



Overview

This chapter provides pertinent information that you should know about the Cisco NCS 4016 chassis before unpacking and moving it into a rack.

The Cisco NCS 4016 chassis contains two slots for route processor (RP) cards, sixteen slots for line cards (LC), and four slots for fabric cards (FC). The Cisco NCS 4016 chassis is rack mountable. It is compatible with the following standard rail spacing:

- ANSI 19-inch or 23-inch (2 or 4-post)
- ETSI



Note For the ANSI 19-inch rack, the minimum front opening must be 17.72 inches (450 mm) to allow for chassis insertion.

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Chassis Packaging

The Cisco NCS 4016 chassis arrives on the primary system pallet with a label that describes the contents. Cards are shipped on a separate card pallet. The complete details on the contents of each pallet reflect the customer's sale order, which is reported on the parts identification label on the pallet or shipping manifest.

The primary system pallet contains the chassis, which is covered with a corrugated shipper packing crate held together with plastic bands.

The chassis is shipped with the following components already installed:

- Fan trays
- Power trays (AC or DC)
- Power modules
- External connection unit (ECU)
- Craft panel
- Cosmetic door



Note The RP, LC, and FC card slots are populated with filler cards.

The card pallet contains the route processor cards (RPs), fabric cards (FCs), and line cards (LCs).

The Cisco NCS 4016 chassis is shipped in a double-wall carton on a standard shipping pallet. Always transport the chassis in its original packaging and make sure that the system is transported and stored in an upright position. If you plan to store system components before the installation, be sure to store the components carefully and in their original shipping containers to prevent accidental damage.

Verifying the Securing Location

Before moving the chassis into position, make sure that you have properly prepared the site so that there is sufficient room for installation and maintenance. Verifying the recommended space ensures that you have enough space available to perform the initial installation of the chassis and its components.

The floor plan for the Cisco NCS 4016 chassis must include enough space to install the chassis in the equipment rack and allow sufficient airflow for the system. The floor plan must also provide enough room to access chassis components for maintenance (for example, to remove fan trays, power modules, cables, and air filters).

For chassis installation, make sure that enough room exists in front of the chassis to accommodate installation personnel and the lifting device used to hold the chassis in the rack while it is bolted to the rack.

Front and Rear Clearances

The site requires the following front and rear clearances for chassis installation and maintenance access:

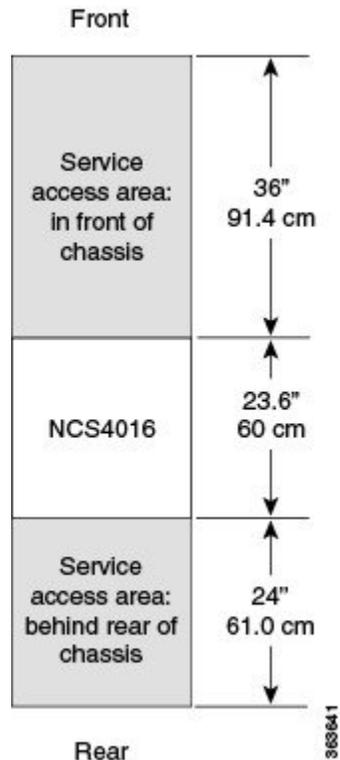
- To install the chassis in the equipment rack: approximately 23.6 inches (60 cm)
- To service components and allow system airflow in front of the chassis: 36 inches (91.4 cm)
- To service components and allow system airflow behind the chassis: 24 inches (61 cm)

If the chassis is installed in a cabinet with doors, note the following restrictions:

- The chassis can be placed in a cabinet with the front and rear doors at least 80% open in front of the inlet and exhaust openings of the chassis.
- The distance between the inlet/exhaust and the door can be as small as 6 inches, but the door should be facing to an open aisle.
- A foot of clearance at front and back should be maintained from the inlet/exhaust and a solid object.

The following figure shows the service area flooring in a lab from the top of the chassis.

Figure 1: Cisco Lab Service Area—Top View



For details on making your site ready for the chassis, see the Regulatory Compliance and Safety Information for the Cisco Network Convergence System 4000 Series Chassis.

Safety Guidelines



Caution Before you perform any procedure in this document, review the safety guidelines in this section to avoid injuring yourself or damaging the equipment.

The following guidelines are for your safety and to protect equipment. Guidelines do not include all hazards. Be alert.



Note Review the safety warnings listed in Regulatory Compliance and Safety Information for the Cisco NCS Network Convergence System 4000 Series before installing, configuring, or troubleshooting any installed card.

- Never attempt to lift an object that might be too heavy for you to lift by yourself.
- Keep the work area clear and dust free during and after installation. Do not allow dirt or debris to enter into any laser-based components.
- Keep tools and chassis components away from walk areas.

- Do not wear loose clothing, jewelry, and other items that could get caught in the chassis while working with the chassis and its associated components.
- Use Cisco equipment in accordance with its specifications and product-usage instructions.
- Do not work alone if potentially hazardous conditions exist.

Preventing Electrostatic Discharge

Electrostatic discharge (ESD) damage, which can occur when electronic cards or components are improperly handled, results in complete or intermittent failures. We recommend use of an ESD-preventive strap whenever you handle network equipment or one of its components.

Follow these guidelines for preventing ESD damage:

- Always use an ESD-preventive wrist or ankle strap, and ensure that it makes good skin contact. Connect the equipment end of the connection cord to an ESD jack or bare metal surface on the chassis.
- Handle a card by its ejector levers, when applicable, or its metal carrier only; avoid touching the board or connector pins.
- Place a removed card board side up on an antistatic surface or in a static-shielding bag. If you plan to return the component to the factory, immediately place it in a static-shielding bag.
- Avoid contact between the card and clothing. The wrist strap protects the board from only ESD voltage on the body; ESD voltage on clothing can still cause damage.



Caution

When unpacking and setting parts aside, it is important to set them either in their original antistatic packaging or on an antistatic mat to avoid ESD damage.
