

# APPENDIX A

## Cabinet and Rack Installation

This appendix provides the requirements for cabinet and rack installation and includes the following sections:

- [Cabinet and Rack Requirements, page A-1.](#)
- [Cable Management Guidelines, page A-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 to 104°F (0 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).

## General Requirements for Cabinets 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”](#) section on page A-2.

The cabinet or rack must also meet the following requirements:

- The minimum vertical rack space per Cisco UCS 6120XP chassis must be one RU (rack unit), equal to 1.75 in. (4.4 cm).
- The width between the rack-mounting rails must be at least 17.72 in. (45.0 cm) if the rear of the chassis is not attached to the rack. For four-post EIA racks, this is the distance between the two front rails.

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- For four-post EIA cabinets (perforated):
  - 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 in (7.6 cm), and a minimum of 5 in (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 in. (59.7 to 86.4 cm) to allow for rear-bracket installation.
  - A minimum of 2.5 in. (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-9](#).

## Requirements Specific to Perforated Cabinets

A perforated cabinet is defined here as a cabinet with perforated front and rear doors and solid side walls. In addition to the requirements listed in the [“General Requirements for Cabinets and Racks” section on page A-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 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.

## Requirements Specific to Standard Open Racks

In addition to the requirements listed in the [“General Requirements for Cabinets and Racks” section on page A-1](#), if mounting the chassis in an open rack (no side panels or doors), ensure that the rack meets the following requirements:

- The minimum vertical rack space per chassis must be one RU (rack unit), equal to 1.75 in. (4.4 cm).
- The horizontal distance between the chassis and any adjacent chassis should be 6 in. (15.2 cm), and the distance between the chassis air vents and any walls should be 2.5 in. (6.4 cm).

## 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.