



Cabinet and Rack Installation

This appendix provides the requirements for cabinet and rack installation for the Cisco NCS 5000 router and includes the following sections:

- [Cabinet and Rack Requirements, on page 1](#)
- [Cable Management Guidelines, on page 2](#)

Cabinet and Rack Requirements

This section provides the requirements for the following types of cabinets and racks, assuming an external ambient air temperature range of 0° F to 104° F (0° C to 40° C):

- Standard perforated cabinets
- Standard open racks



Note If you are selecting an enclosed cabinet, we recommend one of the thermally validated types: standard perforated or solid-walled with a fan tray.



Note Do not use racks that have obstructions (such as power strips), because the obstructions could impair access to field-replaceable units (FRUs).

This section includes the following topics:

[General Requirements for Cabins and Racks, on page 1](#)

[Requirements Specific to Perforated Cabinets, on page 2](#)

General Requirements for Cabins and Racks

The cabinet or rack must be one of the following types:

- Standard 19-in. (48.3 cm) (four-post EIA cabinet or rack, with mounting rails that conform to English universal hole spacing per section 1 of ANSI/EIA-310-D-1992. See the “[Requirements Specific to Perforated Cabinets, on page 2](#)”.

The cabinet or rack must also meet the following requirements:

- The minimum vertical rack space for the Cisco NCS 5000 router chassis must be one RU (rack units).
- The width between the rack-mounting rails must be at least 19 inches if the rear of the router is not attached to the rack. For four-post EIA racks, this is the distance between the two front rails.
- For four-post EIA cabinets (perforated or solid-walled), the requirements are as follows:
 - The minimum spacing for the bend radius for fiber-optic cables should have the front-mounting rails of the cabinet offset from the front door by a minimum of 3 inches (7.6 cm), and a minimum of 5 inches (12.7 cm) if cable management brackets are installed on the front of the chassis.
 - The distance between the outside face of the front mounting rail and the outside face of the back mounting rail should be 23.5 to 34.0 inches (59.7 to 86.4 cm) to allow for rear-bracket installation.
 - A minimum of 2.5 inches (6.4 cm) of clear space should exist between the side edge of the chassis and the side wall of the cabinet. No sizeable flow obstructions should be immediately in the way of chassis air intake or exhaust vents.



Note Optional jumper power cords are available for use in a cabinet. See the Jumper Power Cord section on page C-8

Requirements Specific to Perforated Cabinets

A perforated cabinet is as a cabinet with perforated front and rear doors and solid side walls. In addition to the requirements listed in the “[General Requirements for Cabins and Racks, on page C-1](#)”, perforated cabinets must meet the following requirements:

- The front and rear doors must have at least a 60 percent open area perforation pattern, with at least 15 square inches (96.8 square cm) of open area per rack unit of door height.
- The roof should be perforated with at least a 20 percent open area.
- The cabinet floor should be open or perforated to enhance cooling.

Cisco provides an R-Series rack that conforms to these requirements.

Cable Management Guidelines

To help with cable management, you might want to allow additional space in the rack above and below the chassis to make it easier to route as many as 56 fiber or copper cables through the rack.