

Preinstallation

To achieve simplification and consistency, the Cisco SD-WAN solution has been rebranded as Cisco Catalyst SD-WAN. In addition, from Cisco IOS XE SD-WAN Release 17.12.1a and Cisco Catalyst SD-WAN Release 20.12.1, the following component changes are applicable: **Cisco vManage** to **Cisco Catalyst SD-WAN Manager**, **Cisco vAnalytics** to **Cisco Catalyst SD-WAN Analytics**, **Cisco vBond** to **Cisco Catalyst SD-WAN Validator**, **Cisco vSmart** to **Cisco Catalyst SD-WAN Controller**, and **Cisco Controllers** to **Cisco Catalyst SD-WAN Control Components**. See the latest Release Notes for a comprehensive list of all the component brand name changes. While we transition to the new names, some inconsistencies might be present in the documentation set because of a phased approach to the user interface updates of the software product.

This chapter provides preinstallation information, such as recommendations and requirements that must be met before installing your router. Before you begin, inspect all items for shipping damage. If anything appears to be damaged or if you encounter problems installing or configuring your router, contact customer service.

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General Safety Standards

General Safety Warnings

Warning This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS

Safety with Electricity

Warning Ultimate disposal of this product should be handled according to all national laws and regulations. Statement 1040

Warning This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than 20A. Statement 1005

Warning Only trained and qualified personnel should be allowed to install, replace, or service this equipment. Statement 1030

Caution Before removing or installing router modules and components, ensure that the router chassis is electrically connected to ground. Ensure that you attach an ESD grounding strap to an ESD point and place the other end of the strap around your bare wrist making good skin contact. Failure to use an ESD grounding strap could result in damage to the router.

Caution Some router components are hot-swappable and hot-insertable. You can remove and replace them without powering off or disconnecting power to the router. Do not, however, install the router or any of its component if they appear to be damaged.

- Locate the emergency power-off switch in the room in which you are working. In case of an electrical accident, quickly turn off the power.
- Disconnect power before installing or removing the router.
- If an electrical accident occurs, use caution and immediately turn off power to the router.
- Do not work alone if hazardous conditions exist.
- Always check that power is disconnected from a circuit. Never assume that it is disconnected.
- Carefully inspect your work area for possible hazards, such as moist floors, worn-out power cords, ungrounded power extension cords, and missing safety grounds.
- Operate the device within marked electrical ratings and product usage instructions.
- To ensure that the router and the FRUs function safely and correctly, use the specified cables and connectors, and make certain they are in good condition.

Site Preparation Guidelines

Efficient operation of routers requires proper site planning and proper layout of your equipment rack or wiring closet:

- Ensure that the area around the router is kept free of dust and conductive material.
- Follow appropriate airflow guidelines so that the cooling system functions normally.
- Follow ESD prevention procedures to avoid any damage to the router.

Warning Installing or mounting of devices with LTE radio must be done such that a minimum separation distance (distance between a person and the device, or the device's antennas) of 20 cm is always ensured.

Environmental Requirements

Install the routers in a dry, clean, temperature-controlled, and well-ventilated environment:

- For the router to operate normally, maintain an ambient temperature in the range 0°C to 40°C (32°F to 104°F). If the ambient temperature is too high or the air vents are blocked, the router can overheat.
- Avoid temperature extremes. Ensure that the router is operating at an ambient temperature not more that 40°C (104°F) at sea level. For higher altitudes, a derating of 1.50°C per 1,000 feet applies.
- High humidity conditions can cause moisture to penetrate into the chassis. The devices support 10% to 85% humidity levels, non-condensing.

Airflow Requirements

When planning your site for installing Cisco ISR 1100 and ISR 1100X Series Routers routers, allow enough clearance around the installed router.

Tools and Equipment Required for Installation

You need the following tools and equipment to install and upgrade the router and its components:

- ESD-preventive cord and wrist strap
- Number 2 Phillips screwdriver
- Phillips screwdrivers: small, 3/16-in. (4 to 5 mm) and medium, 1/4-in. (6 to 7 mm)
- Wire crimper
- Copper wire for connecting the chassis to an earth ground:
    - AWG 14 (2 mm2) or larger for chassis grounding
- For grounding, an appropriate user-supplied ring terminal sized appropriately for a #6-32 screw.