NORTEL

Nortel Ethernet Routing Switch 8300

Installation — Chassis

Release: 4.1
Document Revision: 01.01

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Nortel Ethernet Routing Switch 8300
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ATTENTION

For information about the regulatory message, read "Regulatory Information and Safety Precautions" in this guide.

For information about the software license, read "Software license" in this guide.

Contents

Regulatory Information and Safety Precautions

Read the information in this section to learn about regulatory conformities and compliances.

International Regulatory Statements of Conformity

This is to certify that the Nortel 8300 Series chassis and components installed within the chassis were evaluated to the international regulatory standards for electromagnetic compliance (EMC) and safety and were found to have met the requirements for the following international standards:

- EMC - Electromagnetic Emissions – CISPR 22, Class A

- EMC - Electromagnetic Immunity – CISPR 24

- Electrical Safety – IEC 60950, with CB member national deviations

Further, the equipment has been certified as compliant with the national standards as detailed below.

National Electromagnetic Compliance (EMC) Statements of Compliance

FCC Statement (USA only)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

ICES Statement (Canada only)

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (8300 Series chassis and installed components) does not exceed the Class A limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Règlement sur le Brouillage Radioélectrique du Ministère des Communications

Cet appareil numérique (8300 Series chassis) respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

CE Marking Statement (Europe only)

EN 55 022 Statements

This is to certify that the Nortel 8300 Series chassis and components installed within the chassis are shielded against the generation of radio interference in accordance with the application of Council Directive 2004/108/EC. Conformity is declared by the application of EN 55 022 Class A (CISPR 22).

> ⚠ **CAUTION**
> This device is a Class A product. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users are required to take appropriate measures necessary to correct the interference at their own expense.

EN 55 024 Statement

This is to certify that the Nortel 8300 Series chassis is shielded against the susceptibility to radio interference in accordance with the application of Council Directive 2004/108/EC. Conformity is declared by the application of EN 55 024 (CISPR 24).

EN 300386 Statement

The Ethernet Routing Switch 8300 Series chassis complies with the requirements of EN 300386 V1.3.3 for emissions and for immunity for a Class A device intended for use in either Telecommunications centre or locations other than telecommunications centres given the performance criteria as specified by the manufacturer.

EC Declaration of Conformity

This product conforms to the provisions of the R&TTE Directive 1999/5/EC.

European Union and European Free Trade Association (EFTA) Notice

CE   All products labeled with the CE marking comply with R&TTE Directive (1999/5/EEC) which includes the Electromagnetic Compliance (EMC) Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms (ENs). The equivalent international standards are listed in parenthesis.

- EN 55022 (CISPR 22)–Electromagnetic Interference
- EN 55024 (IEC 61000-4-2, -3, -4, -5, -6, -8, -11)–Electromagnetic Immunity
- EN 61000-3-2 (IEC 610000-3-2)–Power Line Harmonics
- EN 61000-3-3 (IEC 610000-3-3)–Power Line Flicker

VCCI Statement (Japan/Nippon only)

This is a Class A product based on the standard of the Voluntary Control Council for Interference (VCCI) for information technology equipment. If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

BSMI Statement for 8310, and 8306 Chassis (Taiwan only)

This is a Class A product based on the standard of the Bureau of Standards, Metrology and Inspection (BSMI) CNS 13438, Class A.

警告使用者：
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

MIC notice for 8310, and 8306 chassis (Republic of Korea only)

This device has been approved for use in Business applications only per the Class A requirements of the Republic of Korea Ministry of Information and Communications (MIC). This device may not be sold for use in a non-business application.

```
명      칭 (모 델 명) : Switch (Passport 8600)
인   증   번   호 : E-E011-02-0015 (A)
인증받은자의상호 : Nortel Networks Ltd.
제      조      일 : 별도표기
제 조 자(제 조 국) : Nortel Networks Ltd.(미국)
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National Safety Statements of Compliance
CE Marking Statement (Europe only)
EN 60 950 Statement

This is to certify that the Nortel 8300 Series chassis and components installed within the chassis are in compliance with the requirements of EN 60 950 in accordance with the Low Voltage Directive. Additional national differences for all European Union countries have been evaluated for compliance. Some components installed within the 8300 Series chassis may use a nickel-metal hydride (NiMH) and/or lithium-ion battery. The NiMH and lithium-ion batteries are long-life batteries, and it is very possible that you will never need to replace them. However, should you need to replace them, refer to the individual component manual for directions on replacement and disposal of the battery.

NOM Statement 8310 and 8306 Chassis (Mexico only)

The following information is provided on the devices described in this document in compliance with the safety requirements of the Norma Oficial Méxicana (NOM):

Exporter:	Nortel Networks, Inc. 4655 Great America Parkway Santa Clara CA 95054 USA
Importer:	Nortel Networks de México, S.A. de C.V. Avenida Insurgentes Sur #1605 Piso 30, Oficina Col. San Jose Insurgentes Deleg-Benito Juarez México D.F. 03900
Tel:	52 5 480 2100

Fax: 52 5 480 2199

Input: (8306 and 8310 Chassis only)

                    8301AC: 100 to 240 VAC 16A 47 to 60 Hz per power supply

                    8301AC: 200 to 240 VAC 12 A 47 to 60 Hz per power supply
                    single supply, single supply + one redundant supply, two supplies, or two
                    supplies + one redundant supply configurations

                    8302AC: 100 to 240 VAC 12A 47 to 60 Hz per power supply

                    8302AC: 200 to 240 VAC 10A 47 to 60 Hz per power supply
                    single supply, single supply + one redundant supply, two supplies, or two
                    supplies + one redundant supply configurations

                    8005DIDC: 40 to 75 VDC, 48.75 to 32.5 A
                    single supply, single supply + one redundant supply, two supplies, or two
                    supplies + one redundant supply configurations

                    8005DC: 48 to 60 VDC, 42 to 34 A
                    single supply, single supply + one redundant supply, two supplies, or two
                    supplies + one redundant supply configurations

Información NOM (unicamente para México)

La información siguiente se proporciona en el dispositivo o en los
dispositivos descritos en este documento, en cumplimiento con los
requisitos de la Norma Oficial Méxicana (NOM):

Exportador: Nortel Networks, Inc.
                    4655 Great America Parkway
                    Santa Clara, CA 95054 USA

Importador: Nortel Networks de México, S.A. de C.V.
                    Avenida Insurgentes Sur #1605
                    Piso 30, Oficina
                    Col. San Jose Insurgentes
                    Deleg-Benito Juarez
                    México D.F. 03900

Tel: 52 5 480 2100

Fax:	52 5 480 2199
Embarcar a:	(8306 and 8310 Chassis)

8301AC:100 to 240 VAC 16A 47 to 60 Hz por fuente de poder

8301AC: 200 to 240 VAC 12 A 47 to 60 Hz por fuente de poder
una fuente, una fuente + configuraciones de una fuente redundante, dos
fuentes o dos + configuraciones de una fuente redundante

8302AC:100 to 240 VAC 12A 47 to 60 Hz por fuente de poder

8302AC: 200 to 240 VAC 10 A 47 to 60 Hz por fuente de poder
una fuente, una fuente + configuraciones de una fuente redundante, dos
fuentes o dos + configuraciones de una fuente redundante

8005DIDC: 40 to 75 VDC, 48.75 to 32.5 A
una fuente, una fuente + configuraciones de una fuente redundante, dos
fuentes o dos + configuraciones de una fuente redundante

8005DC: 48 to 60 VDC, 42 to 34 A
una fuente, una fuente + configuraciones de una fuente redundante, dos
fuentes o dos + configuraciones de una fuente redundante

Denan Statement (Japan/Nippon only)

警告
本製品を安全にご使用頂くため、以下のことにご注意ください。
● 接続ケーブル、電源コード、ACアダプタなどの部品は、必ず製品に同梱されております添
  付品または指定品をご使用ください。添付品・指定品以外の部品をご使用になると故障や
  動作不良、火災の原因となることがあります。
● 同梱されております付属の電源コードを他の機器には使用しないでください。上記注意事
  項を守らないと、死亡や大怪我など人身事故の原因となることがあります。

Safety Messages

This section describes the different precautionary notices used in this
document. This section also contains precautionary notices that you must
read for safe operation of the Nortel Ethernet Routing Switch 8300.

Notices

Notice paragraphs alert you about issues that require your attention. The following sections describe the types of notices. For a list of safety messages used in this guide and their translations, see "Translations of safety messages".

Attention Notice

ATTENTION
An attention notice provides important information regarding the installation and operation of Nortel products.

Caution ESD Notice

CAUTION
ESD
ESD notices provide information about how to avoid discharge of static electricity and subsequent damage to Nortel products.

CAUTION
ESD (décharge électrostatique)
La mention ESD fournit des informations sur les moyens de prévenir une décharge électrostatique et d'éviter d'endommager les produits Nortel.

CAUTION
ACHTUNG ESD
ESD-Hinweise bieten Information dazu, wie man die Entladung von statischer Elektrizität und Folgeschäden an Nortel-Produkten verhindert.

CAUTION
PRECAUCIÓN ESD (Descarga electrostática)
El aviso de ESD brinda información acerca de cómo evitar una descarga de electricidad estática y el daño posterior a los productos Nortel.

CAUTION
CUIDADO ESD
Os avisos do ESD oferecem informações sobre como evitar descarga de eletricidade estática e os conseqüentes danos aos produtos da Nortel.

CAUTION
ATTENZIONE ESD
Le indicazioni ESD forniscono informazioni per evitare scariche di elettricità statica e i danni correlati per i prodotti Nortel.

Caution Notice

	CAUTION Caution notices provide information about how to avoid possible service disruption or damage to Nortel products.
	CAUTION **ATTENTION** La mention Attention fournit des informations sur les moyens de prévenir une perturbation possible du service et d'éviter d'endommager les produits Nortel.
	CAUTION **ACHTUNG** Achtungshinweise bieten Informationen dazu, wie man mögliche Dienstunterbrechungen oder Schäden an Nortel-Produkten verhindert.
	CAUTION **PRECAUCIÓN** Los avisos de Precaución brindan información acerca de cómo evitar posibles interrupciones del servicio o el daño a los productos Nortel.
	CAUTION **CUIDADO** Os avisos de cuidado oferecem informações sobre como evitar possíveis interrupções do serviço ou danos aos produtos da Nortel.
	CAUTION **ATTENZIONE** Le indicazioni di attenzione forniscono informazioni per evitare possibili interruzioni del servizio o danni ai prodotti Nortel.

Warning Notice

	WARNING Warning notices provide information about how to avoid personal injury when working with Nortel products.
	WARNING **AVERTISSEMENT** La mention Avertissement fournit des informations sur les moyens de prévenir les risques de blessure lors de la manipulation de produits Nortel.

	WARNING **WARNUNG** Warnhinweise bieten Informationen dazu, wie man Personenschäden bei der Arbeit mit Nortel-Produkten verhindert.
	WARNING **ADVERTENCIA** Los avisos de Advertencia brindan información acerca de cómo prevenir las lesiones a personas al trabajar con productos Nortel.
	WARNING **AVISO** Os avisos oferecem informações sobre como evitar ferimentos ao trabalhar com os produtos da Nortel.
	WARNING **AVVISO** Le indicazioni di avviso forniscono informazioni per evitare danni alle persone durante l'utilizzo dei prodotti Nortel.

Danger High Voltage Notice

	DANGER Danger—High Voltage notices provide information about how to avoid a situation or condition that can cause serious personal injury or death from high voltage or electric shock.
	DANGER La mention Danger—Tension élevée fournit des informations sur les moyens de prévenir une situation ou une condition qui pourrait entraîner un risque de blessure grave ou mortelle à la suite d'une tension élevée ou d'un choc électrique.
	DANGER **GEFAHR** Hinweise mit Vorsicht – Hochspannung" bieten Informationen dazu, wie man Situationen oder Umstände verhindert, die zu schweren Personenschäden oder Tod durch Hochspannung oder Stromschlag führen können.
	DANGER **PELIGRO** Los avisos de Peligro-Alto voltaje brindan información acerca de cómo evitar una situación o condición que cause graves lesiones a personas o la muerte, a causa de una electrocución o de una descarga de alto voltaje.

DANGER
PERIGO
Avisos de Perigo—Alta Tensão oferecem informações sobre como evitar uma situação ou condição que possa causar graves ferimentos ou morte devido a alta tensão ou choques elétricos.

DANGER
PERICOLO
Le indicazioni Pericolo—Alta tensione forniscono informazioni per evitare situazioni o condizioni che potrebbero causare gravi danni alle persone o il decesso a causa dell'alta tensione o di scosse elettriche.

Danger Notice

DANGER
Danger notices provide information about how to avoid a situation or condition that can cause serious personal injury or death.

DANGER
La mention Danger fournit des informations sur les moyens de prévenir une situation ou une condition qui pourrait entraîner un risque de blessure grave ou mortelle.

DANGER
GEFAHR
Gefahrenhinweise stellen Informationen darüber bereit, wie man Situationen oder Umständen verhindert, die zu schweren Personenschäden oder Tod führen können.

DANGER
PELIGRO
Los avisos de Peligro brindan información acerca de cómo evitar una situación o condición que pueda causar lesiones personales graves o la muerte.

DANGER
PERIGO
Avisos de perigo oferecem informações sobre como evitar uma situação ou condição que possa causar graves ferimentos ou morte.

DANGER
PERICOLO
Le indicazioni di pericolo forniscono informazioni per evitare situazioni o condizioni che potrebbero causare gravi danni alle persone o il decesso.

Software license

This section contains the Nortel Networks software license.

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4. Neither party may bring an action, regardless of form, more than two years after the cause of the action arose.

5. The terms and conditions of this License Agreement form the complete and exclusive agreement between Customer and Nortel Networks.

6. This License Agreement is governed by the laws of the country in which Customer acquires the Software. If the Software is acquired in the United States, then this License Agreement is governed by the laws of the state of New York.

New in this release

The following sections detail what's new in *Nortel Ethernet Routing Switch 8300 Installation — Chassis Installation and Maintenance, NN46200-309* for Release 4.1:

- "Features" (page 19)
- "Other changes" (page 19)

Features

See the following sections for information about feature changes:

- "8005DC power supply" (page 19)
- "Dual input DC-DC switching power supply" (page 19)

8005DC power supply

Release 4.1 introduces the 8005DC power supply. For more information, see "Ethernet Routing Switch 8005DC power supply specifications" (page 61).

Dual input DC-DC switching power supply

Release 4.1 introduces a dual input DC-DC switching power supply—the 8005DI DC. For more information, see "Ethernet Routing Switch 8005DI DC power supply specifications" (page 62).

Other changes

See the following sections for information about changes that are not feature-related:

- "Document changes" (page 19)

Document changes

This document is restructured to align with Nortel Customer Documentation Standards.

Introduction

The Nortel Ethernet Routing Switch 8300 chassis provides the physical framework for the Nortel Ethernet Routing Switch 8300 modules.

This document provides the instructions for installing the Nortel Ethernet Routing Switch 8300 chassis (8306 and 8310 chassis) in an equipment rack. This document also describes some of the routine tasks that you use to operate the Nortel Ethernet Routing Switch 8300 and includes technical specifications for the chassis and modules.

Prerequisites

- Before you install the Ethernet Routing Switch 8300 chassis, ensure that you use standard cable-system practices to install all network wiring on the premises.

Navigation

Chassis installation fundamentals

This chapter describes fundamental information that you need for installing the Ethernet Routing Switch 8300 chassis (8306 and 8310 chassis) .

Each Ethernet Routing Switch 8300 chassis consists of a sheet metal enclosure and a backplane. The number of bays for fan trays depends on the chassis type.

For information about the minimum software versions required to support the hardware, see *Nortel Ethernet Routing Switch 8300 Administration, NN46200-604*.

This section includes information about the following chassis types:

- Ethernet Routing Switch 8310 chassis
- Ethernet Routing Switch 8306 chassis

Navigation

Ethernet Routing Switch 8310 chassis

The Ethernet Routing Switch 8310 chassis provides eight slots for installing Ethernet Routing Switch 8300 I/O modules and two slots for installing the Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU

modules. Slots are numbered from the top down. You can install 8300 Series I/O switch modules in slots 1 through 4 and slots 7 through 10. Slots 5 and 6 are reserved for the 8393SF/CPU or 8394SF/CPU modules.

The Ethernet Routing Switch 8310 chassis has three bays for either AC or DC power supplies and two fan trays for cooling. Figure 1 "Ethernet Routing Switch 8310 chassis and components" (page 25) also shows the location of customer-replaceable components in the Ethernet Routing Switch 8310 chassis.

The Ethernet Routing Switch 8310 chassis includes a Power over Ethernet (PoE) backplane that supports 802.3af PoE. The PoE feature requires the following components:

- Ethernet Routing Switch 8306 or 8310 chassis with PoE backplane
- Ethernet Routing Switch 8301AC or 8302AC power supply
- Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU module

and a choice of either of the following:

- Ethernet Routing Switch 8348TX-PWR module
- Ethernet Routing Switch 8348GTX-PWR module

> **CAUTION**
> **Risk of equipment damage**
> Do not install Ethernet Routing Switch 8300 modules and Ethernet Routing Switch 8100 or 8600 modules within the same chassis. Ethernet Routing Switch 8300 Series software does not support mixed configurations. A mixed configuration can damage the modules and void your warranty.

Figure 1
Ethernet Routing Switch 8310 chassis and components

Ethernet Routing Switch 8306 chassis

The Ethernet Routing Switch 8306 chassis provides four slots for installing I/O modules and two slots for installing Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU modules. See Figure 2 "8306 chassis and components" (page 26). You can use the top four slots to install 8300 I/O switch modules. Slots 5 and 6 are reserved for Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU modules.

The Ethernet Routing Switch 8306 chassis has three bays for either AC or DC power supplies and a single fan tray for cooling. Figure 2 "8306 chassis and components" (page 26) also shows the location of customer-replaceable components in the 8306 chassis.

The Ethernet Routing Switch 8306 chassis includes a PoE backplane that supports 802.3af PoE. The PoE feature requires the following components:

- Ethernet Routing Switch 8306 or 8310 chassis with PoE backplane

- Ethernet Routing Switch 8301AC or 8302AC power supply

- Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU module

and a choice of either of the following:

- Ethernet Routing Switch 8348TX-PWR module or
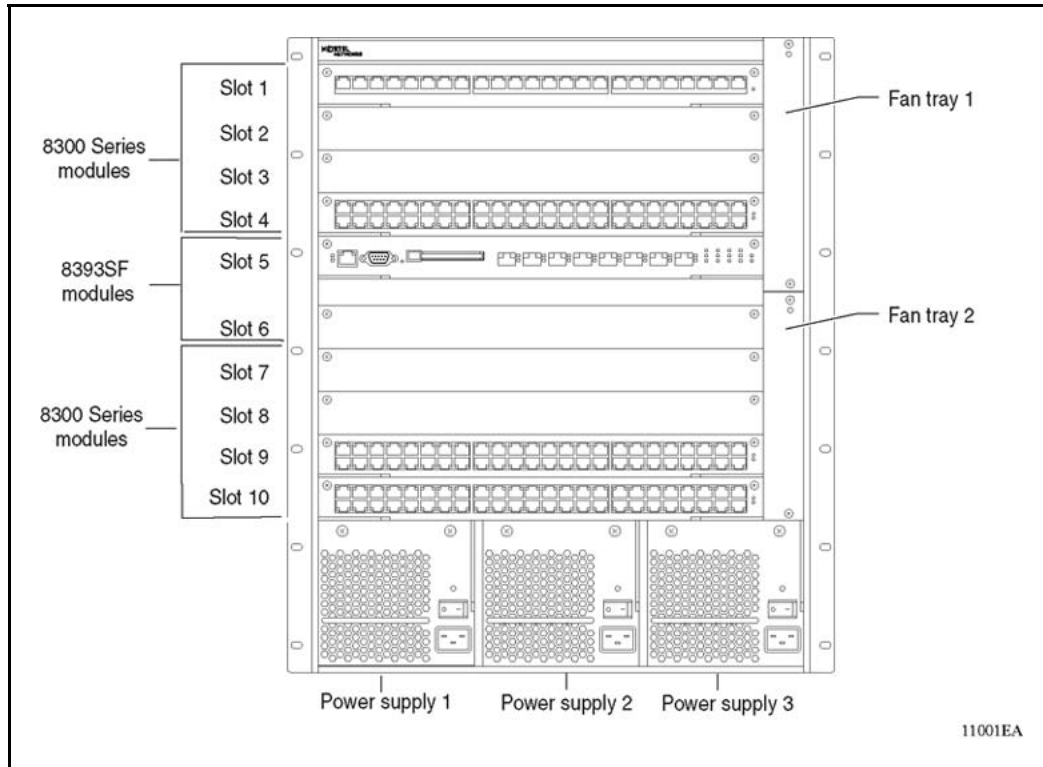
- Ethernet Routing Switch 8348GTX-PWR module

> **CAUTION**
> **Risk of equipment damage**
> Do not install Ethernet Routing Switch 8300 modules and
> Ethernet Routing Switch 8100 or 8600 modules within the same
> chassis. Ethernet Routing Switch 8300 Series software does
> not support mixed configurations. A mixed configuration can
> damage the modules and void your warranty.

Figure 2
8306 chassis and components
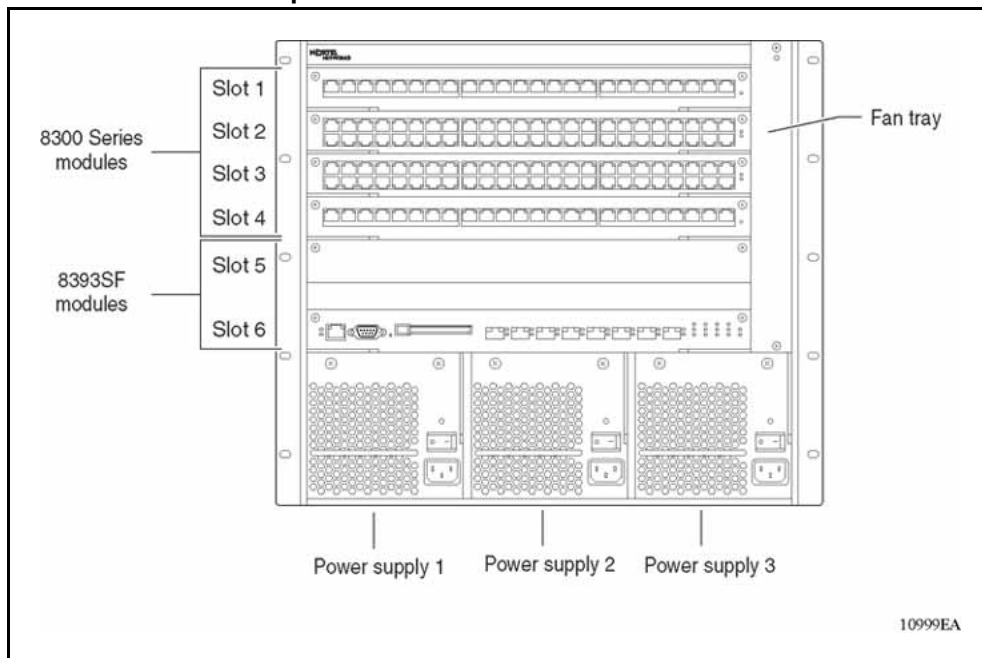
Power supplies

The Ethernet Routing Switch 8306 and 8310 chassis each provide three
bays for either AC or DC power supplies.

The Ethernet Routing Switch 8306 and 8310 chassis supports the
following AC power supplies:

- 8301AC

- 8302AC

The Ethernet Routing Switch 8306 and 8310 chassis supports the
following DC power supplies:

- 8005DC
- 8005DI DC,

The PoE feature requires the following components:

- Ethernet Routing Switch 8306 or 8310 chassis with PoE backplane
- Ethernet Routing Switch 8301AC or 8302AC power supply
- Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU module

and a choice of either of the following:

- Ethernet Routing Switch 8348TX-PWR module
- Ethernet Routing Switch 8348GTX-PWR module

Fan trays

Table 1 "Number of fan trays installed for each chassis" (page 27) lists the number of fan trays for the Ethernet Routing Switch 8310 and 8306 chassis.

Table 1
Number of fan trays installed for each chassis

Chassis	Fan tray
8310	Two fan trays; each fan tray contains eight high-capacity fans.
8306	One fan tray containing six high-capacity fans.

A control/monitor circuit board in the fan tray reports temperature and fan operating status to the network management software. A green light emitting diode (LED) indicates that the fan tray is operating correctly. For information about installing the fan, see *Nortel Ethernet Routing Switch 8300 Installation — Fan Tray,* (NN46200-302).

Site requirements

Ensure that the installation site meets the space, electrical, and environmental requirements listed in this section. For more information see, "Technical specifications" (page 55).

Space requirements

The installation site must provide sufficient free space around the chassis to ensure proper ventilation and access for servicing.

Use the following guidelines to plan front and rear access:

* The maintenance aisle in front of the frame requires a clearance of 76.2 centimeters (cm) (30 inches).

* The wiring aisle at the back of the frame requires a clearance of 61 cm (24 inches).

AC input electrical requirements

Refer to the power specifications for the power supply in "Technical specifications" (page 55).

For AC input power specifications for each of the modules, see *Nortel Ethernet Routing Switch 8300 Installation — Modules,* (NN46205-305).

Environmental requirements

The installation site must meet the following environmental requirements for 8300 chassis operation. For more information, see the following table.

Table 2
Environmental requirements

Altitude	Humidity	Temperature
0-10 000 feet (ft) (0-3 048 meters [m])	5%-85%, noncondensing	32°F-104°F (0°C-40°C), stable

Hardware requirements

This section includes information about the hardware shipped with the 8306 and 8310 chassis.

Shipment contents

In addition to the Ethernet Routing Switch 8310 or 8306 chassis, your shipping container contains several hardware accessories. Verify that the items in the shipping container match those on the shipment packing list.

The following table is a checklist of items included in the shipment container. For information about ordering replacement parts, see "Part Numbers" (page 51).

Table 3
Chassis shipping accessories: Ethernet Routing Switch 8310 and 8306 chassis

Check	Accessory	Use to
	Bracket kit containing the following: • two rack mounting brackets • bracket- mounting machine screws, each being 0.164 inches wide, 32 threads to the inch and 0.250 inches long — The 8310 chassis ships with 24 of these screws. — The 8306 chassis ships with 14 of these screws.	Prepare the chassis for installation in an equipment rack.
	Screw package containing wafer head screws each being 0.190 inches wide, 32 threads to the inch and 0.75 inches long with flat nylon washers: • The 8310 chassis ships with 14 of each. • The 8306 chassis ships with 10 of each.	Mount the chassis in an equipment rack.
	2 side cable management brackets	Manage network interface cables.
	Rubber footpads	Keep the chassis from slipping when mounting it on a flat surface.
	Console cable	Connect an optional management console to the chassis.

The following figures illustrate the items included in the chassis shipping container.

Figure 3
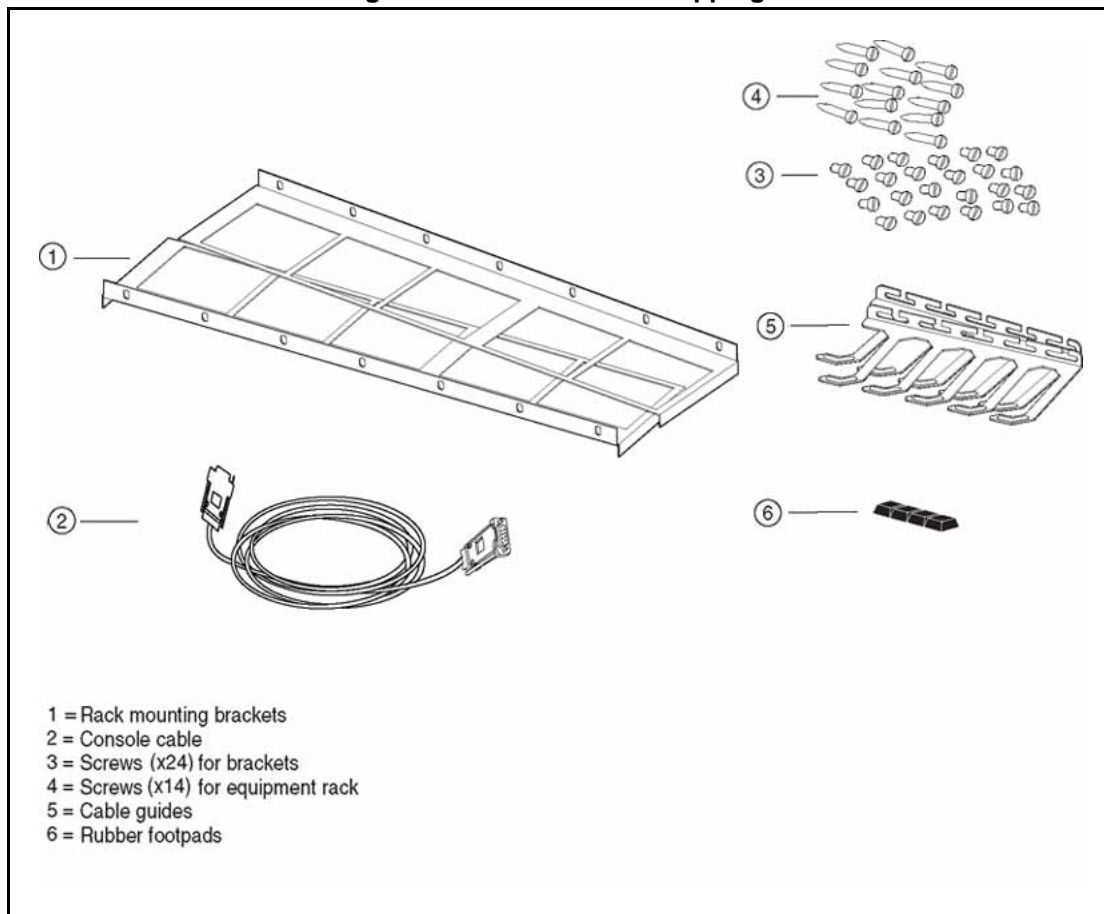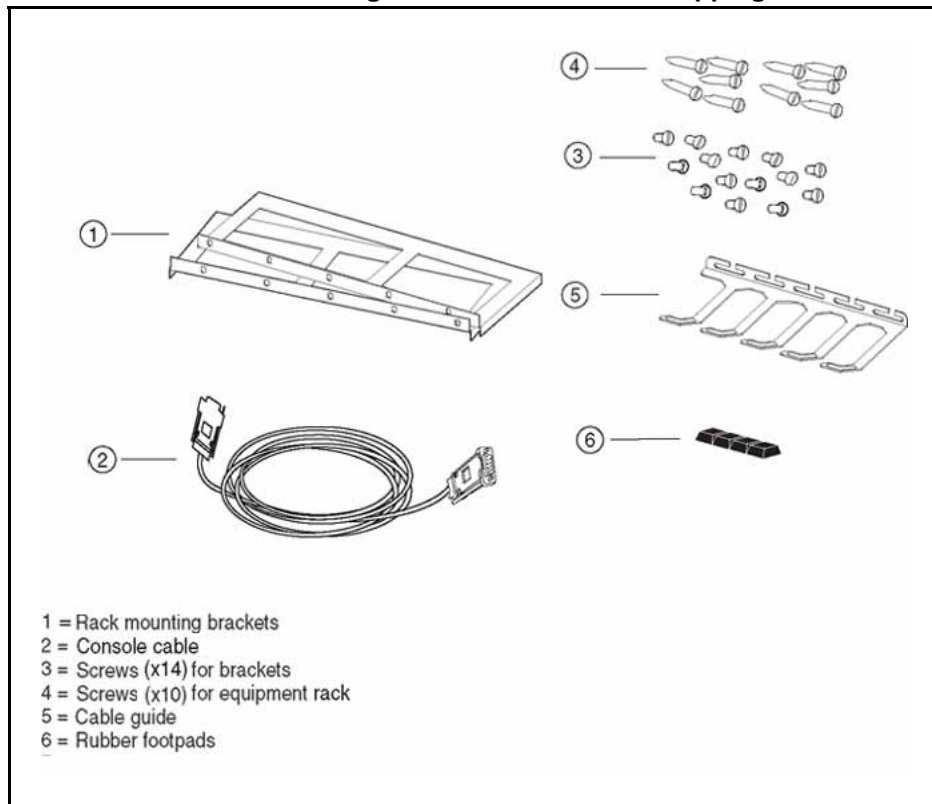**Items in the Ethernet Routing Switch 8310 chassis shipping container**

1 = Rack mounting brackets
2 = Console cable
3 = Screws (x24) for brackets
4 = Screws (x14) for equipment rack
5 = Cable guides
6 = Rubber footpads

Figure 4
Items in the Ethernet Routing Switch 8306 chassis shipping container

1 = Rack mounting brackets
2 = Console cable
3 = Screws (x14) for brackets
4 = Screws (x10) for equipment rack
5 = Cable guide
6 = Rubber footpads

Other equipment

In addition to the items that are included in the Ethernet Routing Switch 8310 and 8306 chassis accessory package you must also supply other items. Before you install the hardware, ensure that you have all the cables, tools, and other equipment that you need. The following sections describe the equipment you must supply:

- "Management console" (page 31)
- "Cables" (page 32)
- "Mounting hardware for the 8310, 8306 chassis" (page 32)

Management console
To configure startup options and to monitor the results of startup diagnostics, you can attach an optional PC, or laptop, VT-100 console or an equivalent, such as a PC terminal emulator.

Cables

Unless you specifically order them, the cables required for your network configuration are not included in the chassis accessory package. If you do not have the proper cables, contact your network administrator.

Mounting hardware for the 8310, 8306 chassis

To install the Ethernet Routing Switch 8310 or 8306 chassis in an equipment rack, you require a Phillips screwdriver and an equipment rack that meets the following specifications:

- heavy-duty steel construction

- Electronic Industries Association (EIA) standard hole-spacing

- width of 19 inches (in.) (48.26 centimeters [cm]) and depth of 24 in. (60.96 cm)

For information about chassis weight including components, see "Procedure job aid: Chassis weight including components" (page 36).

Successful installation verification

In a normal power-up sequence, the LEDs light as follows:

1. When power is applied to the Ethernet Routing Switch 8300 Series, the green LED on each power supply and fan tray turns on, and the Online LED for each module lights amber.

2. Each module initiates a self-test, during which the port and module LEDs display various patterns to indicate the progress of the self-test.

3. On successful completion of the self-test (within two or three minutes after power is applied for a fully loaded chassis), the module Online LED transitions from amber to green.

If the LEDs on the modules light in this sequence, your installation is successful. Contact your network administrator to verify that the Ethernet Routing Switch 8300 Series is now connected to the network.

If the LEDs do not light in this sequence, contact your local Nortel Technical Solutions Center.

Ethernet Routing Switch 8310 and 8306 chassis installation

This section describes how to install the Ethernet Routing Switch 8310 and 8306 chassis.
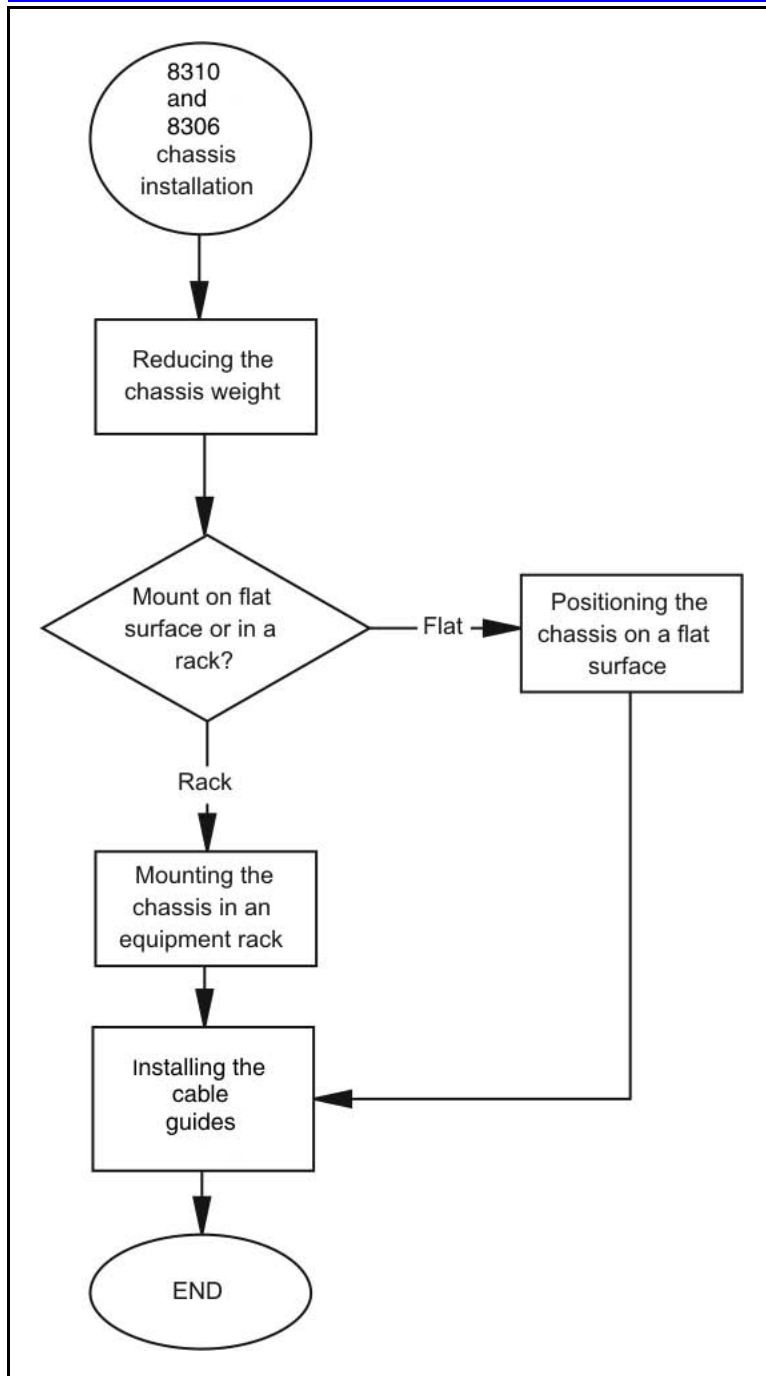
> **CAUTION**
> **ESD**
> To prevent damage from electrostatic discharge, always wear an antistatic wrist strap connected to an electrostatic discharge (ESD) jack when performing maintenance on this product. Ensure that the wrist strap makes contact with your skin.

Prerequisites

• Inspect all items for shipping damage. If you detect damage, do not install the chassis. Call the Nortel Technical Solutions Center in your area.

• Verify that the items in the shipping container match those on the shipment packing list. Use Table 3 "Chassis shipping accessories: Ethernet Routing Switch 8310 and 8306 chassis" (page 29) as a checklist when verifying the contents of the shipping container.

• Verify that you have supplied all the other required hardware.

• Ensure that your installation site meets the physical, electrical, and environmental requirements described in "Site requirements" (page 27).

Chassis installation procedures

This task flow shows you the sequence of procedures you perform to install the chassis. To link to a procedure, click the procedure title in "Navigation" (page 34).

Navigation

Chassis installation time requirements

The following table lists procedures you must use to install the Nortel Ethernet Routing Switch 8300 chassis and the estimated time you need to complete each procedure. Not all procedures are required for every Ethernet Routing Switch 8300 system.

Procedure	Time requirement
Positioning the chassis on a flat surface	5 minutes
Mounting the chassis in an equipment rack	9–17 minutes depending on the chassis
Installing the cable management brackets	5 minutes

Reducing the chassis weight

Reduce the chassis weight to make the chassis easier to lift, and thus you can reduce the risk of personal injury or equipment damage. This procedure requires approximately 5 minutes to complete.

Procedure steps

Step	Action
1	Remove the power supply filler panels.
	For more information, see *Nortel Ethernet Routing Switch 8300 Installation — AC Power Supply, NN46200-301*.
2	Remove the module filler panels.
	For more information, see *Nortel Ethernet Routing Switch 8300 Installation — Modules, NN46200-305*.
3	Remove the fan trays.
	For more information see *Nortel Ethernet Routing Switch 8300 Installation — Fan Tray, NN46200-302*.

--End--

Installing the chassis on a flat surface

Mount the Ethernet Routing Switch 8310 and 8306 chassis on any flat, level surface, such as a tabletop or shelf, that can safely support the weight of the chassis, its components, and its attached cables to provide a convenient location for the safe operation of the switch.

Prerequisites

- Provide adequate space around the unit for access to cable connectors.
- Ensure that the surface can safely support the weight of the chassis, its components, and its attached cables. See "Chassis installation time requirements" (page 35).

Procedure steps

Step	Action
1	Set the switch on the flat surface and check for proper ventilation.
	Allow at least 2 inches 5.1 cm) on each side for proper ventilation and 5 inches (12.7 cm) at the front for power cord clearance.
2	Attach rubber feet to each marked location on the bottom of the chassis.
	The rubber feet are optional but recommended to keep the unit from slipping.
3	Attach all devices to the ports.

<div align="center">

--End--

</div>

Procedure job aid: Chassis weight including components

The following table shows the weight of each chassis including the components.

Chassis	Maximum weight (chassis and components)
8310	225 pounds (lb) (102 kilograms [kg])
8306	140 lb (63 kg)

Mounting the Ethernet Routing Switch 8310 and 8306 chassis in an equipment rack

Install the Ethernet Routing Switch 8310 and 8306 chassis in a standard 19-inch equipment rack to provide a convenient location for the safe operation of the switch.

ATTENTION

If you are mounting the chassis in a 23-inch equipment rack, see the rack manufacturer's 23-inch-to-19-inch rack adapter installation instructions.

Prerequisites

- To mount the chassis in an equipment rack, you need the following equipment:

  — standard 19 in. (48.2 cm) equipment rack

  — two rack mounting brackets

  — 14 Machine screws for the mounting brackets on the 8306 chassis (22 Machine screws for the brackets on the 8310 chassis)

  — 10 WAFER head screws and washers for the 8306 chassis (14 WAFER head screws and washers for the 8310 chassis)

  — a Phillips screwdriver

> **CAUTION**
> See "Procedure job aid: Maximum number of chassis installed in 7-foot rack" (page 40) for the maximum number of chassis that you can install in a 7-foot rack.

Procedure steps

| Step	Action
1	Hold each rack-mounting bracket against one side of the chassis. Make sure that the attachment holes in the bracket match the holes in the chassis.
	Each bracket fits only one side of the chassis. The brackets are labeled R (right) and L (left). If the mounting holes do not line up between a bracket and the chassis, try that bracket on the other side of the chassis.

11152FA

11151FA
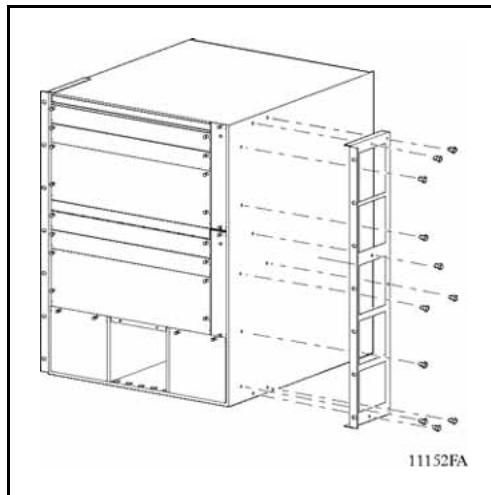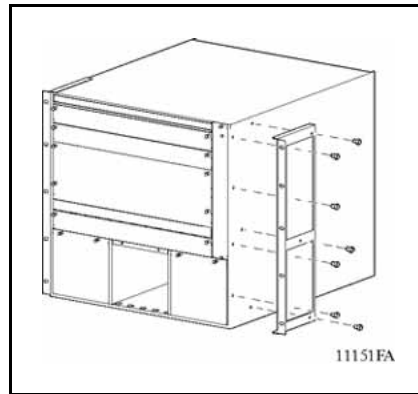
2   Insert and tighten the supplied flat-head screws to fasten each bracket to the chassis.


9418FA
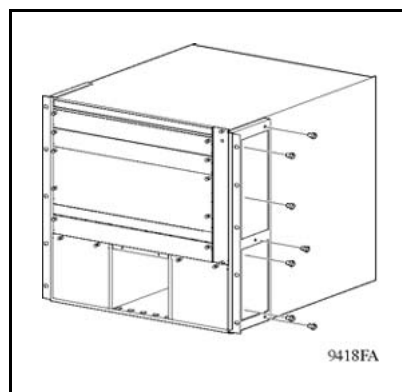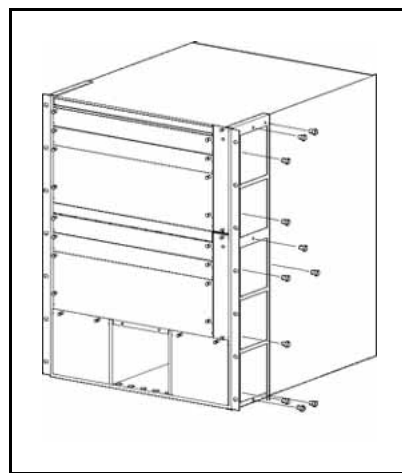
3   Measure the appropriate number of rack units of free vertical space inside the rack and mark the spot.

The following table shows the number of rack units you can allocate for each chassis.

Chassis	Rack units	Inches
8310	13.2	23.06
8306	9.7	16.9

4   Holding the chassis in position, align the flanged end of each mounting rail with two holes on each side of the vertical rack support.

It is easier to complete this step with two people. Make sure that the hole pairs on either side of the vertical support match horizontally.

9074FA

9419FA
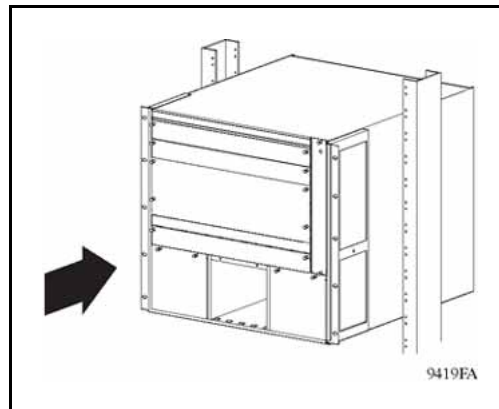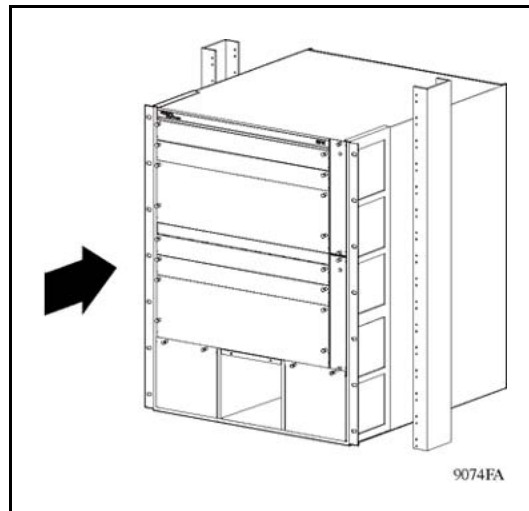
5   Insert and tighten the rack-mounting screws with a Phillips screwdriver.

Do not overtighten the rack-mounting screws.

9075FA

9420FA

--End--
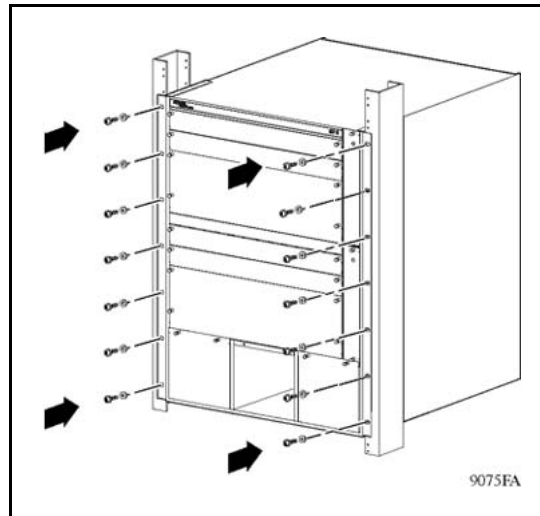
Procedure job aid: Maximum number of chassis installed in 7-foot rack

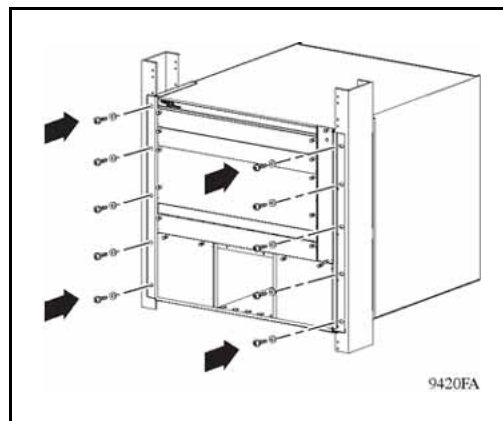The following table shows the maximum number of chassis that you can install in a 7-foot rack.

Chassis	Maximum number of chassis installed in 7-foot rack
8310	3
8306	4

Installing the cable guides

Install the cable guides to keep cable clusters fastened and out of the way, but still accessible for maintenance.

Procedure steps

Step	Action
1	Loosen, but do not remove, the rack-mounting screws needed to install one cable guide.
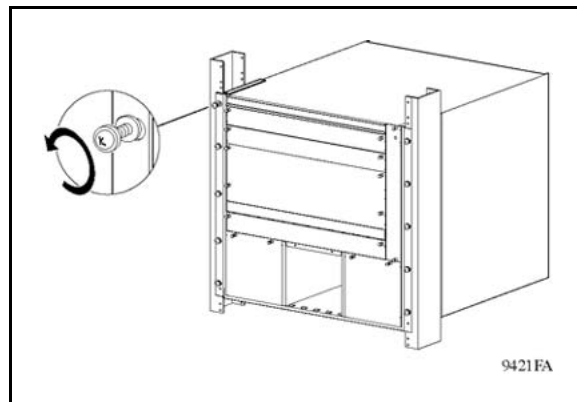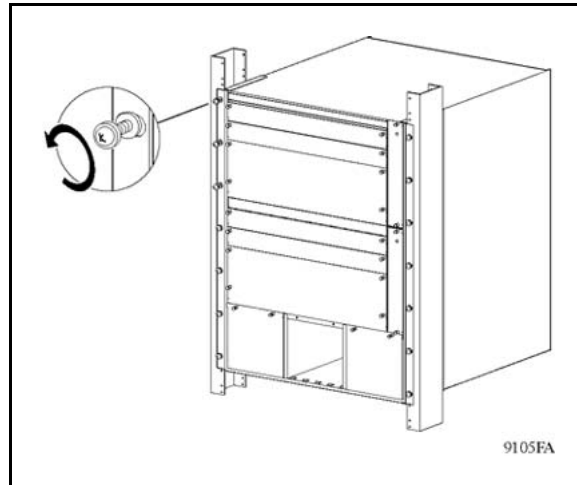
2	Slide the guide onto the loosened screws.
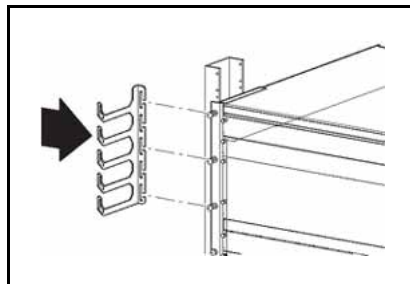
3	Tighten the screws to secure the guide to the chassis.

9107FA

9422FA
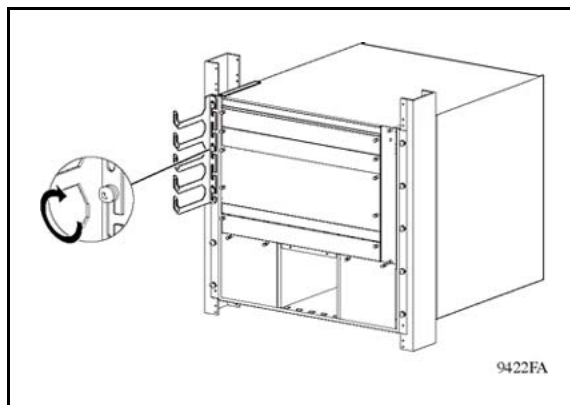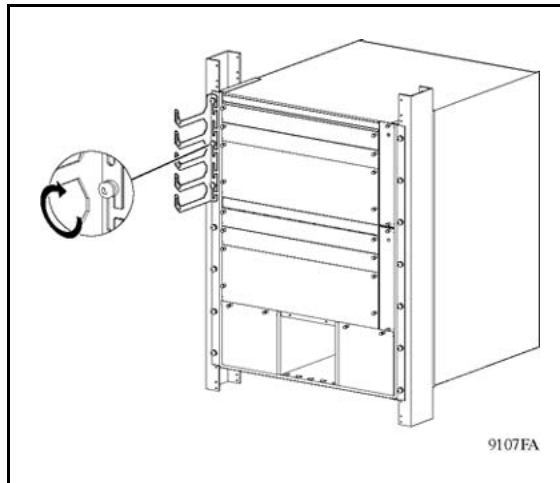
--End--

Switch operations

This chapter describes some of the procedures that you perform to operate the Ethernet Routing Switch 8300 and provides troubleshooting information.

Navigation

Powering on DC power supplies

Power on the DC power supplies to provide power to the switch.

Prerequisites

- Ensure that the power supply is seated properly.

Procedure steps

Step	Action
1	On each DC power supply, turn the power switch to the On position.

> **ATTENTION**
> When you first install a chassis that contains two or three power supplies, you must turn on two of the power supply units simultaneously. If you wait longer to turn on the second power supply, one of the power supplies could shut down. To correct this condition, turn off both power supplies, wait at least 30 seconds, and then turn on both power supplies again simultaneously.

For more information about the power switch locations, see the following figure.
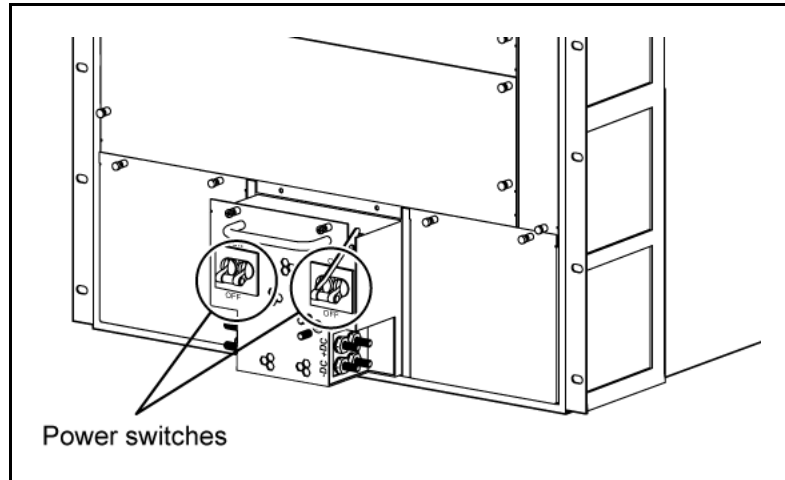
Power switches

2 Verify that the power output LED for each power supply lights green.

3 Verify that the power supply status LEDs and the fan LED on the 8393SF/CPU or 8394SF/CPU module light green.

After you turn on the switch, each module automatically initiates a diagnostic test to verify proper module function. See "Successful installation verification" (page 32).

4 Verify that air is flowing from the cooling fans out through the vents of the chassis.

5 If the power supply LED remains off, or if you cannot feel air flow from the chassis vents, turn the DC power supplies off, and then turn them on again.

6 If the problem persists, contact the Nortel Technical Solutions Center.

--End--

Powering on AC power supplies

Power on the AC power supplies to provide power to the switch.

The number of supported Power over Ethernet (PoE) modules depends on the power supply rating (110 volts [V]AC nominal or 220 VAC nominal), the power supply model, and the number of power supplies. For more information, see *Ethernet Routing Switch 8300 Planning — Power Considerations,* (NN46200-511).

Prerequisites

- Ensure that the power supply is seated properly.

- Verify that the AC power cords are connected to the power supplies and connected to AC power outlets.

Procedure steps

Step	Action
1	On each AC power supply, turn the power switch to the on position.

> **ATTENTION**
> When you first install a chassis that contains two or three power supplies, you must turn on two of the power supply units simultaneously. If you wait longer to turn on the second power supply, one of the power supplies could shut down. To correct this condition, turn off both power supplies, wait at least 30 seconds, and then turn on both power supplies again simultaneously.

Step	Action
2	Verify that the power LED on each power supply lights green.
3	Verify that the power supply status LEDs and the fan LED on the 8393SF/CPU or 8394SF/CPU module light green.
	After you turn on the switch, each module automatically initiates a diagnostic test to verify proper module function. See "Successful installation verification" (page 32).
4	Verify that air is flowing from the cooling fans out through the vents of the chassis.
5	If the power supply LED remains off, or if you cannot feel air flow from the chassis vents, turn the DC power supplies off, and then turn them on again.
6	If the problem persists, contact the Nortel Technical Solutions Center.

--End--

Resetting the switch

Reset the switch to reboot the switch hardware without cycling power.

Procedure steps

Action
To *warm-start* the Ethernet Routing Switch 8300 Series (no diagnostic tests are run), press the Reset button for less than 5 seconds.
To press the Reset button, insert a small pointed object (for example, an unbent paper clip) into the Reset button hole.
The following figure shows the location of the Reset button on the Ethernet Routing Switch 8393SF/CPU module.

Figure 5
Reset button on the 8393SF/CPU module
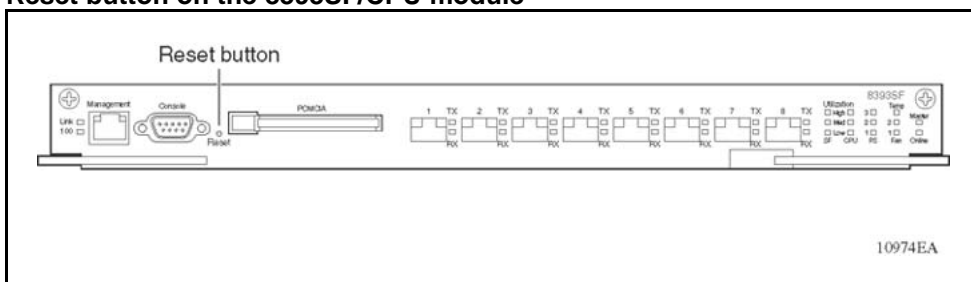
The following figure shows the location of the Reset button on the Ethernet Routing Switch 8394SF/CPU module.

Figure 6
Reset button on the 8394SF/CPU module
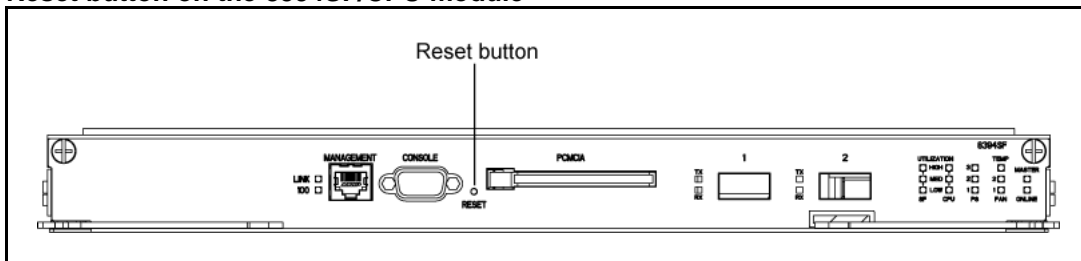
Installing removable flash memory cards

Install a removable flash memory card in an Ethernet Routing Switch 8393SF/CPU module to provide alternative storage media.

Procedure steps

Step	Action
1	Position the card with the label facing up and the insert arrow pointing toward the card receptacle.

11149FA
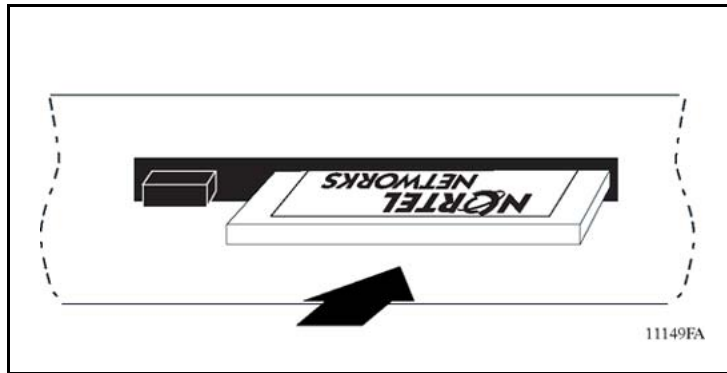
2 Insert the card into the card receptacle.

3 Gently push the card in until it fits snugly in place.

--End--

Removing removable flash memory cards

Remove a removable flash memory card from the Ethernet Routing
Switch 8393SF/CPU or 8394SF/CPU module to stop using it as a storage
medium.

Procedure steps

Step	Action

1 Press the eject button to the side of the memory card receptacle
on the Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU
module.

The card pops out slightly.

Eject button

11148FA
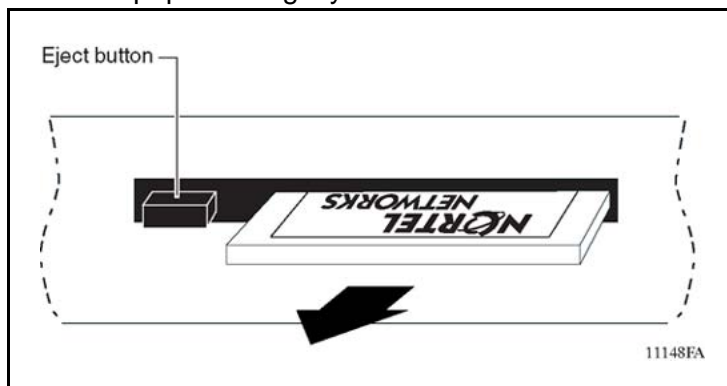
2 Pull the flash memory card out of the card receptacle.

--End--

Protecting memory card files

Write-protect the memory card for backup purposes after you successfully load the configuration file and save your configuration because Nortel ships each memory card with the read-write protect switch in the unprotected position.

Typically, you do not operate the switch with a write-protected memory card. Make a copy of your configuration on another memory card, write-protect that card, and store it in a safe place. If you do not have a second memory card, you can copy your configuration to a File Transfer Protocol (FTP) or Trivial FTP (TFTP) server.

Prerequisites

- Remove the card from the Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU module before changing the read-write protection.

> **ATTENTION**
> You must remove the card from the Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU module before changing the read-write protection. Failure to remove the card can result in improper write protection.

Procedure steps

Step	Action
1	Remove the memory card from the Ethernet Routing Switch 8393SF/CPU or 8394SF/CPU module.
2	Locate the read-write protect switch on the edge opposite the arrow on the memory card.
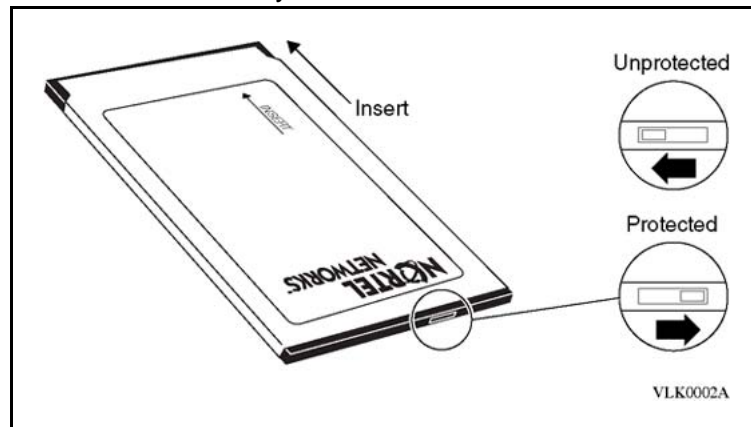
Step	Action
3	Adjust the read-write protect switch.

4   Reinsert the memory card into the card receptacle.

--End--

Part Numbers

This chapter provides a list of Nortel Ethernet Routing Switch 8300 hardware and part numbers.

The following table lists Ethernet Routing Switch 8300 hardware and part numbers.

Table 4
Ethernet Routing Switch 8300 hardware part numbers

Part number	Item	Additional details
DS1402007-E5	8310 10 slot Power over Ethernet (PoE) chassis	Includes chassis, dual backplane, two fan trays, RS232 cable the for the management console, rack mount kit, and cable guide kit. Requires at least one 83XX power supply, and up to three power supplies are supported.
DS1402008-E5	8306 6 slot PoE chassis	Includes chassis, dual backplane, two fan trays, RS232 cable the for the management console, rack mount kit, and cable guide kit. Requires at least one 83XX power supply, and up to three power supplies are supported.
DS1404076-E5	Ethernet Routing Switch 8393SF CPU/Switch Fabric module with 8 Gigabit Ethernet SFP slots	Includes Personal Computer Memory Card International Association (PCMCIA) flash memory card. One switch fabric module is required for each Ethernet Routing Switch 8300 chassis.

Table 4
Ethernet Routing Switch 8300 hardware part numbers (cont'd.)

Part number	Item	Additional details
DS1404099-E5	Ethernet Routing Switch 8394SF CPU/Switch Fabric module with 2 - 10 Gigabit Ethernet XFP slots	Includes PCMCIA flash memory card. One switch fabric module is required for each Ethernet Routing Switch 8300 chassis.
DS1404077-E5	Ethernet Routing Switch 8348TX module. 48 port autosensing 10BASET/ 100BASE-TX Ethernet interface module	
DS1404078	Ethernet Routing Switch 8348TX-PWR module, 48 10BASE-T/100BASE-TX ports Ethernet interface module	
DS1404079-E5	Ethernet Routing Switch 8324GTX module, 24 port autonegotiating (10BASE-T, 100BASE-TX, or 1000BASE-T) Ethernet interface module	
DS1404098-E5	Ethernet Routing Switch 8324FX. 24 Port 100Base-FX Ethernet interface module	
DS1404093-E5	Ethernet Routing Switch 8348GTX module. 48 port Autosensing 10Base-T/100Base-TX/1000Base-T Ethernet interface module	
DS1404094-E5	Ethernet Routing Switch 8348GTX-PWR module, 48 port Autonegotiating 10BASE-T /100BASE-TX / 1000BASE-T, Ethernet interface module	
DS1404095-E5	Ethernet Routing Switch 8348GB module. 48 port SFP interface module	
DS1404100-E6	Ethernet Routing Switch 8308XL module 8 port 10 GBase XFP Ethernet interface module	The 10GBASE-R ports on this module are LAN-capable and operate in full-duplex mode.

Table 4
Ethernet Routing Switch 8300 hardware part numbers (cont'd.)

Part number	Item	Additional details
DS1405A14-E5	8301AC 100-240 volts (V) AC Power Supply. At least one power supply is required for each 83xx chassis.	Provides up to 800W of PoE. Does not include a power cord.
DS1405x16-E5	8302AC 100-240 V AC Power Supply. At least one power supply is required for each 83xx chassis.	Provides up to 400W of PoE. Does not include a power cord.
DS1405011-E5	8005DC 48-60 V DC Power Supply. At least one power supply is required for each 83xx chassis.	
DS1405017-E6	8005DI DC 40-70 V DC Power Supply. At least one power supply is required for each 83xx chassis.	

Technical specifications

This chapter lists the physical, environmental, and electrical specifications for the Ethernet Routing Switch 8310 and 8306 chassis and the available power supplies.

Navigation

Ethernet Routing Switch 8310 chassis specifications

The following sections describe the specifications of the Ethernet Routing Switch 8310 chassis.

Physical specifications

The following table lists the physical specifications of the Ethernet Routing Switch 8310 chassis.

Table 5
Ethernet Routing Switch 8310 chassis physical specifications

Physical specifications	
Height:	22.9 inches (in.) (58.2 centimeters [cm])
Width:	17.5 in. (44.5 cm)

Table 5
Ethernet Routing Switch 8310 chassis physical specifications (cont'd.)

Physical specifications	
Depth:	19.9 in. (50.5 cm)
Weight (empty):	85 pounds (lb) (39 kilograms [kg])
Weight (fully loaded):	225 lb (102 kg)
Cooling system:	
Fan trays:	2 per chassis
Fans:	8 per fan tray
Thermal sensors:	1 per fan tray

Environmental specifications

The following table lists the environmental specifications of the Ethernet Routing Switch 8310 chassis.

Table 6
Ethernet Routing Switch 8310 chassis environmental specifications

Environmental specifications	
Operating temperature:	0 degrees Celcius($^\circ$C) to 40°C (32 degrees Fahrenheit [$^\circ$F] to 104°F)
Storage temperature:	-25°C to 70°C (-13°F to 158°F)
Operating humidity:	85% maximum relative humidity, noncondensing
Storage humidity:	95% maximum relative humidity, noncondensing
Operating altitude:	3 048 meters (m) (10 000feet [ft]) maximum
Storage altitude:	3 048 m (10 000 ft) maximum
Free fall/drop:	ISO 4180-s, NSTA 1A
Vibration:	IEC 68-2-6/34
Shock/bump:	IEC 68-2-27-29

International regulatory requirements

The following table lists the international regulatory requirements of the Ethernet Routing Switch 8310 chassis.

Table 7
Ethernet Routing Switch 8310 international regulatory requirements

International regulatory requirements	
Electromagnetic emissions regulatory requirements:	
Global basis for certification:	CISPR 22-1997 Class A

Table 7
Ethernet Routing Switch 8310 international regulatory requirements (cont'd.)

International regulatory requirements	
U.S.:	FCC CFR47 Part 15, Subpart B, Class A
Canada:	ICES-003, Issue-2, Class A
Europe:	EN 55022-1998 Class A; EN 61000-3-2/A14, EN 61000-3-3 (CE Marking
Australia/New Zealand:	AS/NZS 3548:1995, Class A
Japan:	VCCI-V3/97.04, Class A
Taiwan:	CNS 13438, Class A
Electromagnetic immunity regulatory requirements:	
Global basis for certification:	CISPR 24:1997
Europe:	EN 55024:1998
Safety regulatory requirements:	
Global basis for certification:	IEC 60950 current edition with all CB member deviations
U.S.:	UL60950
Canada:	CSA 22.2 No. 60950
Europe:	EN60950 (CE Marking)
Australia/New Zealand:	AS/NZS 3260
Mexico:	NOM-019-SCFI-1998

Ethernet Routing Switch 8306 chassis specifications

The following sections describe the specifications of the Ethernet Routing Switch 8306 chassis.

Physical specifications

The following table lists the physical specifications of the Ethernet Routing Switch 8306 chassis.

Table 8
Ethernet Routing Switch 8306 physical specifications

Physical specifications	
Height:	15.8 in. (40.1 cm)
Width:	17.5 in. (44.5 cm)
Depth:	19.9 in. (50.5 cm)
Weight (empty):	49 lb (22 kg)

Table 8
Ethernet Routing Switch 8306 physical specifications (cont'd.)

Physical specifications	
Weight (fully loaded):	140 lb (63 kg)
Cooling system:	
Fan tray:	1 per chassis
Fans:	6 per fan tray
Thermal sensors:	1 per fan tray

Environmental specifications

The following table lists the environmental specifications of the Ethernet Routing Switch 8306 chassis.

Table 9
Ethernet Routing Switch 8306 environmental specifications

Environmental specifications	
Operating temperature:	0°C to 40°C (32°F to 104°F)
Storage temperature:	−25°C to 70°C (−13°F to 158°F)
Operating humidity:	85% maximum relative humidity, noncondensing
Storage humidity:	95% maximum relative humidity, noncondensing
Operating altitude:	3048 m (10,000 ft) maximum
Storage altitude:	3048 m (10,000 ft) maximum
Free fall/drop:	ISO 4180-s, NSTA 1A
Vibration:	IEC 68-2-6/34
Shock/bump:	IEC 68-2-27-29

International regulatory requirements

The following table lists the international regulatory requirements of the Ethernet Routing Switch 8306 chassis.

Table 10
Ethernet Routing Switch 8306 international regulatory requirements

International regulatory requirements	
Electromagnetic emissions regulatory requirements:	
Global basis for certification:	CISPR 22-1997 Class A
U.S.:	FCC CFR47 Part 15, Subpart B, Class A
Canada:	ICES-003, Issue-2, Class A

Table 10
Ethernet Routing Switch 8306 international regulatory requirements (cont'd.)

International regulatory requirements	
Europe:	EN 55022-1998 Class A; EN 61000-3-2/A14, EN 61000-3-3 (CE Marking)
Australia/New Zealand:	AS/NZS 3548:1995, Class A
Japan:	VCCI-V3/97.04, Class A
Taiwan:	CNS 13438, Class A
Electromagnetic immunity regulatory requirements:	
Global basis for certification:	CISPR 24:1997
Europe:	EN 55024:1998
Safety regulatory requirements:	
Global basis for certification:	IEC 60950 current edition with all CB member deviations
U.S.:	UL60950
Canada:	CSA 22.2 No. 60950
Europe:	EN60950 (CE Marking)
Australia/New Zealand:	AS/NZS 3260
Mexico:	NOM-019-SCFI-1998

Ethernet Routing Switch 8301 AC power supply specifications

The following table lists the power specifications for the 8301 AC power supply.

Table 11
Ethernet Routing Switch 8301 AC power specifications

AC Input Power Ratings		
Input voltage range (nominal):	100-120 VAC	200-240 VAC
Input current (nominal):	16 amperes (A)	12 A
Frequency range (nominal):	50-60 Hertz (Hz)	50-60 Hz
Input VA	1600 volt-amperes VA	2234 VA
Input power consumption:	1584 watts (W)	2212 W
Heat dissipation (thermal/output):	1515 British Thermal Units (BTU)/hour (hr)	1508 BTU/hr
Hold-up time:	20 milliseconds (ms)	20 ms

Table 11
Ethernet Routing Switch 8301 AC power specifications (cont'd.)

DC Output Power Ratings		
Max. output power (combined):	1140 W (1050 W + 90 W fans)	1770 W (1680 W + 90 W fans)
Non-PoE:	3.3 VDC @ 150 A	3.3 VDC @ 150 A
	12 VDC @ 65 A	12 VDC @ 65 A
PoE:	50 VDC @ 18 A	50 VDC @ 18 A
Fans:	12 volts (V)DC @ 7.5 A	12VDC @ 7.5 A

Note the following information:

- The maximum steady-state output power is limited to a total of 1140 W for any combination of output voltages/currents at low-line 100-120 VAC nominal input voltage conditions.

- The maximum steady-state output power is limited to a total of 690 W for any combination of output voltages/currents, excluding the 50 VDC source at low-line 100-120 VAC nominal input voltage conditions. This limitation is required to ensure that there is sufficient PoE power or 450 W total at this input voltage condition.

- The maximum steady-state output power is limited to a total of 870 W for any combination of output voltages/currents, excluding the 50 VDC source at high-line 200-240 VAC nominal input voltage conditions. This limitation is required to ensure maximum PoE power or 900 W total for the 50 VDC source at this input voltage condition.

- To obtain the full output power rating of 1770 W, you must connect the power supply to a nominal (200-240 VAC) input voltage source

Ethernet Routing Switch 8302 AC power supply specifications

The following table lists the power specifications for the 8302 AC power supply.

Table 12
Ethernet Routing Switch 8302 AC power specifications

AC Input Power Ratings		
Input voltage range (nominal):	100-120 VAC	200-240 VAC
Input current (nominal):	12 A	9 A
Frequency range (nominal):	50-60 Hz	50-60 Hz
Input VA	1192 VA	1768 VA
Input power consumption:	1180 W	1750 W

Table 12
Ethernet Routing Switch 8302 AC power specifications (cont'd.)

Heat dissipation (thermal/output):	1126 BTU/hr	1195 BTU/hr
Hold-up time:	20 ms	20 ms
DC Output Power Ratings		
Max. output power (combined):	850 W (760 W + 90 W fans)	1400 W (1310 W + 90 W fans)
Non-PoE:	3.3 VDC @ 150 A 12 VDC @ 65 A	3.3 VDC @ 150 A 12 VDC @ 65 A
PoE:	50 VDC @ 18 A	50 VDC @ 18 A
Fans:	12 VDC @ 7.5 A	12VDC @ 7.5 A

Note the following information:

- The maximum steady-state output power is limited to a total of 850 W for any combination of output voltages/currents at low-line 100-120 VAC nominal input voltage conditions.

- The maximum steady-state output power is limited to a total of 625 W for any combination of output voltages/currents, excluding the 50 VDC source at low-line 100-120VAC nominal input voltage conditions. This limitation is required to ensure that there is sufficient PoE power or 225 W total at this input voltage condition.

- The maximum steady-state output power is limited to a total of 950 W for any combination of output voltages/currents, excluding the 50 VDC source at high-line 200-240VAC nominal input voltage conditions. This limitation is required to ensure maximum PoE power or 450 W total for the 50 VDC source at this input voltage condition.

- To obtain the full output power rating of 1400 W, you must connect the power supply to a nominal (200-240VAC) input voltage source.

Ethernet Routing Switch 8005DC power supply specifications

This section provides power ratings for the 8005DC power supply.

The following table lists the DC input power specifications.

Parameter	Specifications
Input voltage	–48Vdc/–60Vdc
Input current (nominal)	42 A /34 A
Input VA (maximum)	1.95 kVA
Input power consumption	1950 W
Heat dissipation (thermal/output)	1666 Btu/hr

The following table lists the DC output power specifications.

Parameter	Specifications
Output power (maximum)	1462 W (1372 W + 90 W fans)
Modules	3.3 V @ 150 A
	12 V @ 72 A
Fans	12 VDC @ 7.5 A/ 24 A peak
Mean time before failure (MTBF)	108 803 hr (Bellcore TR–332 standard)

Ethernet Routing Switch 8005DI DC power supply specifications

This section provides power ratings for the 8005DI DC power supply.

The following table lists the DC input power specifications.

Parameter	Specifications
Input voltage	–40Vdc/–75Vdc
Input current	48.75A /32.5A
Input VA (maximum)	1.95 kVA
Input power consumption	1950 W
Heat dissipation (thermal/output)	1666 Btu/hr

The following table lists the DC output power specifications.

Parameter	Specifications
Output power (maximum)	1462 W continuous, 1660 W peak with forced air cooling
Modules	3.3 V @ 150 A
	12 V @ 72 A
Fans	12 VDC @ 7.5 A/ 24 A peak
Mean time before failure (MTBF)	108 803 hr (Bellcore TR–332 standard)

Translations of safety messages

Class A device caution statement

⚠	**CAUTION** This device is a Class A product. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users are required to take appropriate measures necessary to correct the interference at their own expense.
⚠	**CAUTION** **ATTENTION** Le périphérique est un produit de Classe A. Le fonctionnement de cet équipement dans une zone résidentielle risque de causer des interférences nuisibles, auquel cas l'utilisateur devra y remédier à ses propres frais.
⚠	**CAUTION** **ACHTUNG** Dies ist ein Gerät der Klasse A. Bei Einsatz des Geräts in Wohngebieten kann es Störungen des Radio- und Fernsehempfangs verursachen. In diesem Fall muss der Benutzer alle notwendigen Maßnahmen ergreifen, die möglicherweise nötig sind, um die Störungen auf eigene Rechnung zu beheben.
⚠	**CAUTION** **PRECAUCIÓN** Este es un producto clase A. El uso de este equipo en áreas residenciales puede causar interferencias nocivas, en cuyo caso, se requerirá que los usuarios tomen cualquier medida necesaria para corregir la interferencia por cuenta propia.
⚠	**CAUTION** **CUIDADO** Este dispositivo é um produto Classe A. Operar este equipamento em uma área residencial provavelmente causará interferência prejudicial; neste caso, espera-se que os usuários tomem as medidas necessárias para corrigir a interferência por sua própria conta.

CAUTION
ATTENZIONE
Questo dispositivo è un prodotto di Classe A. Il funzionamento di questo apparecchio in aree residenziali potrebbe causare interferenze dannose, nel cui caso agli utenti verrà richiesto di adottare tutte le misure necessarie per porre rimedio alle interferenze a proprie spese.

Electrostatic discharge caution statement

CAUTION
ESD
To prevent damage from electrostatic discharge, always wear an antistatic wrist strap connected to an electrostatic discharge (ESD) jack when performing maintenance on this product. Ensure that the wrist strap makes contact with your skin.

CAUTION
ATTENTION ESD (décharge électrostatique)
Pour prévenir tout dommage dû à une décharge électrostatique, vous devez toujours porter un un bracelet antistatique connecté à une prise pour décharge électrostatique (ESD) lors de l'exécution d'opérations de maintenance sur ce produit. Assurez-vous que le bracelet antistatique est en contact avec votre peau.

CAUTION
ACHTUNG ESD
Um Schäden durch elektrostatische Entladung zu verhindern, tragen Sie bei der Instandhaltung dieses Produkts immer ein antistatisches Band am Handgelenk, das mit einer ESD-Buchse verbunden ist. Stellen Sie sicher, dass das Band am Handgelenk Kontakt zur Haut hat.

CAUTION
PRECAUCIÓN ESD (Descarga electrostática)
Para prevenir el daño producido por una descarga electrostática, use siempre una pulsera antiestática conectada a un enchufe de descarga electrostática (ESD) al realizar el mantenimiento de este producto. Asegúrese de que la pulsera antiestática haga contacto con su piel.

CAUTION
CUIDADO ESD
Para evitar danos com descarga eletrostática, sempre use uma pulseira antiestática que esteja conectada a uma tomada de descarga eletrostática (ESD) quando estiver realizando a manutenção deste produto. Certifique-se de que a pulseira esteja em contato com sua pele.

> **CAUTION**
> **ATTENZIONE ESD**
> Per evitare danni derivanti da scariche elettrostatiche, indossare sempre un polsino antistatico collegato a una presa di scarico elettrostatico (ESD) durante la manutenzione del prodotto. Accertarsi che il polsino sia a contatto con la pelle.

Installation — Chassis

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ATTENTION

For information about the regulatory message, read "Regulatory Information and Safety Precautions" in this guide.

For information about the software license, read "Software license" in this guide.

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