
2. Lift and remove the box off the skid.
3. Remove and save four screws fastening the rear shipping bracket/shelf to the rear of the chassis.

Note: The rear shipping bracket is also the shelf used to mount the chassis in an equipment rack. Instructions for installing the shelf into the rack are provided in Section 3.2.3.1.

4. Remove and save the four screws fastening the rear shipping bracket/shelf to the skid. Remove the rear shipping bracket/shelf from the skid and set aside for later installation in the rack.
5. Open the top of the shipping bag covering the unit, then pull the bag down around the skid.
6. Remove and save the accessory package, any other documents, and cable from the top of the styrofoam cap. The accessory package contains the following:
   - Electrostatic Discharge (ESD) wrist strap
   - Installation Documentation
   - Rubber feet and screw assemblies
   - Cable management bar and associated hardware
7. Lift and remove the styrofoam cap from the top of the chassis. Save for reshipping if necessary.
8. Remove and save the eight screws fastening left and right shipping brackets to the chassis and the skid. Remove and save the brackets, and also the foam sheets, which are between the chassis and the brackets.
9. Lift and remove the chassis from the skid.
10. Save the plastic bag and skid for future reshipment if necessary.

Note: To reship the chassis, refer to Figure 3-1 and perform each step in reverse and in the reverse order. Ensure that all shipping brackets are used including the one that also serves as the shelf (rear shipping bracket).

Figure 3-1 Unpacking the Matrix N7 Chassis



3.2 SETTING UP THE ENTERASYS MATRIX N7 CHASSIS

The following sections describe the procedures that must be followed to complete the installation of the N7 chassis.

3.2.1 Order of Installation

Once a suitable site has been chosen, the N7 chassis can be installed as a freestanding or rack-mounted unit.

It is recommended that the N7 chassis installation proceed in the following order:

1. Install the rubber feet (for freestanding installation) and cable management bar. (Section 3.2.2)
2. Mount the chassis to a 48.26-centimeter (19-inch) rack or other secure location. (Section 3.2.3)
3. Attach the Electrostatic Discharge wrist strap. (Section 3.2.3.3)
4. Install the power supply module(s). (Section 3.2.4)

3.2.2 Installing the Rubber Feet and Cable Management Bar



Caution: Using longer screws than the ones packaged with the cable management bar may cause damage to the chassis.

Precaución: El utilizar tornillos más largos que los que vienen incluidos con la barra del cable de gerencia resultará en dañar al chasis.

If you are installing the N7 chassis as a freestanding device, start with Section 3.2.2.1 to install the rubber feet. To install the chassis in a rack, rubber feet are not needed. Therefore, start with Section 3.2.2.2 to install the cable management bar.



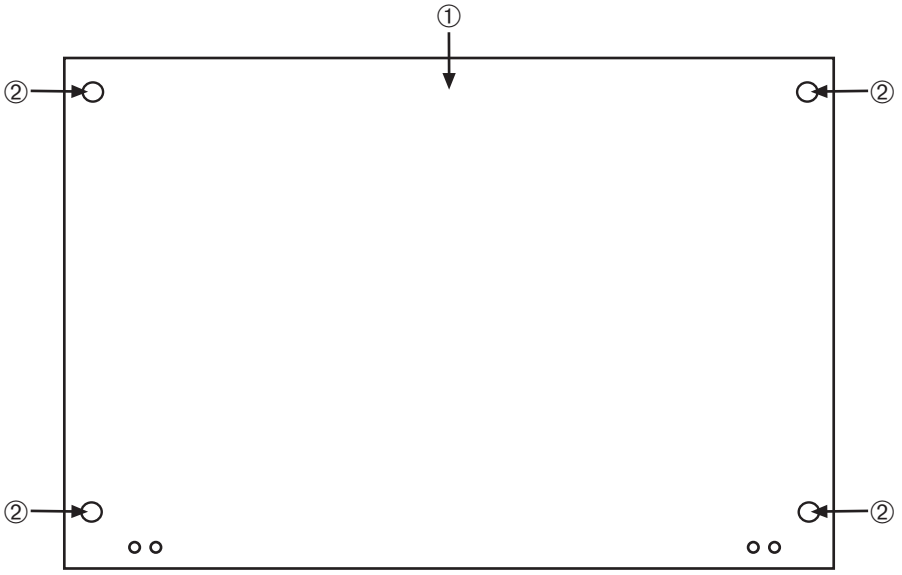
Note: Before installing the rubber feet and cable management bar, place the chassis on its back on a sturdy flat surface to have access to the bottom of the chassis.

3.2.2.1 Installing the Rubber Feet

To install the rubber feet, see Figure 3-2 and proceed as follows:

1. Place the chassis on a sturdy flat surface to access the bottom of the chassis.
2. Remove the four rubber foot/screw assemblies from their plastic bag in the shipping box.
3. Locate the four tapped holes in the four corners on the bottom of the chassis.

Figure 3-2 Chassis Bottom, Rubber Feet Placement



1 Bottom of chassis **2** Tapped hole for rubber foot (four places)

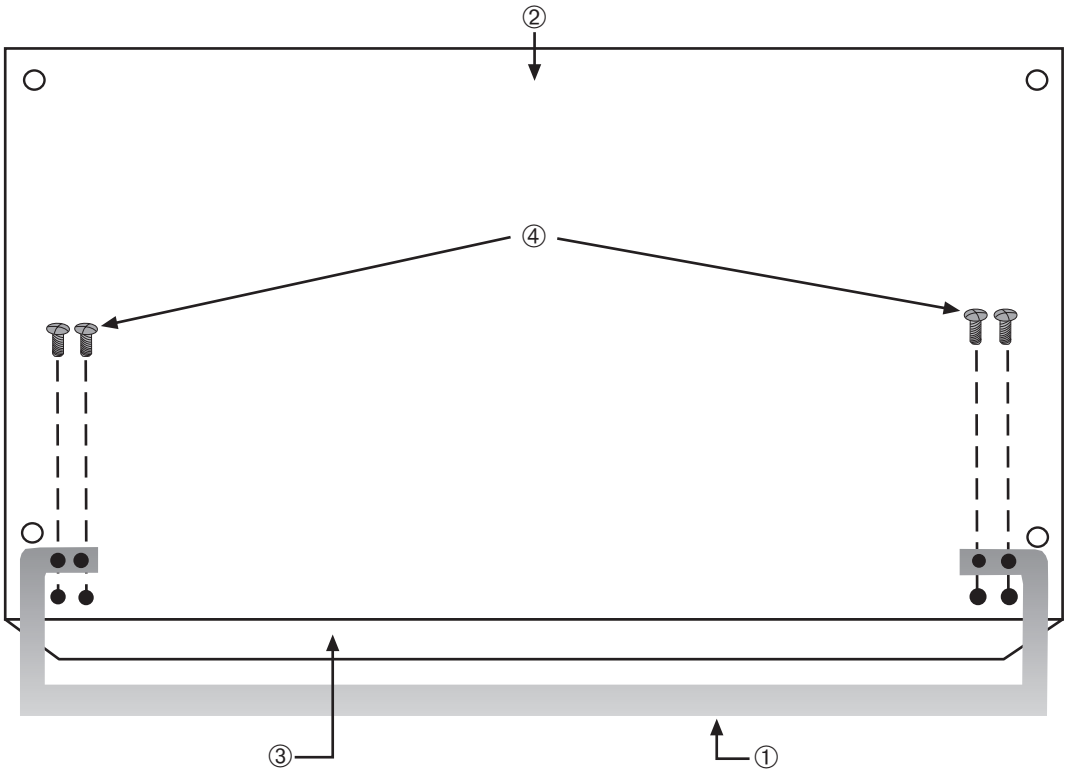
4. Screw in and hand tighten each of the four rubber foot/screw assemblies into the four tapped holes. Then tighten with a Phillips screwdriver.
5. After installing the rubber feet, proceed to Section 3.2.2.2 to install the cable management bar.

3.2.2.2 Installing the Cable Management Bar

Cables can be attached along the cable management bar using cable ties to ensure that the cables are not accidentally loosened or disconnected from the chassis during operation. To install the cable management bar, see Figure 3-3 and proceed as follows:

1. Remove the cable management bar from the shipping box. Ensure that there are four screws inside the bag with the cable management bar.
2. Line up the two holes on each side of the cable management bar with the four holes located on the bottom of the N7 chassis, near the front of the chassis as shown in Figure 3-3.
3. Use a Phillips screwdriver and the four screws supplied with the bar to fasten the cable management bar to the bottom of the chassis.

Figure 3-3 Installing the Cable Management Bar



1 Cable management bar
2 Bottom of chassis
3 Front panel of chassis
4 Screws (4)

3.2.3 Rack Mounting the Enterasys Matrix N7 Chassis

The N7 chassis can be mounted in a standard 48.26-centimeter (19-inch) equipment rack. To rack mount the chassis into a rack you need to

- allow at least 60 centimeters (24 inches) of clearance in front of the rack for chassis installation,
- install the shelf into the rack first, then
- install the N7 chassis into the rack.



Note: In order to prevent a possible interference between the rack frame front and chassis rack ears, the tapped rails may need to be adjusted such that they are recessed approximately 2 inches behind the rack frame front. If the rack has a front door, this distance may need to be slightly more depending on the door thickness.

3.2.3.1 Installing the Shelf

To install the shelf, proceed as follows:

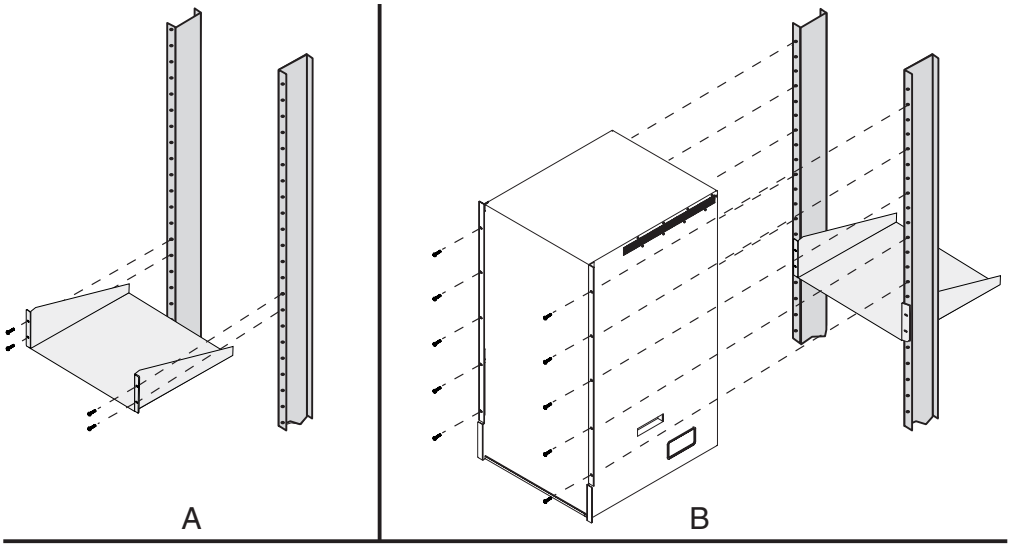
Warning: If the rack is not secured to the floor, it is recommended that you install the chassis in the bottom half of the rack. This helps prevent the rack from being top heavy.

Advertencia: Si el rack no esta asegurado al piso, es recomendable que instales el chasis en la parte de abajo del rack.Esto ayuda a prevenir que el rack este demasiado pesado en la parte superior.

Warnhinweis: Falls das Rack nicht mit Schrauben am Boden gesichert wird, sollte das Chassis in der unteren Hälfte des Racks installiert werden, um ein kippen des Racks zu vermeiden.

1. Keeping the above Caution note in mind, locate the position on the rack where you will install the shelf. The chassis requires 77.47 centimeters (30.5 inches) of vertical spacing.
2. Align the four holes in the ears of the shelf with those in the rack (see Figure 3-4, A), then fasten the shelf to the rack using four of the screws supplied with the rack.
3. After installing the shelf, proceed to install the Enterasys Matrix N7 chassis as described in Section 3.2.3.2.

Figure 3-4 Shelf Installation



3.2.3.2 Installing the Enterasys Matrix N7 Chassis

Caution: Read Chapter 2 before completing the following procedure to ensure that all installation guidelines are met.

Precaución: Antes de llevar a cabo el siguiente procedimiento, lea Chapter 2 para y asegúrese de cumplir con todos los requisitos de instalación.

To install the N7 chassis, proceed as follows:

Warning: To help prevent personal injury, at least two people are required to lift the chassis into the rack.

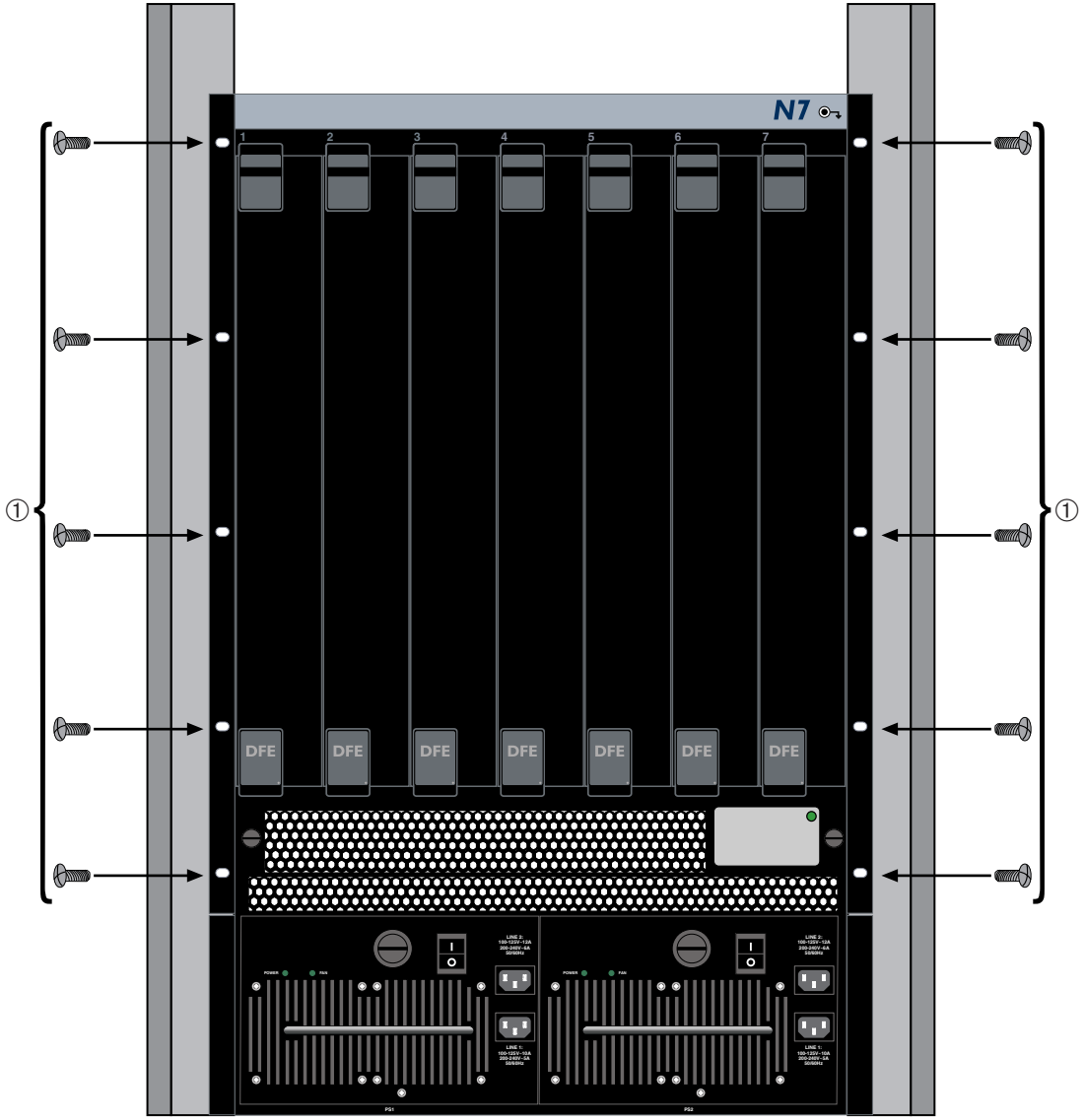
Advertencia: Para ayudar a prevenir alguna lesión personal , al menos dos personas son requeridas para levantar el chasis y meterlo al rack.

Warnhinweis: Zum Schutz vor körperlichen Schäden, sollten sie mit min. zwei Personen das Chassis in das Rack heben.

1. Lift the chassis onto the shelf and slide it all the way into the rack. Refer back to Figure 3-4, B.
2. Use 10 screws (5 per side) provided with the equipment rack to secure the chassis to the rack, starting with the bottom holes and working toward the top of the chassis, as shown in Figure 3-5.

Note: Refer to Table A-1 on page A-2 for recommended torque values to use when installing the N7 chassis using standard threaded fastener machine screws and bolts.

Figure 3-5 Rack Mounting the Enterasys Matrix N7 Chassis



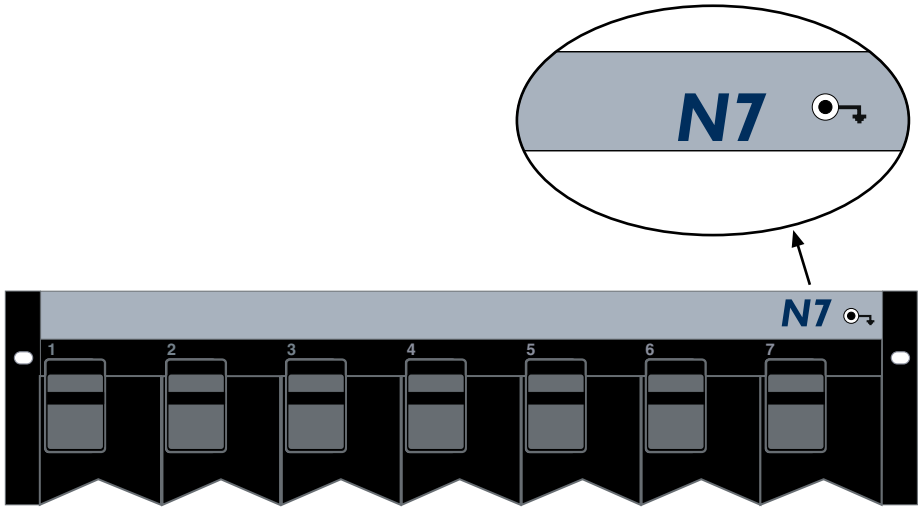
1 Rack mounting screws (5 per side)

3.2.3.3 Attaching the Electrostatic Discharge Wrist Strap

The Electrostatic Discharge (ESD) wrist strap must be attached before handling the power supplies, fan tray, and modules used in the N7 chassis. In addition, observe all precautions when handling these modules to prevent damage from electrostatic discharge.

Place the ESD wrist strap on your wrist and plug the other end into the grounding receptacle, at the top right corner of the chassis, shown in Figure 3-6.

Figure 3-6 ESD Grounding Receptacle



3.2.4 Installing a Power Supply

You must install at least one 7C203-1power supply in the Enterasys Matrix N7 chassis. One power supply provides sufficient power for a fully loaded chassis, but a second power supply can be installed to provide a redundant, load sharing power source. When you receive your N7 chassis a cover plate will be in place over power supply slot PS2.

When two power supplies are installed, the load is evenly distributed. If one power supply fails for any reason, the second power supply assumes the load.

The power supplies must be installed in the two slots labeled PS1 and PS2 at the bottom of the chassis (Figure 3-7). If you intend to install a single power supply, it must be installed in the slot labeled PS1 in the chassis. A large flat blade screwdriver is needed to install the power supplies.

To install the power supply into the Enterasys Matrix N7 chassis, refer to Figure 3-7 and proceed as follows:

1. Unpack the power supply by removing it from the shipping box and sliding the two foam end caps off the unit. (Save the shipping box and materials in the event the unit must be reshipped.)
2. Remove the power supply from its protective plastic bag. (Save the shipping box and materials in the event the unit must be reshipped.)
3. Examine the power supply carefully, checking for damage. If any damage is noted, DO NOT install the power supply. Contact Enterasys Networks immediately.
4. Slide the power supply into the slot labeled PS1 as follows:
   a. Hold the power supply by placing one hand on the handle located on the front panel and using the other hand to support the power supply.
   b. Holding the power supply right side up, align the power supply with the plastic guides on the bottom of the opening.

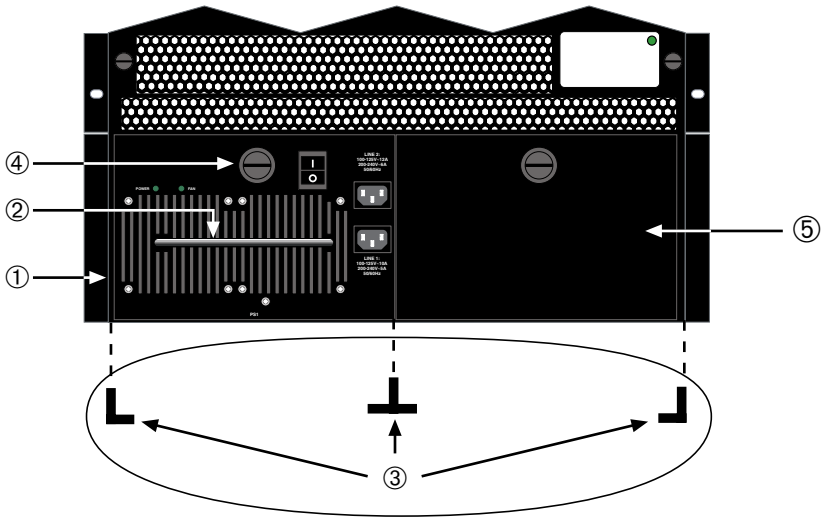


Caution: Forcing a misaligned power supply into place can damage the power supply and/or the chassis backplane.

Precaución: Colocar de manera forzada una fuente de poder o no colocarla bien alineada podría dañarla y/o maltratar el panel posterior del chasis.

   c. With the power supply properly inserted into the opening, carefully slide the supply forward until it is connected to the backplane. The front panel should be flush with the face of the N7 chassis. If significant resistance is encountered before the front panel is flush, remove and reinsert the power supply. Do not force the power supply into place.
   d. Secure the power supply to the chassis by using a large flat blade screwdriver to turn the large screw and lock the power supply in place.
5. If you are installing a second power supply, remove the blank plate from the second power supply slot PS2 (keep the blank plate in the event you need to remove the power supply), and repeat steps 1– 4.

Figure 3-7 Installing the Power Supply Module(s)



1 Mandatory power supply installed in slot PS1
2 Power supply handle
3 Card guides
4 Slotted screw
5 Blank plate covering slot PS2

Note: To install the modules, refer to the module installation guide for the installation instructions. Before you power up the N7 chassis, it is recommended that you complete the installation of the modules in the chassis.

After completing the power supply and module installations, the N7 chassis is ready to be powered up. Proceed to Section 3.3 for instructions to power up the chassis.

3.2.5 Removing a Power Supply

To remove a 7C203-1 power supply, refer to Figure 3-8 and proceed as follows:

1. Attach the anti-static wrist strap as described in Section 3.2.3.3 before handling the power supply module.



Caution: Always set the **0/I** power switch to **0** before removing a power supply from the chassis.

Precaución: Antes de quitar la fuente de poder del chasis, coloque el interruptor 0/I en la posición 0.

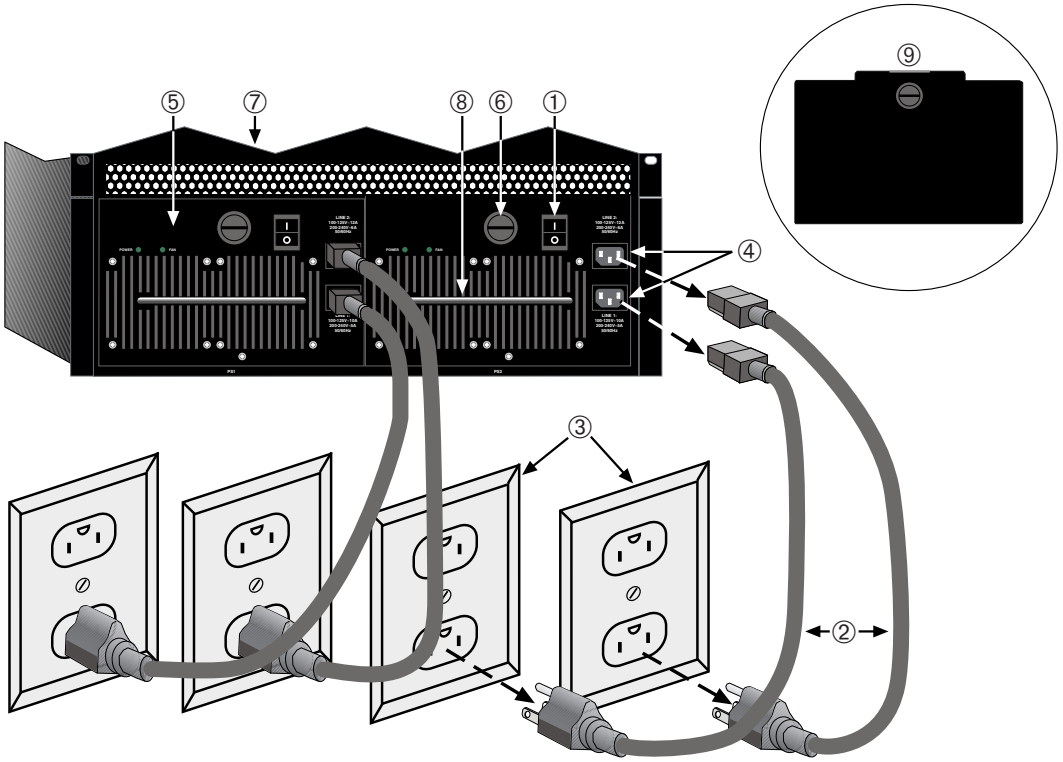
2. Set the power supply **0/I** Power switch to **0**.
3. Unplug the power cords from each dedicated 15A/120 Vac outlet.
4. Unplug the power cord from the ac power connectors of the power supply.
5. Unscrew the captive slotted-head screw to release the power supply from the chassis.
6. To remove the power supply from the chassis, grasp the handle and pull the power supply straight out of the chassis, then place it on an antistatic surface or in an antistatic bag for future use.



Caution: If you plan to operate the chassis with only one power supply, make sure to install the coverplate in place of the removed power supply to reduce Electromagnetic Interference.

Precaución: Si desea trabajar sólo con una fuente de poder, no olvide colocar la tapa en el compartimiento de la fuente de poder que haya eliminado, para reducir la interferencia electromagnética.

Figure 3-8 Removing a Power Supply from a Powered-Up Chassis



1	Power switch	**4**	AC power connector	**7**	N7 chassis
2	AC power cord	**5**	Power supply	**8**	Power supply handle
3	15A/120 Vac power outlet	**6**	Captive slotted-head screw	**9**	Example of blank plate

3.3 POWERING UP THE N7 CHASSIS WITH POWER SUPPLIES

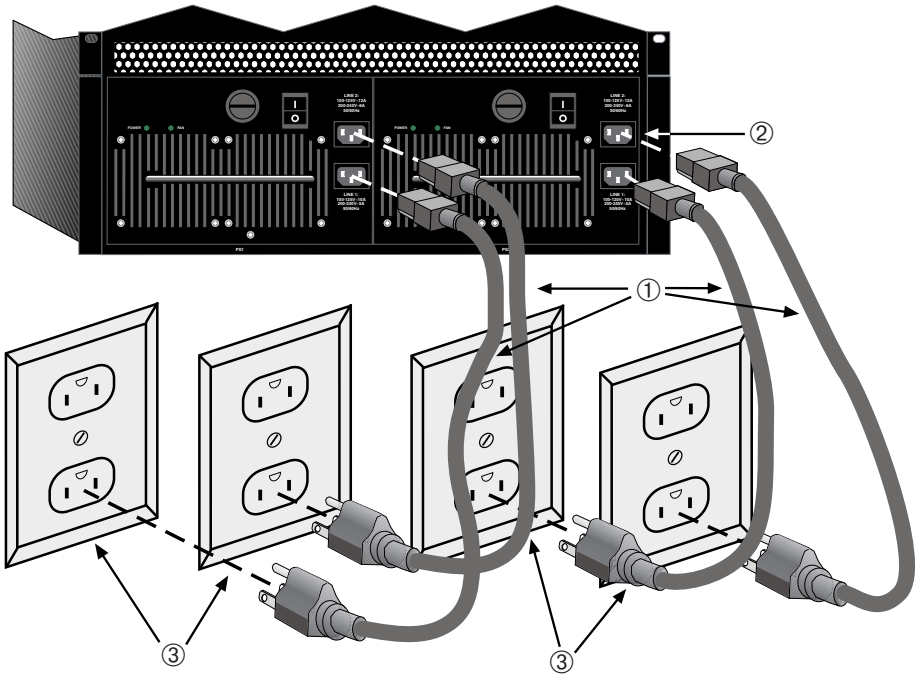
To power up the N7 chassis with ac power supplies, refer to Figure 3-9 and proceed as follows:

Note: If two power supplies are installed, repeat the following procedure for each supply.

For redundancy using two 6C207-3 power supplies, each of the four power cords from the two power supplies must be connected to dedicated 15-Ampere ac power circuits.

1. Plug one end of each power cord (supplied with the power supply) into the ac power socket on the front panel of the power supplies. See Figure 3-9 for the 6C207-3 power connections.

Figure 3-9 Connecting the 15-Amp AC Power Cords to the 6C207-3



1 NEMA 5-15P 15 A power cords (4)
2 AC power socket (2 each supply)
3 115 Vac, 15 A power outlet

NOTE: Power cords shown are for North America only. Each outlet must be on a separate circuit.

2. Plug each of the power cords into separate dedicated 15 A/115 Vac receptacles. Set the **0/I** Power switch on the front panel of each power supply to **I**.

3. Ensure that the Power LED on each power supply is green.
4. Ensure that all fans in the fan tray unit are operating properly when power is received from the power supply modules (fan tray LED will be green). For more information on the power supply LEDs (Power and Fan), refer to Section 2.3.

If you experience any problems with this installation, contact Enterasys Networks for assistance.

3.4 REMOVING AND REINSTALLING THE FAN TRAY

The N7 chassis is equipped at the factory with a removable fan tray that allows for easy periodic cleaning and/or replacement if a problem occurs with fan operation. A flat blade screwdriver is needed to remove and reinstall the fan tray. To remove and reinstall the fan tray, refer to Section 3.4.1 and Section 3.4.2.



Caution: The fan assembly is hot-swappable. However, do not run the chassis for any extended periods of time without an operating fan assembly, as the chassis will quickly overheat and cause damage.

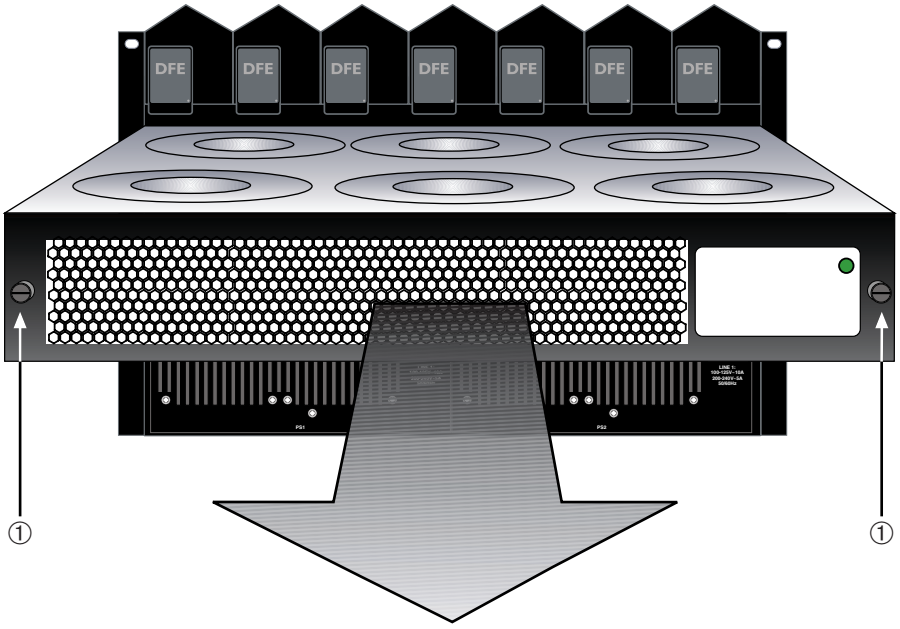
Precaución: El sistema de ventilación se puede reemplazar cuando la unidad está encendida. Sin embargo, no utilice el chasis durante largos períodos sin contar con un sistema de ventilación porque podría sobrecalentarse y dañarse.

3.4.1 Removing the Fan Tray

To remove the fan tray, refer to Figure 3-10 and proceed as follows:

1. Locate the ESD wrist strap shipped with the N7 chassis. Attach the ESD wrist strap to your wrist and plug the cable from the ESD wrist strap into the ESD grounding receptacle at the upper right corner of the chassis.
2. Use the flat blade screwdriver to loosen the slotted screws located on either side of the fan tray.
3. Slowly slide the fan tray out of its slot in the bottom of the chassis.

Figure 3-10 Removing the Fan Tray



1 Slotted screw (2)

3.4.2 Reinstalling the Fan Tray

To reinstall the fan tray, refer to Figure 3-11 and proceed as follows:

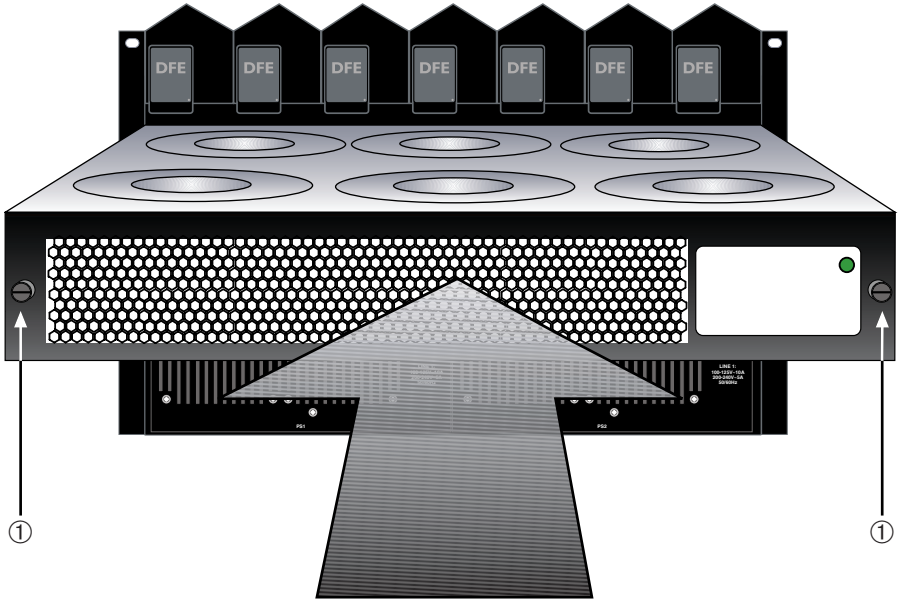
1. Locate the ESD wrist strap shipped with the N7 chassis. Attach the ESD wrist strap to your wrist and plug the cable from the ESD wrist strap into the ESD grounding receptacle at the upper right corner of the chassis.
2. Hold the sides of the fan tray.
3. Line up the rails on each side of the fan tray with the slot guides on the chassis.

Caution: In the following step, ensure that you do not force the fan assembly into place as it may damage the self-aligning power/control connector in the chassis.

Precaución: En el siguiente paso, tenga cuidado de no colocar de manera forzada el sistema de ventilación, porque puede dañar el conector de control de corriente con autoalineación del chasis.

4. Slide the fan tray into the chassis until the faceplate of the tray is flush with the face of the N7 chassis. If there is any strong resistance, remove the fan tray and reinsert it.

Figure 3-11 Reinstalling the Fan Tray



1 Slotted screw (2)

Once the tray is in place, tighten the two slotted screws to secure the tray to the N7 chassis.

A

Specifications and Regulatory Compliance

This appendix provides operating specifications for the Enterasys Matrix N7 7C107 chassis. Enterasys Networks reserves the right to change the specifications at any time without notice.

A.1 PHYSICAL SPECIFICATIONS

The physical specifications for the N7 chassis, the 6C207-3 power supply module, and the 6C407 fan tray module are as follows:

7C107 Chassis

Dimensions:	77.47 H x 44.04 W x 36.83 D (cm) 30.5 H x 17.34 W x 14.5 D (in.)
Weight (with factory installed fan tray):	23.6 kg (52.0 lb)
MTBF (Predicted):	404,872 hours

6C207-3 Power Supply Modules

Dimensions:	12.7 H x 21.0 W x 27.94 D (cm) 5.0 H x 8.27 W x 11.0 D (in.)
Weight:	9.1 kg (20.0 lb)
MTBF (Predicted):	200,000 hours

6C407 Fan Tray

Dimensions:	6.57 H x 43.64 W x 34.82 D (cm) 2.59 H x 17.18 W x 13.71 D (in.)
Weight:	2.3 kg (5.0 lb)
MTBF (Predicted):	404,787 hours

A.1.1 Torque Values

The following table describes the recommended torque values to use when installing the N7 chassis using standard threaded fastener machine screws and bolts.

Table A-1 Recommended Torque Values by Screw Size

Screw Size		Torque in Pounds			Bit Size
English	Metric	-%5	Nominal	+%5	
N/A	N/A	1.42	1.5	1.57	0
2 – 56	1.5	2.85	3.0	3.15	0
4 – 40	2.5	4.75	5.0	5.25	0/1
6 – 32	3.5	8.55	9.0	9.45	1
8 – 32	4.5	17.10	18.0	18.90	2
10 – 32	5	30.40	32.0	33.60	2
1/4 – 20	6.5	63.65	67.0	70.35	3

A.2 POWER SUPPLY REQUIREMENTS

The requirements for the 6C207-3 ac power supply modules are as follows:

Accepts up to (2) 6C207-3 power supplies.
Each 6C207-3 power supply accepts (2) IEC320 C13 power cord plugs.

Input Frequency:	50 to 60 Hz
Input: (Voltage/Current):	2 x 100 to 125 Vac: 12 A
	2 x 200 to 240 Vac: 6 A
Input Power:	1600 W

A.3 ENVIRONMENTAL REQUIREMENTS

Operating Temperature:	5°C to 40°C (41°F to 104°F)
Storage Temperature:	-30°C to 73°C (-22°F to 164°F)
Operating Relative Humidity:	5% to 90% (non-condensing)

A.4 REGULATORY COMPLIANCE

This equipment meets the following safety and electromagnetic compatibility (EMC) requirements:

Safety:	UL 60950, CSA C22.2 No. 60950, 2006/95/EC, EN 60950, IEC 60950, EN 60825, 21 CFR 1040.10. Modules which support laser connections also meet the EN 60825 and 21 CFR 1040.10 standards.
Electromagnetic Compatibility (EMC):	47 CFR Parts 2 and 15, CSA C108.8, 2004/108/EC, EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55024, AS/NZS CISPR 22, VCCI V-3.