



## Installation Preparation

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## Installation Warnings

Read the [Regulatory Compliance and Safety Information](#) document before installing the Cisco Threat Grid appliance.



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**Caution** Do *not* open the appliance except under direction from TAC.

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Take note of the following warnings:



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**Warning** **Statement 1071**—Warning Definition

### IMPORTANT SAFETY INSTRUCTIONS

Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Read the installation instructions before using, installing, or connecting the system to the power source. Use the statement number provided at the end of each warning statement to locate its translation in the translated safety warnings for this device.

SAVE THESE INSTRUCTIONS





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**Warning Statement 12—Power Supply Disconnection Warning**

Before working on a chassis or working near power supplies, unplug the power cord on AC units. Disconnect the power at the circuit breaker on DC units.

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**Warning Statement 19—TN Power Warning**

The device is designed to work with TN power systems.

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**Warning Statement 43—Jewelry Removal Warning**

Before working on equipment that is connected to power lines, remove jewelry including rings, necklaces, and watches. Metal objects heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.

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**Warning Statement 94—Wrist Strap Warning**

During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself.

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**Warning Statement 1004—Installation Instructions**

Read the installation instructions before using, installing, or connecting the system to the power source.

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**Warning Statement 1005—Circuit Breaker**

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: USA: 120 V, 15 A (EU: 250 V, 16 A)

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**Warning Statement 1015—Battery Handling**

To reduce risk of fire, explosion or leakage of flammable liquid or gas:

- Replace the battery only with the same or equivalent type recommended by the manufacturer.
  - Do not dismantle, crush, puncture, use sharp tool to remove, short external contacts, or dispose of in fire.
  - Do not use if battery is warped or swollen.
  - Do not store or use battery in a temperature > 60° C.
  - Do not store or use battery in low air pressure environment < 69.7 kPa.
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**Warning Statement 1021**—SELV Circuit

To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.

**Warning Statement 1024**—Ground Conductor

This equipment must be grounded. To reduce the risk of electric shock, never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

**Warning Statement 1040**—Product Disposal

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

**Warning Statement 1045**—Short-Circuit Protection

This product requires short-circuit (overcurrent) protection to be provided as part of the building installation. Install only in accordance with national and local wiring regulations.

**Warning Statement 1053**—Class 1M Laser Radiation

Hazard level 1M invisible laser radiation is present. Do not view directly with nonattenuating optical instruments.

**Warning Statement 1074**—Comply with Local and National Electrical Codes

To reduce risk of electric shock or fire, installation of the equipment must comply with local and national electrical codes.

## Safety Recommendations

Use the information in the following sections to help ensure your safety and to protect the chassis. This information may not address all potentially hazardous situations in your working environment, so be alert and exercise good judgment at all times.

Observe these safety guidelines:

- Keep the area clear and dust free before, during, and after installation.

- Keep tools away from walkways, where you and others might trip over them.
- Do not wear loose clothing or jewelry, such as earrings, bracelets, or chains that could get caught in the chassis.
- Wear safety glasses if you are working under any conditions that might be hazardous to your eyes.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- Never attempt to lift an object that is too heavy for one person.

## Maintain Safety with Electricity



### Warning

Before working on a chassis, be sure the power cord is unplugged.

Be sure to read the [Regulatory Compliance and Safety Information](#) document before installing the Threat Grid chassis.

Follow these guidelines when working on equipment powered by electricity:

- Before beginning procedures that require access to the interior of the chassis, locate the emergency power-off switch for the room in which you are working. Then, if an electrical accident occurs, you can act quickly to turn off the power.
- Do not work alone if potentially hazardous conditions exist anywhere in your work space.
- Never assume that power is disconnected; always check.
- Look carefully for possible hazards in your work area, such as moist floors, ungrounded power extension cables, frayed power cords, and missing safety grounds.
- If an electrical accident occurs:
  - Use caution; do not become a victim yourself.
  - Disconnect power from the system.
  - If possible, send another person to get medical aid. Otherwise, assess the condition of the victim, and then call for help.
  - Determine whether the person needs rescue breathing or external cardiac compressions; then take appropriate action.
- Use the chassis within its marked electrical ratings and product usage instructions.
- The FMC chassis is equipped with an AC-input power supply, which is shipped with a three-wire electrical cord with a grounding-type plug that fits into a grounding-type power outlet only. Do not circumvent this safety feature. Equipment grounding should comply with local and national electrical codes.

## Prevent ESD Damage

ESD occurs when electronic components are improperly handled, and it can damage equipment and impair electrical circuitry, which can result in intermittent or complete failure of your equipment.

Always follow ESD-prevention procedures when removing and replacing components. Ensure that the chassis is electrically connected to an earth ground. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the grounding clip to an unpainted surface of the chassis frame to safely ground ESD voltages. To properly guard against ESD damage and shocks, the wrist strap and cord must operate effectively. If no wrist strap is available, ground yourself by touching the metal part of the chassis.

For safety, periodically check the resistance value of the antistatic strap, which should be between one and 10 megohms.

## Site Environment

See [Hardware Specifications](#) for information about physical specifications.

To avoid equipment failures and reduce the possibility of environmentally caused shutdowns, plan the site layout and equipment locations carefully. If you are currently experiencing shutdowns or unusually high error rates with your existing equipment, these considerations may help you isolate the cause of failures and prevent future problems.

## Power Supply Considerations

See [Power Supply](#) for more detailed information about the power supply in the Threat Grid chassis.

When installing the chassis, consider the following:

- Check the power at the site before installing the chassis to ensure that it is free of spikes and noise. Install a power conditioner, if necessary, to ensure proper voltages and power levels in the appliance-input voltage.
- Install proper grounding for the site to avoid damage from lightning and power surges.
- The chassis does not have a user-selectable operating range. Refer to the label on the chassis for the correct appliance input-power requirement.
- Several styles of AC-input power supply cords are available for the chassis; make sure that you have the correct style for your site.
- If you are using dual redundant (1+1) power supplies, we recommend that you use independent electrical circuits for each power supply.
- Install an uninterruptible power source for your site, if possible.

## Rack Configuration Considerations

See [Rack-Mount the Chassis](#) for rack-mount instructions.

Consider the following when planning a rack configuration:

- If you are mounting a chassis in an open rack, make sure that the rack frame does not block the intake or exhaust ports.
- Be sure enclosed racks have adequate ventilation. Make sure that the rack is not overly congested as each chassis generates heat. An enclosed rack should have louvered sides and a fan to provide cooling air.
- In an enclosed rack with a ventilation fan in the top, heat generated by equipment near the bottom of the rack can be drawn upward and into the intake ports of the equipment above it in the rack. Ensure that you provide adequate ventilation for equipment at the bottom of the rack.
- Baffles can help to isolate exhaust air from intake air, which also helps to draw cooling air through the chassis. The best placement of the baffles depends on the airflow patterns in the rack. Experiment with different arrangements to position the baffles effectively.