



# Overview

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## About this Guide

This guide provides step-by-step instructions on how to physically install and power up the Cisco 3350 Mobility Services Engine.

Details on running the automatic installation script and the required information for that installation script are also provided.

After installation and power up is complete, refer to the following documents for additional information on the Cisco 3350:

- For detailed software configuration information, refer to the *Cisco Context Aware Software Configuration Guide*.
- For detailed feature support and compatibility information, refer to the latest release notes for the Cisco 3350 Mobility Services Engine.

These documents are available on Cisco.com. Follow these steps to access these documents:

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- Step 1** Browse to <http://www.cisco.com>.
  - Step 2** Click **Support**. A new window appears.
  - Step 3** Click **Wireless** under View Information by Product Type. The Select Your Product or Technology page appears.
  - Step 4** Enter **Cisco 3350** in the Search for a Specific Product field and click **Go**. The Cisco 3350 Introduction page appears.
  - Step 5** Choose the appropriate link for the documentation you want to view or download.
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# General Warnings, Regulatory and Safety

## Conventions

Safety warnings appear throughout this guide in procedures that may harm you if performed incorrectly. A warning symbol precedes each warning statement. Specific warnings are included in the sections to which they apply.



**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**



**Caution**

Means reader be careful. In this situation, you might do something that could result in equipment damage or loss of data.

## Warnings

The warnings below are general warnings that are applicable to the entire guide. Specific warnings are included in the sections to which they apply.



**Warning**

**There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Statement 1015**



**Warning**

**This equipment must be grounded. 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. Statement 1024**



**Warning**

**Read the installation instructions before connecting the system to the power source. Statement 1004**



**Warning**

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



**Warning**

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

## Regulatory and Safety



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**Note** Refer to Appendix A for translated safety information for the Cisco 3350 Mobility Services Engine.

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**Note** Refer to Appendix B for regulatory information for the Cisco 3350 Mobility Services Engine.

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## Installation and Initial Configuration

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This chapter describes how to initially install and configure your Cisco 3350 Mobility Services Engine.

This chapter contains these sections:

- [Required Tools and Information, page 2-1](#)
- [Choosing a Physical Location for the Cisco 3350, page 2-3](#)
- [Unpacking the Mobility Services Engine, page 2-6](#)
- [Mounting the Cisco 3350 in a Rack, page 2-6](#)
- [Front and Rear Panel, page 2-9](#)
- [Connecting and Using the CLI Console, page 2-16](#)
- [Powering On the Mobility Services Engine, page 2-16](#)
- [Configuring the Mobility Services Engine, page 2-16](#)
- [Configuring an NTP Server, page 2-24](#)
- [Launching the Mobility Services Engine, page 2-25](#)
- [Verifying the Mobility Services Engine Software State, page 2-25](#)
- [Manually Stopping Mobility Services Engine Software, page 2-26](#)
- [Updating Mobility Services Engine Software, page 2-26](#)
- [Recovering a Lost Root Password, page 2-29](#)



**Note**

For configuration details beyond initial installation, refer to the appropriate mobility services configuration guide at:

[http://www.cisco.com/en/US/products/ps9742/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps9742/tsd_products_support_series_home.html)

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## Required Tools and Information

This section lists the required hardware, software and other information that you need to install and setup the mobility services engine.

## Required Hardware

You need this equipment to install a mobility services engine in an EIA rack:

- A mobility services engine
- Network cables
- One rack unit (RU) in an EIA-standard rack
- Rack mounting kit (included in shipment)




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**Note** If you are installing this unit in a threaded-hole rack, you must supply screws that fit the threaded-hole rack and the appropriate screwdriver or Torx driver for those screws.

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## CLI Console Requirements

You need this equipment to connect to the mobility services engine console:

- VT-100 terminal emulator on CLI console laptop, desktop, or palmtop




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**Note** A null modem serial cable that provides a connection to the laptop, desktop, or palmtop is shipped with the mobility services engine.

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**Note**

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Please refer to the latest *Release Notes for Cisco 3300 Series Mobility Services Engine* for compatibility by release between the mobility services engine and Cisco WCS and controller releases at: [http://www.cisco.com/en/US/products/ps9742/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps9742/prod_release_notes_list.html)

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## System Configuration Parameters

Obtain these parameters from your network administrator:

- A host name for the mobility services engine
- An IP address for the Ethernet-0 (eth0) port (mobility services engine back panel)
- A net mask for the eth0 IP address
- An IP address for the eth0 default gateway
- An IP address for the Ethernet-1 (eth1) port (mobility services engine back panel) (installation optional)
- A net mask for the eth1 IP address (only required if eth1 is installed)
- An IP address for the eth1 default gateway (only required if eth1 is installed)



**Note**

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Either the Ethernet-0 or Ethernet-1 port can be used to transmit location updates to Cisco WCS. However, the Ethernet-0 port is generally configured to communicate with Cisco WCS and the Ethernet-1 port is generally used for out-of-band management. Both ports are configured as part of the installation script described in the “[Configuring the Mobility Services Engine](#)” section on page 2-16.

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# Choosing a Physical Location for the Cisco 3350

For maximum safety and reliability, mount the mobility services engine using the following guidelines.

## General Precautions

To reduce the risk of personal injury or damage to the mobility services engine:

- Place the product away from radiators, heat registers, stoves, amplifiers, or other products that produce heat.
- Never use the product in a wet location.
- Avoid inserting foreign objects through openings in the product.
- To reduce risk of injury from electric shock hazards, do not open the product enclosure.

## Laser Devices

Laser devices are used within the DVD of the mobility services engine. The DVD has no defined use on the customer site.

To reduce the risk of exposure to hazardous radiation:

- Do not try to open the laser device enclosure. There are no user-serviceable components inside.
- Do not operate controls, make adjustments, or perform procedures to the laser device other than those specified herein.
- Allow only Cisco authorized service technicians to repair the laser device.

## Space and Airflow Requirements

Install the mobility services engine in a EIA-standard rack. One rack unit is required for each mobility services engine.

Ensure that you can reach the mobility services engine and all cables.

- Ensure that the mobility services engine is within 328 ft (100 m) equivalent distance to any equipment connected to the 10/100/1000BASE-T ports.
- Ensure that the power cord can reach a 110 or 220 VAC grounded electrical outlet.

Ensure that there is sufficient room at the back of the mobility services engine for all cables and connectors.

- Leave a minimum clearance of 63.5 cm (25 in.) in front of the rack.
- Leave a minimum clearance of 76.2 cm (30 in.) behind the rack.
- Leave a minimum clearance of 121.9 cm (48 in.) from the back of the rack to the back of another rack or row of racks



**Caution**

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To prevent improper cooling and damage to the equipment, do not block the ventilation openings.

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**Caution**

Always use blanking panels to fill empty vertical spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

**Caution**

When selecting a rack to use, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment: (1)  Front and rear doors—If the 42U rack includes closing front and rear doors, you must allow 5,350 sq. cm (830 sq. in.) of holes evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation). (2) Side—The clearance between the installed rack component and the side panels of the rack must be a minimum of 7 cm (2.75 in.in.).

## Temperature Requirements

To ensure continued safe and reliable equipment operation, install or position the system in a well ventilated, climate-controlled environment.

Ensure that the ambient operating temperature remains between 0 and 40° C (32 and 104° F), taking into account the elevated temperatures that occur when equipment is installed in a rack.

**Caution**

To reduce the risk of damage to the equipment when installing third-party options: (1)  Do not permit optional equipment to impede airflow around the mobility services engine or to increase the internal rack temperature beyond the maximum allowable limits. (2)  Do not exceed the manufacturer's TMRA.

## Power Requirements

Installation of this equipment must comply with local and regional electrical regulations governing the installation of information technology equipment by licensed electricians. This equipment is designed to operate in installations covered by NFPA 70, 1999 Edition (National Electric Code) and NFPA-75, 1992 (code for Protection of Electronic Computer/Data Processing Equipment). For electrical power ratings on options, refer to the product rating label or the user documentation supplied with that option.

**Caution**

Protect the mobility services engine from power fluctuations and temporary interruptions with a regulating uninterruptible power supply (UPS). This device protects the hardware from damage caused by power surges and voltage spikes and keeps the system in operation during a power failure.

When installing more than one mobility services engine, you may need to use additional power distribution devices (PDUs) to safely provide power to all devices. Observe the following guidelines:

- Balance the mobility services engine power load between available AC supply branch circuits.
- Do not allow the overall system AC current load to exceed 80 percent of the branch circuit AC current rating.
- Do not use common power outlet strips for this equipment.
- Provide a separate electrical circuit for the mobility services engine.



## Power Supplies on the Mobility Services Engine

The mobility services engine has two power supplies.



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**This unit might have more than one power supply connection. All connections must be removed to de-energize the unit. Statement 1028**

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Verify that the external power source connected to the mobility services engine matches the type of power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult your Cisco authorized reseller or local power company.

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## Batteries

The mobility services engine might include a real-time clock battery or coin cell battery that might contain perchlorate and might require special handling when recycled or disposed of in California.

Refer to the following link for disposal information.

<http://www.dtsc.ca.gov/hazardouswaste/perchlorate>



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Do not dispose of batteries with the general household waste. Recycle them using the public collection system.

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## Electrical Grounding Requirements

The mobility services engine must be grounded properly for proper operation and safety. In the United States, you must install the equipment in accordance with NFPA 70, 1999 Edition (National Electric Code), Article 250, as well as any local and regional building codes. In Canada, you must install the equipment in accordance with Canadian Standards Association, CSA C22.1, Canadian Electrical Code. In all other countries, you must install the equipment in accordance with any regional or national electrical wiring codes, such as the International Electrotechnical Commission (IEC) Code 364, parts 1 through 7.

Furthermore, you must verify that all power distribution devices used in the installation, such as branch wiring and receptacles, are listed or certified grounding-type devices. Because of the high ground-leakage currents associated with multiple systems connected to the same power source, Cisco recommends the use of a PDU that is either permanently wired to the building's branch circuit or includes a nondetachable cord that is wired to an industrial-style plug, NEMA locking-style plugs or those complying with IEC 60309 are considered suitable for this purpose. Using common power outlet strips for the mobility services engine is not recommended.

## Rack Warnings



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**To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety: (1) This unit should be mounted at the bottom of the rack if it is the only unit in the rack.**

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**(2) When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack. (3) If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006.**

**Caution**

To reduce the risk of personal injury or equipment damage when unloading a rack, at least two people are needed to safely unload the rack from the pallet.

**Caution**

To prevent damage, ensure that water or excessive moisture cannot get into the mobility services engine.

## Unpacking the Mobility Services Engine

Follow these steps to unpack the mobility services engine.

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- Step 1** Open the shipping container and carefully remove the contents.
  - Step 2** Return all packing materials to the shipping container and save it.
  - Step 3** Ensure that all items listed in the “[Package Contents](#)” section are included in the shipment.
  - Step 4** Check each item for damage. If any item is damaged or missing, notify your authorized Cisco sales representative.
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### Package Contents

Each mobility services engine package contains the following items:

- One Cisco 3350 Mobility Services Engine
- One rack mount kit
- Power cords
- DB9-RJ45 cable for console connection
- RJ45-DB9 adapter
- This guide, the *Cisco 3350 Mobility Services Engine Getting Started Guide*

## Mounting the Cisco 3350 in a Rack

**Warning**

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

**Caution**

This mobility services engine is very heavy (37 lbs, 17 kgs).

To reduce the risk of personal injury or damage to the equipment:

- Observe local occupational health and safety requirements and guidelines for manual material handling.
- Get help to lift and stabilize the mobility services engine during installation or removal is recommended, especially when the system is not fastened to the rails.
- Use caution when installing the mobility services engine in or removing it from the rack; it is unstable when not fastened to the rails.
- Always plan the rack installation so that the heaviest item is on the bottom of the rack. Install the heaviest item first, and continue to populate the rack from the bottom to the top.



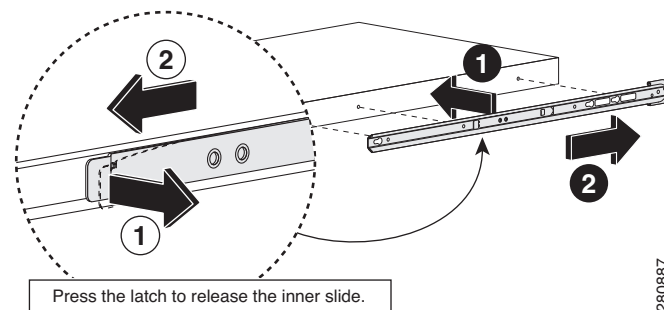
**Note**

- The mobility services engine comes with a rack mount rail kit that can be installed in a square-hole rack, round-hole rack, or a threaded-hole rack.
- You must provide the threaded-hole screws to secure the mounting rails to the rack. Threaded-hole screws are not shipped with the system.

## Installing the Rail Kit Into a Threaded-Hole, Square-Hole or Round-Hole Rack

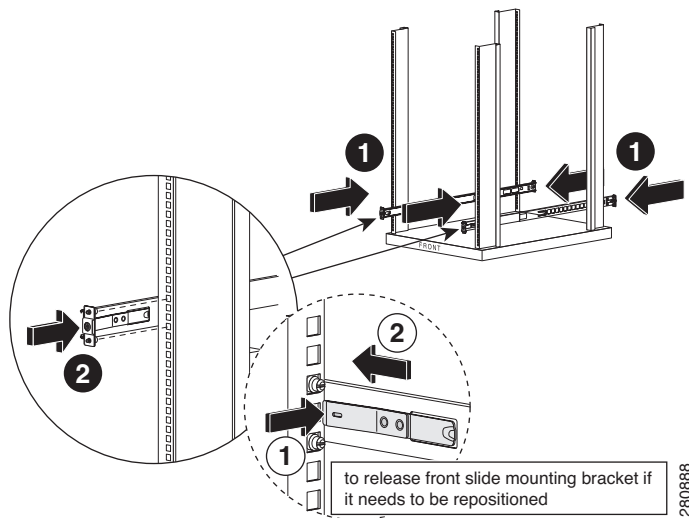
- Step 1** Release the inner slide of the mounting rail and attach it to the side of the mobility services engine (Figure 2-1). The numbers within the illustrations indicate the order of the action.

**Figure 2-1** Attach Inner Sliding Rail to Mobility Services Engine



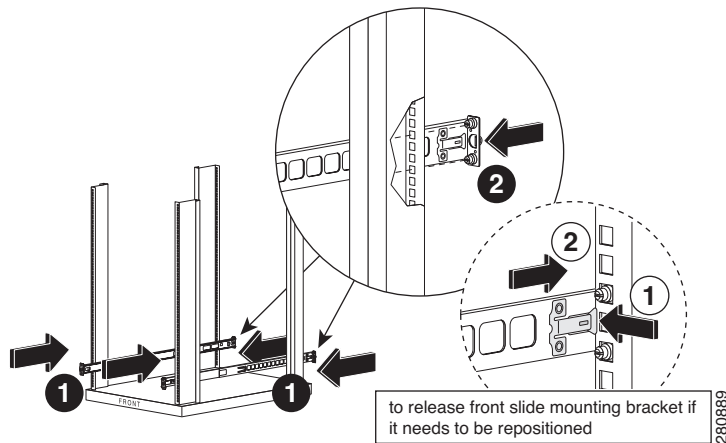
- Step 2** Attach the outside rail to the front of the rack structure where the mobility services engine is going to be installed (Figure 2-2). The numbers within the illustrations indicate the order of the action.

**Figure 2-2** Attach Outer Rail to Front of Rack



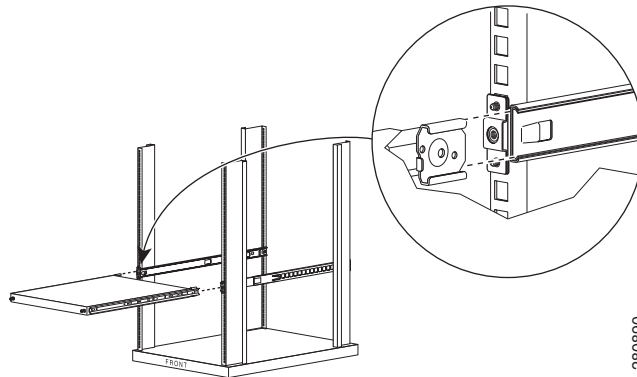
**Step 3** Attach the outside rail to the back of the rack structure where the mobility services engine is going to be installed (Figure 2-3). The numbers within the illustrations indicate the order of the action.

**Figure 2-3** *Attach Outer Rail to Back of Rack*



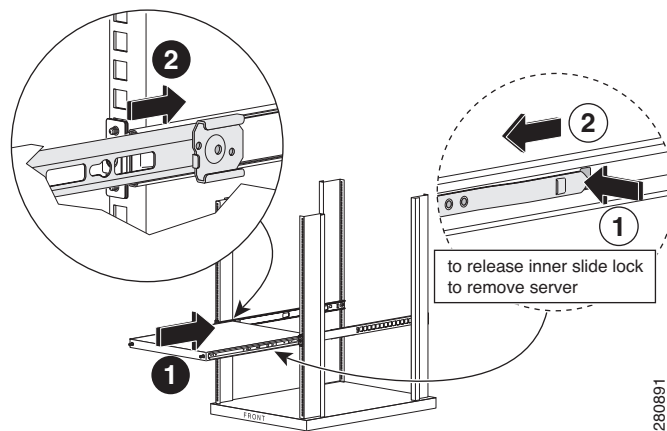
**Step 4** Attach inner slide rail with mobility service engine to the outside rail that is mounted on the rack (Figure 2-4).

**Figure 2-4** *Attach Inner Rail to Outer Rail*



**Step 5** Slide the attached inner rail and the mobility services engine to the rear of the rack (Figure 2-5). The numbers within the illustrations indicate the order of the action.

**Figure 2-5** Slide System and Inner Rail to Rear of Rack



## Front and Rear Panel

### Front Panel

Figure 2-6 shows a full view of the front panel of the Cisco 3350 Mobility Services Engine.

Figure 2-7 shows a detailed section of the Cisco 3350 front panel.

Table 2-1 identifies Cisco 3350 front panel components and their function.

**Figure 2-6** Cisco 3350 Front Panel

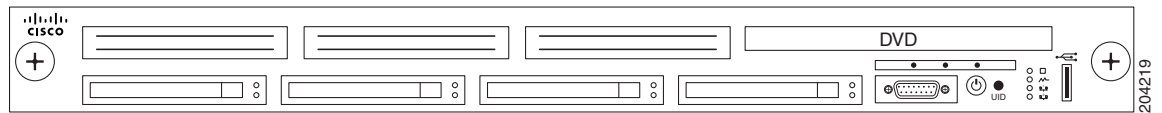


Figure 2-7 Close Up of Cisco 3350 Front Panel

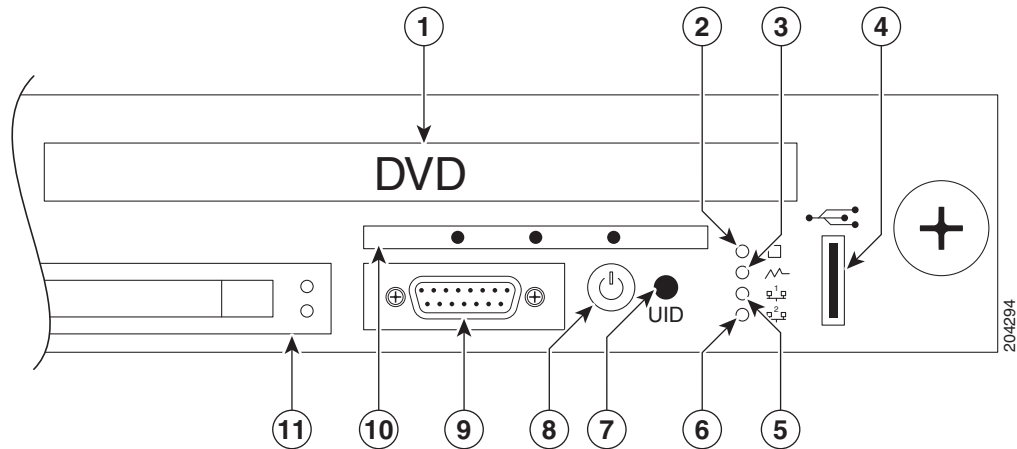


Table 2-1 Front Panel Components

Number	Component	Description or LED Status
1	DVD drive	No customer use. All system software is downloaded using Cisco WCS.
2	System LED	Green means that the system health is normal. Amber means that system health is degraded. For specific system information, pull out the diagnostic card from the front panel. Refer to the <a href="#">“Diagnostic Card” section on page 2-12.</a> Red means that system health is critical. To identify the component in a critical state, pull out the diagnostic card from the front panel. Refer to the <a href="#">“Diagnostic Card” section on page 2-12.</a> Off means that system health is normal (when in standby mode).
3	Power Supply LED	Green means that power supply health is normal. Amber means that power redundancy failure occurred. Off means that power supply health is normal when in standby mode.
4	USB slot	Reserved for future use.

Table 2-1 Front Panel Components (continued)

Number	Component	Description or LED Status
5	NIC1 link/activity LED	Green means that a network link exists. <b>Note</b> NIC1 is identified as Ethernet-0 during the automatic installation script.
		Blinking green = Network link and activity exist.
		Off means that no link to the network exists. <b>Note</b> If power is off, the front panel LED is not active. Check the NIC1 LED on the rear panel. Refer to the <a href="#">“Rear Panel” section on page 2-14</a> .
6	NIC2 link/activity LED	Green means that a network link exists. <b>Note</b> NIC2 is identified as Ethernet-1 during the automatic installation script.
		Blinking green means that a network link and activity exist.
		Off means that no link to the network exists. <b>Note</b> If power is off, the front panel LED is not active. Check the NIC2 LED on the rear panel. Refer to the <a href="#">“Rear Panel” section on page 2-14</a> .
7	UID	Blue means that identification is activated. Flashing blue means that the system is being remotely managed. Off means that identification is deactivated.
8	Power On/Standby button and system power LED	Green means that the system is on.
		Amber means that the system is shut down, but power is still applied.
		Off means that the power cord is not attached, power supply failure has occurred, no power supplies are installed, facility power is not available, or power button cable is disconnected.
9	Video connector (DB-15)	Serial connection is recommended. Do not connect any equipment to this port.
10	Diagnostic card	Provides status on the power supplies, internal processors, DIMMS, memory, temperature and alarms. Refer to the <a href="#">“Diagnostic Card” section on page 2-12</a> for details.
11	Hard drive bay (1 of 4)	Do not remove a hard drive unless it is malfunctioning and you are directed by Cisco technical support to do so.

## Diagnostic Card

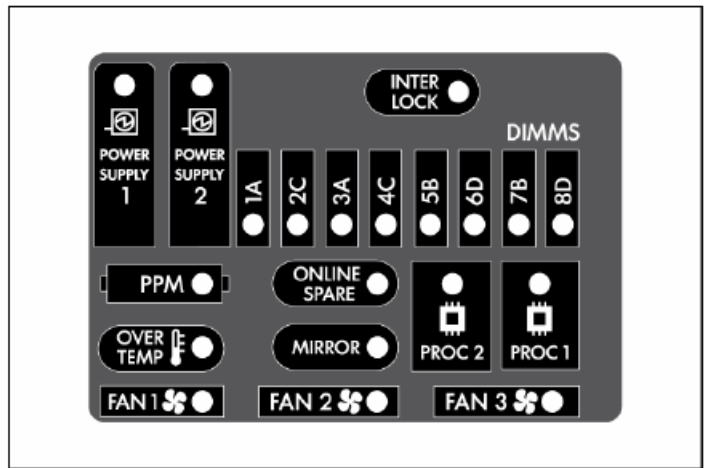
Figure 2-8 shows details of the diagnostic card found on the front panel.

Table 2-2 summarizes the internal components of the mobility services engine that are tracked by the diagnostic card. Definitions of each of the LED states for those components are also summarized.


**Note**

This information is not currently summarized within Cisco WCS.

**Figure 2-8** Diagnostic Card



**Table 2-2** Diagnostic Card LEDs

Component	LED Status
Power Supply 1 <i>or</i> 2 LED is Amber or Red.	<p>Red means that one or more of the following conditions might exist:</p> <ul style="list-style-type: none"> <li>Processor in socket X has failed.</li> <li>Processor X is required yet not installed in the socket.</li> <li>Processor X is unsupported.</li> </ul> <p>Amber means that the processor in socket X is in a pre-failure condition.</p>
Power Supply 1 <i>and</i> 2 LEDs are Red.	Red means that the processor types are mismatched.
Interlock	Red means that the PCI riser board assembly is not seated properly.



**Table 2-2 Diagnostic Card LEDs (continued)**

<b>Component</b>	<b>LED Status</b>
DIMMs, one slot	<p>Red means that one or more of the following conditions may exist:</p> <ul style="list-style-type: none"> <li>• FBDIMM in slot X has failed.</li> <li>• FBDIMM in slot X is an unsupported type, and no valid memory exists in another bank</li> </ul> <p>Amber means that one or more of the following conditions may exist:</p> <ul style="list-style-type: none"> <li>• FBDIMM in slot X has reached single-bit correctable error threshold.</li> <li>• FBDIMM in slot X is in a pre-failure condition.</li> <li>• FBDIMM in slot X is an unsupported type, but valid memory exists in another bank.</li> </ul>
DIMMs, all slots	Red means that no valid or usable memory is installed in the system.
PPM	Red means that the Integrated Processor Power Module (PPM) has failed.
Online Spare	<p>Green means that protection is enabled.</p> <p>Blinking amber means that a memory configuration error.</p> <p>Amber means that a memory failure occurred.</p> <p>Off = No protection.</p>
Proc 1 <i>or</i> Proc 2 is Amber or Red	<p>Red = One or more of the following conditions may exist:</p> <ul style="list-style-type: none"> <li>• Processor has failed.</li> <li>• Processor is required yet not installed in the socket.</li> <li>• Processor is unsupported.</li> </ul> <p>Amber means that the processor in socket X is in a pre-failure condition.</p>
Proc 1 <i>and</i> Proc 2 are Amber or Red	Processor types are mismatched.
Over Temp	<p>Amber means that the health driver has detected a cautionary temperature level.</p> <p>Red means that the system has detected a critical temperature level.</p>

**Table 2-2** Diagnostic Card LEDs (continued)

Component	LED Status
Mirror	Green means that protection is enabled for the memory.
	Blinking amber means that there is a memory configuration error.
	Amber means that a memory failure occurred.
	Off means that there is no protection.
Fan 1, 2, or 3	Amber means that a redundant fan has failed.
	Red means that the minimum fan requirements are not being met in one or more of the fan modules. One or more fans have failed or are missing.

## Rear Panel

Figure 2-9 shows details of the rear panel for the Cisco 3350 Mobility Services Engine.

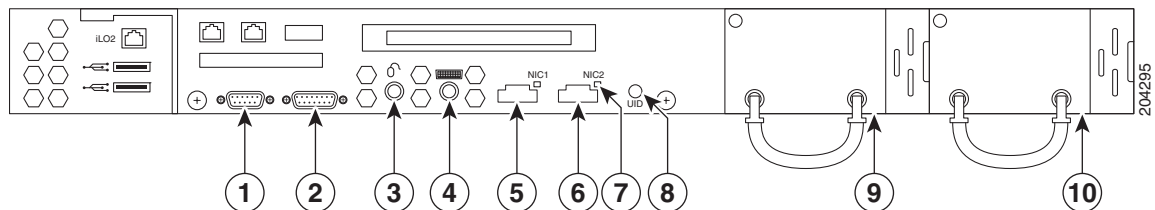
Table 2-3 identifies Cisco 3350 back panel components and their function.

Table 2-4 summarizes pin assignment for the DB9 cable.





### Note

Items not labeled in Figure 2-9 are not currently assigned an active role on the system.

**Figure 2-9** Cisco 3350 Mobility Services Engine Rear Panel**Table 2-3** Back Panel Components

Number	Description
1	DB9 serial connector for console. See pinouts in Table 2-4.
2	DB15 connector.
3	Mouse connector.
4	Keyboard connector.
5	NIC 1 (Ethernet-0) connector and LED. <ul style="list-style-type: none"> <li>Green LED indicates link exists.</li> <li>Off (unlit) LED indicates no link.</li> </ul>

**Table 2-3 Back Panel Components (continued)**

Number	Description
6	NIC 2 (Ethernet-1) connector and LED. <ul style="list-style-type: none"> <li>Green LED indicates link exists.</li> <li>Off (unlit) LED indicates no link.</li> </ul>
7	NIC 2 link status LED (same function as LED for NIC 1)
8	UID button and LED. <ul style="list-style-type: none"> <li>Blue means that identification is activated.</li> <li>Blinking blue means that the system is being managed remotely.</li> <li>Off (unlit) means that identification is deactivated.</li> </ul>
9	Power Supply 2. <ul style="list-style-type: none"> <li>Green means normal operation.</li> <li>Off means that the system is off or the power supply has failed.</li> </ul>  <p><b>Warning</b> This unit might have more than one power supply connection. All connections must be removed to de-energize the unit. Statement 1028</p>
10	Power Supply 1. <ul style="list-style-type: none"> <li>Green means normal operation.</li> <li>Off means that the system is off or the power supply has failed.</li> </ul>  <p><b>Warning</b> This unit might have more than one power supply connection. All connections must be removed to de-energize the unit. Statement 1028</p>

**Table 2-4 Pin Assignments for DB9 Pinout**

Pin	Assignments	Description
1	DCD	Data Carrier Detect
2	RD	Receive Data
3	TD	Transmit Data
4	DTR	Data Terminal Ready
5	SG	Signal Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send
9	Ring	Ring Indicator

## Connecting and Using the CLI Console

For initial system configuration, use the command-line interface (CLI) console. The CLI console connects to the mobility services engine back-panel DB9 console port. [Figure 2-9](#) shows the console port on the back panel of the mobility services engine. Back panel components are described in [Table 2-3](#). Console port pinouts are shown in [Table 2-4](#).

**Note**

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Use either a Crossover serial cable or Null modem cable to connect the console ports.

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Use these terminal emulator settings for the CLI console session:

- 9600 baud
- 8 data bits
- no flow control
- 1 stop bit
- no parity

## Powering On the Mobility Services Engine

When you apply AC power to a mobility services engine, the bootup script initializes the operating system and its stored configurations. You are prompted to enter a user ID and password and enter key configuration details.

Follow these steps to power up the mobility services engine.

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- Step 1** Plug an AC power cord into the back of the power supplies of the mobility services engine ([Figure 2-9](#)), and connect the other end to a grounded 100 to 240 VAC 50/60 Hz electrical outlet.

The end of the power cord that plugs into the mobility services engine conforms with the IEC 320 standard.

- Step 2** Use the front-panel Power On/Standby button to turn the mobility services engine on ([Figure 2-7](#)).

- Step 3** At the login prompt, enter the mobility services engine operating user ID and password. The default user ID is *root* and the default password is *password*.

The user ID and password are case sensitive.

You are now logged into the mobility services engine operating system.

Continue to the [“Configuring the Mobility Services Engine”](#) section on page 2-16.

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## Configuring the Mobility Services Engine

Minimal configuration is done for the mobility services engine as part of installation using the console. All configuration beyond the initial setup using the automatic installation can be done with Cisco WCS. For details on automatic installation refer to the [“Automatic Installation Script”](#) section on page 2-17.

**Note**

You must change the default root password during initial configuration of the mobility services engine to ensure optimum network security.

- You are prompted to change the password during the automatic setup script.
- You can also change the password using the Linux command, **passwd**.

## Automatic Installation Script

**Note**

It is highly recommended that all relevant items be configured during initial setup to ensure optimum operation of the mobility services engine in your network. The hostname and either the Ethernet-0 (eth0) or the Ethernet-1 (eth1) port **MUST** always be configured during the automatic installation.

**Note**

You can rerun the automatic installation script at any time to add or change parameters. There is no need to reenter values that you do not want changed during one of these updates.

**Note**

If you do not want to configure an item, enter **skip** and you are prompted for the next configuration step. Any setting skipped is retained and not modified.

The automatic installation script that displays to the screen is shown below along with descriptive text.

Example text: Indicates the installation script that displays to the console.

Body text: Provides additional information to the user about steps within the script.

Enter the login *root*.

```
localhost.localdomain login:
```

Enter the password *password*.

```
Password:
```

```
Setup parameters via Setup Wizard (yes/no) [yes]:
```

Enter **yes** if you want to use the setup wizard or **No** if you want to manually set the parameters. Only experienced Linux system administrators should opt to configure the system using the setup script. The option in square brackets is the default. You can press **Enter** to choose that default.

When you enter **Yes** the following displays on the console.

```
Welcome to the mobility services engine setup.  
Please enter the requested information. At any prompt,  
enter ^ to go back to the previous prompt. You may exit at  
any time by typing <Ctrl+C>.
```

```
You will be prompted to choose whether you wish to configure a  
parameter, skip it, or reset it to its initial default value.  
Skipping a parameter will leave it unchanged from its current  
value.
```

Changes made will only be applied to the system once all the information is entered and verified.

```
Current hostname=[localhost]
Configure hostname? (Y)es/(S)kip/(U)se default [Yes]:Y
```

The host name should be a unique name that can identify the device on the network. The hostname should start with a letter, end with a letter or number, and contain only letters, numbers, and dashes.

```
Enter a host name [localhost]: mse-nyc
```

Enter a domain name for the network domain to which this device belongs. The domain name should start with a letter, and it should end with a valid domain name suffix such as *.com*. It must contain only letters, numbers, dashes, and dots.

```
Current domain=[localdomain]
Configure domain name? (Y)es/(S)kip/(U)se default [Yes]: Y
```

```
Enter a domain name [localdomain]: cisco.com
```

```
Current IP address=[209.165.201.25]
Current eth0 netmask=[255.255.255.224]
Current gateway address=[209.165.201.1]
Enter eth0 IP address [209.165.201.25]:
Configure eth0 interface parameters? (Y)es/(S)kip/(U)se default [Skip]: Y
```

Enter **Yes** if you want to provide information for Ethernet-0 (eth0) interface.




---

**Note** A network administrator can provide you with the IP address, network mask, and default gateway address for the prompts that follow.

---

Enter an IP address for the first ethernet interface of this machine.

```
Enter eth0 IP address [209.165.201.25]:
Enter the network mask for IP address 209.165.201.25.
Enter network mask [255.255.255.224]:
```

Enter a default gateway address for this machine.  
Note that the default gateway must be reachable from the first ethernet interface

```
Enter default gateway address [209.165.201.1]:
```

```
The second ethernet interface is currently disabled for this machine.
Configure eth1 interface parameters? (Y)es/(S)kip/(U)se default [Skip]:
```

Enter **Yes** if you want to provide information for a second ethernet (eth1) interface.




---

**Note** Entry of a second ethernet interface (eth1) can be skipped by entering **skip**.

---

Enter an IP address for the second ethernet interface (eth1) on this machine.

```
Enter eth1 IP address [none]:
```

Enter the network mask for the IP address you specified.

```
Enter network mask [255.0.0.0]:
```



**Note** If you entered an IP address and mask for the second interface (eth1) of this machine, you are given the opportunity to define up to two static routing entries for that interface. Static routes are typically used in lab environments to mimic out-of-band networks and are not recommended for implementation within your network unless you have extensive experience in their use.



**Note** If you do not want to configure any static routes, enter **none** at the network address prompt seen below. You will not be prompted for the network mask and gateway address.



**Note** If you want to configure only one route, you can enter **none** when you are prompted for the second network address. You will not be prompted for the network mask and gateway address for the second route.

Enter the network address to define a static route for eth1.

```
Enter network [none]:
```

Enter the network mask for the network address you entered above.

```
Enter network mask [255.0.0.0]:
```

Enter a gateway address for the network address and network mask you provided.

```
Enter gateway address:
```

Enter DNS information.

```
Domain Name Service (DNS) Setup
DNS is currently enabled.
No DNS servers currently defined
Configure DNS related parameters? (Y)es/(S)kip/(U)se default [Skip]:Y
```

```
Enable DNS (yes/no) [yes]: Yes
Enter primary DNS server IP address: 209.165.201.20
Enter backup DNS server IP address (or none) [none]:
```

Enter time zone information.



**Note** Communications between the mobility services engine, Cisco WCS and the controller are in universal time code (UTC). Local time zones are configured on the mobility services engine to assist network operations center personnel in locating events within logs. Configuring NTP on each system provides devices with the UTC time.

```
Current timezone=[America/Los_Angeles]
Configure timezone? (Y)es/(S)kip/(U)se default [Skip]:
```

Enter NTP server information.



**Note** The mobility services engine and its associated controllers must be mapped to the same NTP server and the same Cisco WCS server. An NTP server is required to automatically synchronize time between the controller, Cisco WCS and the mobility services engine.

```
Network Time Protocol (NTP) Setup.
```

If you choose to enable NTP, the system time will be configured from NTP servers that you select. Otherwise, you will be prompted to enter the current date and time.

NTP is currently disabled.

Configure NTP related parameters? (Y)es/(S)kip/(U)se default [Skip]: **Y**

Enter whether or not you would like to set up the Network Time Protocol (NTP) for this machine.

If you choose to enable NTP, the system time will be configured from NTP servers that you select. Otherwise, you will be prompted to enter the current date and time.

Enable NTP (yes/no) [no]: **yes**

Enter NTP server name or address: 1.ntp.es1.cisco.com

Enter another NTP server IP address (or none) [none]:

A login banner appears when a user logs in through the console or SSH. This example shows the default banner. You can change the text that appears in this banner in the steps below. The banner is usually used to warn users that they are entering a private system.

Current Login Banner = [Warning!]

Configure login banner (Y)es/(S)kip/(U)se default [Skip]:

Enter text to be displayed as login banner. Enter a single period on a line to terminate.

Login banner [Warning!]:

Cisco Mobility Service Engine.

Remote root login is currently disabled.

Enter **Y** in the step below to configure and enable remote root login (access) from the console.



**Note** If you enable *remote root access*, serial and SSH connections are supported. Local monitor and keyboard access is denied.



**Note** If you disable *remote root access*, then both the local monitor and keyboard work along with the serial connection. SSH access is disabled.

Configure remote root access? (Y)es/(S)kip/(U)se default [Skip]: **N**

Enter whether or not you would like to allow remote root login via secure shell for this machine.

Enable remote root login (yes/no) [no]: **N**

SSH root access is currently enabled.

Configure ssh access for root (Y)es/(S)kip/(U)se default [Skip]: **N**

Enter whether or not you would like to enable ssh root login. If you disable this option, only console root login will be possible.

Enter **yes** (below) to allow remote login through SSH v2 (ssh root login) in addition to console login. Choose **no** to allow *root* login only from the console.

Enable ssh root access (yes/no): **yes**





**Note** If you forget the *ssh root* login password, you can enter into *single user mode* and change the password. To prevent unauthorized access, a password for the *single user mode* can be defined.

```
Single user mode password check is currently enabled.
Configure single user mode password check (Y)es/(S)kip/(U)se default [Skip]: Y
The single user mode is usually used for recovery
operations. For example, when the root password is
forgotten, you can log into single user mode and reset
the root password.
*****
!!WARNING!!
-----
If single user mode password check is enabled and
the root password is forgotten, the appliance
will be unusable as it cannot be logged into
successfully. Do not enable this option unless it
is required. (Press ^ to go back to previous step.)
*****
```

**Caution**

If you forget the *single user mode* password, you cannot login and you will need to contact TAC to arrange for an RMA.

```
Enable password check for single user mode login (yes/no) [yes]: yes
```

Enter the desired value for each of the password parameters or hit **Enter** to accept the default parameter value.



**Note** These parameter settings apply to ALL passwords that you enable and set during the installation script.

```
Login and password strength related parameter setup
Maximum number of days a password may be used : 60
Minimum number of days allowed between password changes : 1
Minimum acceptable password length : 9
Login delay after failed login : 5
Checking for strong passwords is currently enabled.
```

```
Configure login/password related parameters? (Y)es/(S)kip/(U)se default [Skip]: Y
```

Enter login and password related parameters.

```
Maximum number of days a password may be used(1-99999, 99999 means no expiry) [60]:
Minimum number of days a password may be used(0-99999, 0 means no minimum) [1]:
Minimum acceptable password length(8-10) [9]:
Login delay in seconds after failed login(0-15) [5]
Enable strong password checking? [yes/no] [yes]:
```

Enter **Y** to enable and define a *root* (superuser) password. Press Enter to skip this step.

```
Configure root password? (Y)es/(S)kip/(U)se default [Skip]: Y
```

Enter a password for the superuser.

Enter a password for the superuser and confirm it by typing it again. Your typing is not visible.

```
Enter root password:
Confirm root password:
```

You can also configure a *strong* (GRand Unified Bootloader (GRUB)) password. A strong password must have a minimum of 9 characters and must include: two lowercase letters, two digits and two special characters (such as \$ and #). An error message displays if you enter an inadequate password.

**Caution**

If you forget the GRUB password, you cannot login and you will need to contact TAC to arrange for an RMA.

**Note**

If a *strong* password is not enabled, a password can be of any length.

**Note**

Passwords defined *before* a strong password is set are not affected by the *strong* password setting. Only those passwords that are set *after* the strong password is set are affected. For example, *strong* passwords will be required for passwords set later in this script such as the Cisco WCS communication password (as noted in example below) and as passwords expire.

```
GRUB password is not currently configured.
Configure GRUB password (Y)es/(D)isable/(S)kip/(U)se default [Skip]: Y
GRUB is the Linux bootloader. Setting a password for
the GRUB loader means that each time the appliance is
powered up, you will be prompted for the GRUB password
you configure here.
```

```
*****
```

```
!!WARNING!!
```

```
-----
```

```
If the GRUB password is forgotten, the appliance
will be unusable as it cannot be booted up
successfully. Do not configure this option unless it
is required. (Press ^ to go back to previous step.)
*****
```

```
Enter a password for the grub menu.
```

```
Enter GRUB Password:
Verify GRUB Password:
```

```
Password must be 9 characters long. Try again.
```

```
Enter GRUB Password:
Verify GRUB Password:
UP = 2, LO = 6, DIGIT = 3, PUNCT = 0
Password must contain 2 uppercase, 2 lowercase letters,
2 digits and 2 special characters. Try again.
```

```
Enter GRUB Password:
Verify GRUB Password:
```

Enter **Y** to enable and define a *Cisco WCS communication* password.

**Note**

This password does not define an individual user password for access to the Cisco WCS GUI. This password is used for SOAP/XML authentication between systems (such as mobility services engines) and Cisco WCS.

```
Configure WCS communication password? (Y)es/(S)kip/(U)se default [Skip]: Y
```

Enter a password for the admin user.  
 The admin user is used by the WCS and other northbound systems to authenticate their SOAP/XML session with the server.  
 Once this password is updated, it must correspondingly be updated on the WCS page for MSE General Parameters so that the WCS can communicate with the MSE.

Enter a password for Cisco WCS communication and confirm it by typing it again. Your typing is not visible.

Enter WCS communication password:  
 Confirm WCS communication password:



**Note** It is recommended that you set a BIOS password to prevent unauthorized BIOS access.

All of the information that was entered into the install script appears on the screen.

Please verify the following setup information.

```
-----
Host name= mse-nyc
Domain=cisco.com
Eth0 IP address=209.165.201.25, Eth0 network mask=255.255.255.224
Default gateway=209.165.201.1
Enable DNS=yes, DNS servers=209.165.201.20
Enable NTP=yes, NTP servers=1.ntp.esl.cisco.com
Login banner =
Cisco Mobility Service Engine.
Enable Remote Root Login=no
Enable SSH root access=yes
Enable Single User Mode Password Check=no
Password/Login parameters :
Password min length=9
Password min days =1
Password max days =60
Failed login delay =5
Strong password checking=yes
Root password is changed.
GRUB password is changed.
WCS password is changed.
-----
```

```
You may enter "yes" to proceed with configuration, "no" to make
more changes, or "^" to go back to the previous step.
Is the above information correct (yes, no, or ^): yes
-----
```

```
Setup will now attempt to apply the configuration.
Applying hostname related parameters...
Generating /etc/hosts
Running hostname mse-nyc.cisco.com
Generating /etc/sysconfig/network
Updating /proc/sys/kernel/hostname
Applying eth0 related parameters...
Generating /etc/sysconfig/network-scripts/ifcfg-eth0
Applying DNS related parameters...
Generating /etc/resolv.conf
Restarting network services with new settings.
Shutting down interface eth0:
Shutting down loopback interface:
Setting network parameters:
Bringing up loopback interface:
Bringing up interface eth0:
Applying NTP related parameters...
```

```

Generating /etc/ntp.conf and /etc/ntp/step-tickers
Setting system clock from NTP.
11 Apr 15:56:59 ntpdate[15176]: step time server 209.165.201.22 offset -37.556823 sec
Synchronizing hardware clock
Generating /etc/sysconfig/clock
Applying remote root login related parameters...
Disabling single user mode login password check...

Setting password/login parameters....
Setting root password.
Changing password for user root.
passwd: all authentication tokens updated successfully.
Setting grub password...
Setting wcs password.
***Configuration successful***
We recommend you reboot the system to ensure changes are operational.
Reboot now? (yes/no) [yes]: yes
Some of your changes will only take effect after the next reboot.
Exiting setup script...
[root@sanity-lbs setup]#
Script done on Wed 30 Sept 2008 03:58:12 PM PDT

```

After the script configuration appears on the screen, you are asked to verify all the setup information you provided. You can enter **Yes** to proceed with the configuration, **No** to make more changes, or **^** to go back to the previous step.

Is the above information correct (yes, no, or ^):

If you enter **yes**, the configuration information is applied. Cisco recommends that you reboot the system when prompted to ensure that the changes are applied.

**Note**

The message “\*\*\*Configuration successful\*\*\*” appears on the screen when the configuration is complete.

The next time you log in using *root*, only the Linux shell prompt appears and not the setup script. You can rerun the setup script at any time to change settings by logging in as *root* and running **/opt/mse/setup/setup.sh**.

The setup script generates a log file that can be found at **/opt/mse/setup/setup.log**.

## Configuring an NTP Server

You can configure NTP servers to set up the time and date of the mobility services engine.

**Note**

You are automatically prompted to enable NTP and enter NTP server IP addresses as part of the automatic installation script. For more details on the automatic installation script, refer to the [“Configuring the Mobility Services Engine” section on page 2-16](#).

**Note**

If you need to add or change an NTP server installation after a mobility services engine install, rerun the automatic installation script. You can configure the NTP server without adjusting the other values by just tabbing through the script. To rerun the automatic script, log in as *root* and run **/opt/mse/setup/setup.sh**.

**Note**

For more information on the NTP configuration, consult the Linux configuration guide.

## Launching the Mobility Services Engine

To configure a mobility services engine to automatically launch after bootup enter:

```
[root@mse-server1]# chkconfig msed on
```

To start the image manually, enter: `/etc/init.d/msed start`

## Verifying the Mobility Services Engine Software State

You can verify the mobility services engine software state at any time. In the mobility services engine CLI interface, enter: `/etc/init.d/msed status`

If the mobility services engine is running, the command output looks like this example:

```
-----
Server Config
-----
Product name: Cisco Mobility Service Engine
Version: x.x.x.x
Hw Version: none
Hw Product Identifier: none
Hw Serial Number: none
Use HTTPS: true
HTTPS Port: 443
Use HTTP: false
HTTP Port: 80
Legacy HTTPS: false
Legacy Port: 8001
Session timeout in mins: 30
DB backup in days: 0

-----
Server Monitor
-----
Start time: Wed Sept 30 15:24:36 EDT 2008
Server current time: Fri May 30 19:08:15 EDT 2008
Server timezone: America/New_York
Server timezone offset: -18000000
-----
Service Engine (1):
-----
NAME: Location Service
VERSION: x.x.x.x
-----
Location Service Monitor
-----
Log Modules: 262143
Log Level: INFO
Days to keep events: 2
Keep absent data in mins: 1440
Restarts: 1
Used Memory (bytes): 129851856
Allocated Memory (bytes): 3087007744
Max Memory (bytes): 3087007744
```

```

DB virtual memory (kbytes): 0
DB virtual memory limit (bytes): 256000000
DB disk memory (bytes): 4128768
DB free size (kbytes): 2856
Active Elements: 0
Active Clients: 0
Active Tags: 0
Active Rogues: 0
Active Elements Limit: 18000
Active Sessions: 0
Clients Not Tracked due to the limiting: 0
Tags Not Tracked due to the limiting: 0
Rogues Not Tracked due to the limiting: 0
Total Elements Not Tracked due to the limiting: 0

```

If the mobility services engine is not running, the command output looks like this example:

```

com.aes.common.util.AesException: Failed to connect to server: http://localhost:8001
    at com.aes.client.AesClient.connect(AesClient.java:218)
    at com.aes.location.test.AesAbstractTest.init(AesAbstractTest.java:181)
    at
com.aes.location.test.admin.AesTestGetServerInfo.main(AesTestGetServerInfo.java:75)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at sun.reflect.NativeMethodAccessorImpl.invoke(Unknown Source)
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(Unknown Source)
    at java.lang.reflect.Method.invoke(Unknown Source)
    at com.zerog.lax.LAX.launch(DashoA8113)
    at com.zerog.lax.LAX.main(DashoA8113)
#

```

## Manually Stopping Mobility Services Engine Software

The mobility services engine software automatically runs after initial configuration and after each reboot.

Follow these steps to manually stop and restart the software:

- 
- Step 1** To stop the software, enter `/etc/init.d/msed stop`.
  - Step 2** To check status enter `/etc/init.d/msed status`.
  - Step 3** To start the software, enter: `/etc/init.d/msed start`.
- 

## Updating Mobility Services Engine Software

You can update the mobility services engine using the Cisco WCS or manually download the software using a console port connected to the mobility services engine.



### Note

For the latest Cisco WCS and mobility services engine compatibility and installation notes for a given release, refer to the appropriate release note at the following link:

[http://www.cisco.com/en/US/products/ps9742/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps9742/tsd_products_support_series_home.html)

---

Before downloading and updating software on the mobility services engine, note the following:

- The mobility services engine (server) image is compressed. The software image automatically decompresses during its download from Cisco WCS.
- Approximately 5 minutes is required for the newly loaded mobility services engine software version to appear on the Cisco WCS **Mobility > Mobility Service Engines** window.




---

**Note** In release 6.0, the path is **Services > Mobility Services**.

---




---

**Note** Cisco WCS queries for mobility services engine connectivity and database updates every 5 minutes by default.

---

## Downloading Software Using Cisco WCS

To download software to a mobility services engine using Cisco WCS, follow these steps:

**Step 1** Verify that you can ping the mobility services engine from Cisco WCS or an external FTP server, whichever you are going to use for the image download.

**Step 2** In Cisco WCS, choose **Mobility > Mobility Service Engines**.




---

**Note** In release 6.0, the path is **Services > Mobility Services**.

---

**Step 3** Click the name of the mobility services engine to which you want to download software.

**Step 4** Choose **Maintenance** (left panel).

**Step 5** Choose **Download Software**.

**Step 6** To download software, do one of the following:

- To download software listed in the Cisco WCS directory, select **Select from uploaded images to transfer into the Server**. Then, choose a binary image from the drop-down menu.

Cisco WCS downloads the binary images listed in the drop-down menu into the FTP server directory you have specified during the Cisco WCS installation.

- To use downloaded software available locally or over the network, select the **Browse a new software image to transfer into the Server** and click **Browse**. Locate the file and click **Open**.

**Step 7** Enter the time in seconds (between 1 and 1800) after which software download times out.




---

**Note** This time out setting represents the total time allowed before a software download to a mobility services engine expires. It is not a FTP packet timeout setting.

---

**Step 8** Click **Download** to send the software to the `/opt/installers` directory on the mobility services engine.

**Step 9** After the image has been transferred to the mobility service engine, log in to the mobility services engine CLI and run the installer image from the `/opt/installers` directory by entering the `Jimage-name` command.

**Step 10** To run the software, enter `/etc/init.d/msed start`.

**Step 11** To stop the software, enter `/etc/init.d/msed stop` and to check status enter `/etc/init.d/msed status`.

## Manually Downloading Software

If you do not want to automatically update the mobility services engine software using Cisco WCS, follow these steps to upgrade the software manually using a local (console) or remote (SSH) connection.

**Step 1** Transfer the new mobility services engine image onto the hard drive.

- a. Log in as root, and use the binary setting to send the software image from an external FTP server root directory.

An example software image file name is `CISCO-MSE-L-K9-x-x-x-x-64bit.bin.gz` and it changes with each release.



**Note** The mobility services engine image is compressed at this point.



**Note** The default login name for the FTP server is `ftp-user`.

Your entries should look like this example:

```
# cd /opt/installers
# ftp <FTP Server IP address>
Name: <login>
Password: <password>
binary
get CISCO-MSE-L-K9-x-x-x-x-64bit.bin.gz
<CTRL-Z>
#
```

- b. Verify that the image (`CISCO-MSE-L-K9-x-x-x-x-64bit.bin.gz`) is in the mobility services engine `/opt/installers` directory.
- c. To decompress (unzip) the image file enter:

```
gunzip CISCO-MSE-L-K9-x-x-x-x-64bit.bin.gz
```

The decompression yields a `bin` file.

- d. Make sure that the `CISCO-MSE-L-K9-x-x-x-x.bin` file has execute permissions for the root user. If not, enter:

```
chmod 755 CISCO-MSE-L-K9-x-x-x-x.bin
```

**Step 2** To manually stop the mobility services engine, login as `root` and enter:

```
/etc/init.d/msed stop.
```

**Step 3** To install the new mobility services engine image, enter:

```
/opt/installers/CISCO-MSE-L-K9-x-x-x-x.bin
```

**Step 4** To start the new mobility services software, by enter:

```
/etc/init.d/msed start
```



**Caution**

Do not complete the next step, which uninstalls the script files, unless the system instructs you to do so. Removing the files unnecessarily erases your historical data.

**Step 5** To uninstall the mobility services engine's script files, enter:

```
/opt/mse/uninstall
```

## Recovering a Lost Root Password

If you lose or forget the root password for a mobility services engine, follow these steps:

**Step 1** When the GRUB screen comes up, press **Esc** to enter the boot menu.

**Caution**

If you forget the GRUB password, you cannot login and you will need to contact TAC to arrange for an RMA.

**Note**

The connection must be made over the console port, not by connecting a keyboard, mouse and monitor to the unit.

**Step 2** Press **e** to edit.

**Step 3** Navigate to the line beginning with "kernel," and press **e**.

At the end of the line enter a space and the number one (1). Press **Enter** to save this change.

**Step 4** Press **b** to begin boot sequence.

At the end of the boot sequence, a shell prompt appears.



**Note** The shell prompt does not appear if you have set up a single user mode password.

**Step 5** You can change the root password by entering the **passwd** command.

**Step 6** Enter and confirm the new password.

**Step 7** Restart the machine.





# Safety Considerations and Translated Safety Warnings

---

This appendix lists safety notices for the Cisco 3350 Mobility Services Engine. The following safety considerations and safety warnings appear in this appendix:

- [Safety Considerations, page A-2](#)
- [Warning Definition, page A-2](#)
- [Installation Instructions, page A-5](#)
- [Ground Conductor Warning, page A-7](#)
- [Chassis Warning for Rack-Mounting and Servicing, page A-9](#)
- [Equipment Installation Warning, page A-18](#)
- [Battery Handling, page A-21](#)
- [Product Disposal, page A-23](#)
- [Power Cable and AC Adapter, page A-25](#)

# Safety Considerations

Keep these guidelines in mind when installing mobility services engine:

- Verify that the ambient temperature remains between 0 and 40° C (32 and 104° F), taking into account the elevated temperatures that occur when they are installed in a rack.
- When multiple mobility services engines are mounted in an equipment rack, be sure that the power source is sufficiently rated to safely run all of the equipment in the rack.
- Verify the integrity of the ground before installing mobility services engines in an equipment rack.

## Warning Definition



Warning

### IMPORTANT SAFETY INSTRUCTIONS

**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

Waarschuwing

### BELANGRIJKE VEILIGHEIDSINSTRUCTIES

**Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.**

### BEWAAR DEZE INSTRUCTIES

Varoitus

### TÄRKEITÄ TURVALLISUUSOHJEITA

**Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.**

### SÄILYTÄ NÄMÄ OHJEET

**Attention      IMPORTANTES INFORMATIONS DE SÉCURITÉ**

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

**CONSERVEZ CES INFORMATIONS****Warnung      WICHTIGE SICHERHEITSHINWEISE**

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

**BEWAHREN SIE DIESE HINWEISE GUT AUF.****Avvertenza      IMPORTANTI ISTRUZIONI SULLA SICUREZZA**

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

**CONSERVARE QUESTE ISTRUZIONI****Advarsel      VIKTIGE SIKKERHETSINSTRUKSJONER**

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

**TA VARE PÅ DISSE INSTRUKSJONENE****Aviso      INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

**GUARDE ESTAS INSTRUÇÕES**

## Warning Definition

**¡Advertencia! INSTRUCCIONES IMPORTANTES DE SEGURIDAD**

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

**GUARDE ESTAS INSTRUCCIONES****Varning! VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

**SPARA DESSA ANVISNINGAR****Figyelem FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmeztető jel veszélyre utal. Sérülésveszélyt rejtő helyzetben van. Mielőtt bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplő figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján kereshető meg.

**ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!****Предупреждение ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

**СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ**

**警告** 重要的安全性说明

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

**警告** 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

# Installation Instructions

**Warning**

**Read the installation instructions before connecting the system to the power source.** Statement 1004

**Waarschuwing**

**Raadpleeg de installatie-instructies voordat u het systeem op de voedingsbron aansluit.**

**Varoitus**

**Lue asennusohjeet ennen järjestelmän yhdistämistä virtälähteeseen.**

**Attention**

**Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.**

**Warnung**

**Vor dem Anschließen des Systems an die Stromquelle die Installationsanweisungen lesen.**

**Avvertenza**

**Consultare le istruzioni di installazione prima di collegare il sistema all'alimentatore.**

**Advarsel**

**Les installasjonsinstruksjonene før systemet kobles til strømkilden.**

**Aviso**

**Leia as instruções de instalação antes de ligar o sistema à fonte de energia.**

**¡Advertencia!**

**Lea las instrucciones de instalación antes de conectar el sistema a la red de alimentación.**

**Varning!**

**Läs installationsanvisningarna innan du kopplar systemet till strömförsörjningsenheten.**

**Figyelem**

**Mielőtt áramforráshoz csatlakoztatná a rendszert, olvassa el az üzembe helyezési útmutatót!**

**Предупреждение**

**Перед подключением устройства к источнику электропитания ознакомьтесь с данной инструкцией по установке.**

## Installation Instructions

**警告** 在将系统与电源连接之前，请仔细阅读安装说明。

**警告** 必ず設置手順を読んでから、システムを電源に接続してください。

**주의** 시스템을 전원 에 연결하기 전에 설치 지침을 읽으십시오.

**Aviso** Leia as instruções de instalação antes de conectar o sistema à fonte de energia.

**Upozornění** Před připojením systému k elektrické síti si prostudujte pokyny k instalaci.

**אזהרה** יש לקרוא את הוראות ההתקנה לפני חיבור המערכת למקור המתח.

**Ostrzeżenie** Przed podłączeniem systemu do źródła zasilania należy przeczytać instrukcje dotyczące instalacji.

**Upozornenie** Pred pripojením systému k napájaciemu zdroju si prečítajte inštaláčn é pokyny.

**Opozorilo** Preden sistem priključite, preberite navodila za priključitev.

**警告** 將系統連接供電系統前，請先閱讀安裝指南。

**Figyelem** Mielőtt áramforráshoz csatlakoztatná a rendszert, olvassa el az üzembe helyezési útmutatót!

**Предупреждение** Перед подключением устройства к источнику электропитания ознакомьтесь с данной инструкцией по установке.

**警告** 在将系统与电源连接之前，请仔细阅读安装说明。

**警告** 必ず設置手順を読んでから、システムを電源に接続してください。

**주의** 시스템을 전원 에 연결하기 전에 설치 지침을 읽으십시오.

**Aviso** Leia as instruções de instalação antes de conectar o sistema à fonte de energia.

**Upozornění** Před připojením systému k elektrické síti si prostudujte pokyny k instalaci.

**אזהרה** יש לקרוא את הוראות ההתקנה לפני חיבור המערכת למקור המתח.



Ostrzeżenie	Przed podłączeniem systemu do źródła zasilania należy przeczytać instrukcje dotyczące instalacji.
Upozornenie	Pred pripojením systému k napájaciemu zdroju si prečítajte inštalačné pokyny.
Opozorilo	Preden sistem priključite, preberite navodila za priključitev.
警告	將系統連接供電系統前，請先閱讀安裝指南。

## Ground Conductor Warning



### Warning

This equipment must be grounded. 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. Statement 1024

### Waarschuwing

Deze apparatuur dient geaard te zijn. De aardingsleiding mag nooit buiten werking worden gesteld en de apparatuur mag nooit bediend worden zonder dat er een op de juiste wijze geïnstalleerde aardingsleiding aanwezig is. Neem contact op met de bevoegde instantie voor elektrische inspecties of met een electricien als u er niet zeker van bent dat er voor passende aarding gezorgd is.

### Varoitus

Laitteiden on oltava maadoitettuja. Älä koskaan ohita maajohdinta tai käytä laitteita ilman oikein asennettua maajohdinta. Ota yhteys sähkötarkastusviranomaiseen tai sähköasentajaan, jos olet epävarma maadoituksen sopivuudesta.

### Attention

Cet équipement doit être mis à la masse. Ne jamais rendre inopérant le conducteur de masse ni utiliser l'équipement sans un conducteur de masse adéquatement installé. En cas de doute sur la mise à la masse appropriée disponible, s'adresser à l'organisme responsable de la sécurité électrique ou à un électricien.

### Warnung

Dieses Gerät muss geerdet sein. Auf keinen Fall den Erdungsleiter unwirksam machen oder das Gerät ohne einen sachgerecht installierten Erdungsleiter verwenden. Wenn Sie sich nicht sicher sind, ob eine sachgerechte Erdung vorhanden ist, wenden Sie sich an die zuständige Inspektionsbehörde oder einen Elektriker.

### Avvertenza

Questa apparecchiatura deve essere dotata di messa a terra. Non escludere mai il conduttore di protezione né usare l'apparecchiatura in assenza di un conduttore di protezione installato in modo corretto. Se non si è certi della disponibilità di un adeguato collegamento di messa a terra, richiedere un controllo elettrico presso le autorità competenti o rivolgersi a un elettricista.

<b>Advarsel</b>	<b>Dette utstyret må jordes. Omgå aldri jordingslederen og bruk aldri utstyret uten riktig montert jordingsleder. Ta kontakt med fagfolk innen elektrisk inspeksjon eller med en elektriker hvis du er usikker på om det finnes velegnet jordning.</b>
<b>Aviso</b>	<b>Este equipamento deve ser aterrado. Nunca anule o fio terra nem opere o equipamento sem um aterramento adequadamente instalado. Em caso de dúvida com relação ao sistema de aterramento disponível, entre em contato com os serviços locais de inspeção elétrica ou um electricista qualificado.</b>
<b>¡Advertencia!</b>	<b>Este equipo debe estar conectado a tierra. No inhabilite el conductor de tierra ni haga funcionar el equipo si no hay un conductor de tierra instalado correctamente. Póngase en contacto con la autoridad correspondiente de inspección eléctrica o con un electricista si no está seguro de que haya una conexión a tierra adecuada.</b>
<b>Varning!</b>	<b>Denna utrustning måste jordas. Koppla aldrig från jordledningen och använd aldrig utrustningen utan en på lämpligt sätt installerad jordledning. Om det föreligger osäkerhet huruvida lämplig jordning finns skall elektrisk besiktningsauktoriteten eller elektriker kontaktas.</b>
<b>Figyelem</b>	<b>A berendezés csak megfelelő védőföldeléssel működtethető. Ne iktassa ki a földelés csatlakozóját, és ne üzemeltesse a berendezést szabályosan felszerelt földelő vezeték nélkül! Ha nem biztos benne, hogy megfelelő földelés áll rendelkezésbe, forduljon a helyi elektromos hatóságokhoz vagy egy villanyszerelőhöz.</b>
<b>Предупреждение</b>	Данное устройство должно быть заземлено. Никогда не отключайте провод заземления и не пользуйтесь оборудованием при отсутствии правильно подключенного провода заземления. За сведениями об имеющихся возможностях заземления обратитесь к соответствующим контролирующим организациям по энергоснабжению или к инженеру-электрику.
<b>警告</b>	此设备必须接地。切勿使接地导体失效，或者在没有正确安装接地导体的情况下操作该设备。如果您不能肯定接地导体是否正常发挥作用，请咨询有关电路检测方面的权威人士或电工。
<b>警告</b>	この装置はアース接続する必要があります。アース導体を破損しないよう注意し、アース導体を正しく取り付けないまま装置を稼働させないでください。アース接続が適正であるかどうか分からない場合には、電気検査機関または電気技術者に相談してください。

Figyelem	A berendezés csak megfelelő védőföldeléssel működtethető. Ne iktassa ki a földelés csatlakozóját, és ne üzemeltesse a berendezést szabályosan felszerelt földelő vezeték nélkül! Ha nem biztos benne, hogy megfelelő földelés áll rendelkezésbe, forduljon a helyi elektromos hatóságokhoz vagy egy villanyszerelőhöz.
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## Chassis Warning for Rack-Mounting and Servicing



Warning

**To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:** Statement 1006

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

Waarschuwing

**Om lichamelijk letsel te voorkomen wanneer u dit toestel in een rek monteert of het daar een servicebeurt geeft, moet u speciale voorzorgsmaatregelen nemen om ervoor te zorgen dat het toestel stabiel blijft. De onderstaande richtlijnen worden verstrekt om uw veiligheid te verzekeren:**

- Dit toestel dient onderaan in het rek gemonteerd te worden als het toestel het enige in het rek is.
- Wanneer u dit toestel in een gedeeltelijk gevuld rek monteert, dient u het rek van onderen naar boven te laden met het zwaarste onderdeel onderaan in het rek.
- Als het rek voorzien is van stabiliseringshulpmiddelen, dient u de stabilisatoren te monteren voordat u het toestel in het rek monteert of het daar een servicebeurt geeft.

- Varoitus** Kun laite asetetaan telineeseen tai huolletaan sen ollessa telineessä, on noudatettava erityisiä varotoimia järjestelmän vakavuuden säilyttämiseksi, jotta vältetään loukkaantumiselta. Noudata seuraavia turvallisuusohjeita:
- Jos telineessä ei ole muita laitteita, aseta laite telineen alaosaan.
  - Jos laite asetetaan osaksi täytettyyn telineeseen, aloita kuormittaminen sen alaosasta kaikkein raskaimmalla esineellä ja siirry sitten sen yläosaan.
  - Jos telinettä varten on vakaimet, asenna ne ennen laitteen asettamista telineeseen tai sen huoltamista siinä.
- Attention** Pour éviter toute blessure corporelle pendant les opérations de montage ou de réparation de cette unité en casier, il convient de prendre des précautions spéciales afin de maintenir la stabilité du système. Les directives ci-dessous sont destinées à assurer la protection du personnel:
- Si cette unité constitue la seule unité montée en casier, elle doit être placée dans le bas.
  - Si cette unité est montée dans un casier partiellement rempli, charger le casier de bas en haut en plaçant l'élément le plus lourd dans le bas.
  - Si le casier est équipé de dispositifs stabilisateurs, installer les stabilisateurs avant de monter ou de réparer l'unité en casier.
- Warnung** Zur Vermeidung von Körperverletzung beim Anbringen oder Warten dieser Einheit in einem Gestell müssen Sie besondere Vorkehrungen treffen, um sicherzustellen, daß das System stabil bleibt. Die folgenden Richtlinien sollen zur Gewährleistung Ihrer Sicherheit dienen:
- Wenn diese Einheit die einzige im Gestell ist, sollte sie unten im Gestell angebracht werden.
  - Bei Anbringung dieser Einheit in einem zum Teil gefüllten Gestell ist das Gestell von unten nach oben zu laden, wobei das schwerste Bauteil unten im Gestell anzubringen ist.
  - Wird das Gestell mit Stabilisierungszubehör geliefert, sind zuerst die Stabilisatoren zu installieren, bevor Sie die Einheit im Gestell anbringen oder sie warten.
- Avvertenza** Per evitare infortuni fisici durante il montaggio o la manutenzione di questa unità in un supporto, occorre osservare speciali precauzioni per garantire che il sistema rimanga stabile. Le seguenti direttive vengono fornite per garantire la sicurezza personale:
- Questa unità deve venire montata sul fondo del supporto, se si tratta dell'unica unità da montare nel supporto.
  - Quando questa unità viene montata in un supporto parzialmente pieno, caricare il supporto dal basso all'alto, con il componente più pesante sistemato sul fondo del supporto.
  - Se il supporto è dotato di dispositivi stabilizzanti, installare tali dispositivi prima di montare o di procedere alla manutenzione dell'unità nel supporto.
- Advarsel** Unngå fysiske skader under montering eller reparasjonsarbeid på denne enheten når den befinner seg i et kabinett. Vær nøye med at systemet er stabilt. Følgende retningslinjer er gitt for å verne om sikkerheten:
- Denne enheten bør monteres nederst i kabinettet hvis dette er den eneste enheten i kabinettet.
  - Ved montering av denne enheten i et kabinett som er delvis fylt, skal kabinettet lastes fra bunnen og opp med den tyngste komponenten nederst i kabinettet.
  - Hvis kabinettet er utstyrt med stabiliseringsutstyr, skal stabilisatorene installeres før montering eller utføring av reparasjonsarbeid på enheten i kabinettet.

- Aviso** Para se prevenir contra danos corporais ao montar ou reparar esta unidade numa estante, deverá tomar precauções especiais para se certificar de que o sistema possui um suporte estável. As seguintes directrizes ajudá-lo-ão a efectuar o seu trabalho com segurança:
- Esta unidade deverá ser montada na parte inferior da estante, caso seja esta a única unidade a ser montada.
  - Ao montar esta unidade numa estante parcialmente ocupada, coloque os itens mais pesados na parte inferior da estante, arrumando-os de baixo para cima.
  - Se a estante possuir um dispositivo de estabilização, instale-o antes de montar ou reparar a unidade.

- ¡Advertencia!** Para evitar lesiones durante el montaje de este equipo sobre un bastidor, o posteriormente durante su mantenimiento, se debe poner mucho cuidado en que el sistema quede bien estable. Para garantizar su seguridad, proceda según las siguientes instrucciones:
- Colocar el equipo en la parte inferior del bastidor, cuando sea la única unidad en el mismo.
  - Cuando este equipo se vaya a instalar en un bastidor parcialmente ocupado, comenzar la instalación desde la parte inferior hacia la superior colocando el equipo más pesado en la parte inferior.
  - Si el bastidor dispone de dispositivos estabilizadores, instalar éstos antes de montar o proceder al mantenimiento del equipo instalado en el bastidor.

- Varning!** För att undvika kroppsskada när du installerar eller utför underhållsarbete på denna enhet på en ställning måste du vidta särskilda försiktighetsåtgärder för att försäkra dig om att systemet står stadigt. Följande riktlinjer ges för att trygga din säkerhet:
- Om denna enhet är den enda enheten på ställningen skall den installeras längst ned på ställningen.
  - Om denna enhet installeras på en delvis fylld ställning skall ställningen fyllas nedifrån och upp, med de tyngsta enheterna längst ned på ställningen.
  - Om ställningen är försedd med stabiliseringsdon skall dessa monteras fast innan enheten installeras eller underhålls på ställningen.

- Figyelem** A készülék rackbe történő beszerelése és karbantartása során bekövetkező sérülések elkerülése végett speciális óvintézkedésekkel meg kell őrizni a rendszer stabilitását. A személyes biztonsága érdekében tartsa be a következő szabályokat:
- Ha a rackben csak ez az egy készülék található, a rack aljába kell beszerelni.
  - Ha nincs teljesen tele az a rack, amelybe beszerelik a készüléket, alulról fölfelé haladva tölts fel a racket úgy, hogy a legnehezebb készülék kerüljön a rack aljába.
  - Ha stabilizáló eszközök is tartoznak a rackhez, szerelje fel a stabilizátorokat, mielőtt beszerelné az egységet a rackbe, vagy karbantartást végezne rajta.

- Предупреждение** Во избежание травм при монтаже и обслуживании устройства в стойке следует принять особые меры предосторожности, чтобы убедиться в устойчивости оборудования. Для обеспечения безопасности работ необходимо соблюдать следующие правила.
- Если в стойке находится одно устройство, оно должно быть установлено в нижней части.
  - При монтаже устройств в частично заполненную стойку устанавливайте оборудование снизу вверх, размещая наиболее тяжелые устройства в нижней части.
  - Если стойка снабжена приспособлениями для стабилизации, их необходимо установить до начала монтажа или обслуживания оборудования.

- 警告** 为避免在机架中安装或维修该部件时使身体受伤，您必须采取特殊的预防措施确保系统固定。以下是确保安全的原则：
- 如果此部件是机架中唯一的部件，应将其安装在机架的底部。
  - 如果在部分装满的机架中安装此部件，请按从下往上的顺序安装各个部件，并且最重的组件应安装在机架的底部。
  - 如果机架配有固定装置，请先装好固定装置，然后再在机架中安装或维修部件。

- 警告** この装置をラックに設置したり保守作業を行ったりするときは、人身事故を防ぐため、システムが安定しているかどうかを十分に確認する必要があります。次の注意事項に従ってください。
- ラックにこの装置を単独で設置する場合は、ラックの一番下に設置します。
  - ラックに別の装置がすでに設置されている場合は、最も重量のある装置を一番下にして、重い順に下から上へ設置します。
  - ラックに安定器具が付属している場合は、その安定器具を取り付けてから、装置をラックに設置するか、またはラック内の装置の保守作業を行ってください。
- 주의** 이 장치를 랙에 장착하거나 서비스할 때 신체 부상을 방지하려면, 시스템이 안정된 상태를 유지하도록 특별히 주의해야 합니다. 사용자의 안전을 위해 다음 지침 사항을 준수하십시오.
- 이 장치가 랙에 장착되는 유일한 것일 경우, 랙의 맨 아래 부분에 장착되어야 합니다.
  - 부분적으로 차 있는 랙에 이 장치를 장착할 경우, 가장 무거운 장치를 랙의 맨 아래 부분부터 차례로 장착하십시오.
  - 안정기가 랙과 함께 제공되는 경우, 이 안정기를 설치한 후 이 장치를 랙에 장착하거나 서비스하십시오.
- Aviso** Para evitar lesões corporais ao montar ou dar manutenção a esta unidade em um rack, é necessário tomar todas as precauções para garantir a estabilidade do sistema. As seguintes orientações são fornecidas para garantir a sua segurança:
- Se esta for a única unidade, ela deverá ser montada na parte inferior do rack.
  - Ao montar esta unidade em um rack parcialmente preenchido, carregue-o de baixo para cima com o componente mais pesado em sua parte inferior.
  - Se o rack contiver dispositivos estabilizadores, instale-os antes de montar ou dar manutenção à unidade existente.
- Advarsel** For at forhindre legemesbeskadigelse ved montering eller service af denne enhed i et rack, skal du sikre at systemet står stabilt. Følgende retningslinjer er også for din sikkerheds skyld:
- Enheden skal monteres i bunden af dit rack, hvis det er den eneste enhed i racket.
  - Ved montering af denne enhed i et delvist fyldt rack, skal enhederne installeres fra bunden og opad med den tungeste enhed nederst.
  - Hvis racket leveres med stabiliseringsenheder, skal disse installeres for enheden monteres eller serviceres i racket.
- تحذير** لتجنب حدوث أي إصابات عند تركيب هذه الوحدة، يجب اتباع بعض الاحتياطات لضمان عمل النظام بشكل سليم. يتم ذكر الإرشادات التالية لضمان الأمان.
- يجب تركيب هذه الوحدة في الجزء السفلي من الدولاب المتضمن قضبان إذا كانت هذه الوحدة هي الوحدة الوحيدة في الدولاب الذي يحتوي على قضبان.
- عند تركيب هذه الوحدة في دولاب شبه ممتلئ، قم برفع الدولاب من الجزء السفلي لأعلى بحيث يكون الجزء الأثقل وزناً أسفل الدولاب.
- إذا كان الدولاب المتضمن قضباناً يحتوي على أجهزة حفظ التوازن، قم بتثبيت هذه الأجهزة قبل تركيب الوحدة في الدولاب.

Upozorenje	<p>Kako ne bi došlo do tjelesnih ozljeda kod postavljanja ili servisiranja uređaja na polici, potrebno je poduzeti mjere predostrožnosti kako bi sustav uvijek bio stabilan. Sigurnost se može osigurati poštivanjem sljedećih smjernica:</p> <ul style="list-style-type: none"> <li>• Ovaj uređaj treba ugraditi na dno police, ukoliko je to jedini uređaj na polici.</li> <li>• Kod ugradnje uređaja u policu na kojoj se već nalaze drugi uređaji, policu treba opremiti počevši od dna, te tako da se na dno stave najteži dijelovi.</li> <li>• Ukoliko su na polici ugrađeni stabilizatori, njih montirajte prije ugradnje ili servisiranja uređaja na polici.</li> </ul>
Upozornění	<p>Abyste předešli poranění osob při montáži nebo opravě zařízení v montážním rámu, musíte dodržovat zvláštní preventivní opatření pro zajištění udržení stability systému. Pro zajištění bezpečnosti obsluhy jsou určeny následující zásady:</p> <ul style="list-style-type: none"> <li>• Pokud je toto zařízení jedinou jednotkou v montážním rámu, musí být namontováno na nejnižší místo rámu.</li> <li>• Pokud je toto zařízení montováno do částečně obsazeného montážního rámu, obsazujte montážní rám ve směru zdola nahoru tak, aby byla nejtěžší součást nejnižší.</li> <li>• Pokud je montážní rám vybaven stabilizačními zařízeními, nainstalujte stabilizátory ještě před montáží nebo opravou zařízení v montážním rámu.</li> </ul>
Προειδοποίηση	<p>Για να αποφύγετε τον τραυματισμό κατά την τοποθέτηση ή τη συντήρηση αυτής της συσκευής σε αρθρωτό σύστημα, πρέπει να λάβετε ειδικές προφυλάξεις για να διασφαλίσετε τη σταθερότητα του συστήματος. Οι παρακάτω οδηγίες παρέχονται για να εξασφαλίσουν την ασφάλειά σας:</p> <ul style="list-style-type: none"> <li>• Αυτή η συσκευή πρέπει να τοποθετείται στο κάτω μέρος του αρθρωτού συστήματος αν είναι η μοναδική συσκευή σε αυτό.</li> <li>• Όταν τοποθετείτε αυτήν τη συσκευή σε εν μέρει γεμάτο αρθρωτό σύστημα, τοποθετήστε συσκευές στο αρθρωτό σύστημα από κάτω προς τα επάνω, με τη βαρύτερη συσκευή στο κάτω μέρος του συστήματος.</li> <li>• Εάν το αρθρωτό σύστημα διαθέτει διατάξεις σταθεροποίησης, τοποθετήστε τους σταθεροποιητές πριν τοποθετήσετε ή συντηρήσετε τη συσκευή στο αρθρωτό σύστημα.</li> </ul>
אזהרה	<p>כדי למנוע פציעה בעת הרכבת יחידה זו במעמד או טיפול בה, עליך לנקוט אמצעי זהירות מיוחדים כדי להבטיח את יציבות המערכת. הקווים המנחים הבאים ניתנים על מנת להבטיח את ביטחונך:</p> <ul style="list-style-type: none"> <li>• אם יחידה זו היא יחידה בודדת במעמד, יש להרכיב את היחידה בחלקו התחתון של המעמד.</li> <li>• בעת הרכבת יחידה זו במעמד המלא בחלקו, טען את המעמד החל בחלק התחתון וכלפי מעלה כאשר הרכיב הכבד ביותר נמצא בחלקו התחתון של המעמד.</li> <li>• אם המעמד מסופק עם התקני ייצוב, התקן את המייצבים לפני הרכבה היחידה במעמד או טיפול בה.</li> </ul>

**Opomena** За да се не повредите кога го монтирате или го сервисирате уредот на полица, мора да бидете особено претпазливи за да ја обезбедите стабилноста на системот. Следите напатствија се дадени за да ја осигураат Вашата безбедност:

- Уредот треба да се монтира најдолу на полицата ако е единствен уред на полицата.
- Кога го монтирате уредот на делумно пополнета полица, полнете ја полицата од дното кон врвот со најтешката компонента на дното на полицата.
- Ако полицата има стабилизаторски делови, наместете ги стабилизаторите пред да го монтирате или сервисирате уредот на полицата.

**Ostrzeżenie** Aby zapobiec urazom podczas montażu lub serwisowania tego urządzenia w stojaku, należy zastosować szczególne środki ostrożności w celu zapewnienia stabilności układu. Poniżej przedstawiono wskazówki, których przestrzeganie zapewni bezpieczeństwo:

- Jeśli urządzenie to jest jedynym urządzeniem w stojaku, powinno być zamontowane na dole.
- W przypadku montażu urządzenia w częściowo zapełnionym stojaku należy instalować kolejne urządzenia od najniższego do najwyższego, przy czym element najcięższy powinien być zamontowany najniżej w stojaku.
- Jeśli stojak jest wyposażony w elementy stabilizujące, należy zamontować stabilizatory przed przystąpieniem do montażu lub serwisowania urządzeń w stojaku.

**Upozornenie** Aby ste predišli poraneniu osôb pri montáži alebo oprave zariadenia v montážnom ráme, musíte dodržiavať zvláštne preventívne opatrenia na zaistenie udržania stability systému. Na zaistenie bezpečnosti obsluhy sú určené nasledujúce zásady:

- Pokiaľ je toto zariadenie jedinou jednotkou v montážnom ráme, musí byť namontované na najnižšie miesto v ráme.
- Pokiaľ je toto zariadenie montované do čiastočne obsadeného montážneho rámu, obsadzujte montážny rám v smere zdola nahor tak, aby bola najťažšia súčasť najnižšie.
- Pokiaľ je montážny rám vybavený stabilizačnými zariadeniami, nainštalujte stabilizátory ešte pred montážou alebo opravou zariadenia v montážnom ráme.



**Figyelem** A készülék rackbe történő beszerelése és karbantartása során bekövetkező sérülések elkerülése végett speciális óvintézkedésekkel meg kell őrizni a rendszer stabilitását. A személyes biztonsága érdekében tartsa be a következő szabályokat:

- Ha a rackben csak ez az egy készülék található, a rack aljába kell beszerelni.
- Ha nincs teljesen tele az a rack, amelybe beszerelik a készüléket, alulról fölfelé haladva töltsse fel a racket úgy, hogy a legnehezebb készülék kerüljön a rack aljába.
- Ha stabilizáló eszközök is tartoznak a rackhez, szerelje fel a stabilizátorokat, mielőtt beszerelné az egységet a rackbe, vagy karbantartást végezne rajta.

**Предупреждение** Во избежание травм при монтаже и обслуживании устройства в стойке следует принять особые меры предосторожности, чтобы убедиться в устойчивости оборудования. Для обеспечения безопасности работ необходимо соблюдать следующие правила.

- Если в стойке находится одно устройство, оно должно быть установлено в нижней части.
- При монтаже устройств в частично заполненную стойку устанавливайте оборудование снизу вверх, размещая наиболее тяжелые устройства в нижней части.
- Если стойка снабжена приспособлениями для стабилизации, их необходимо установить до начала монтажа или обслуживания оборудования.

**警告** 为避免在机架中安装或维修该部件时使身体受伤，您必须采取特殊的预防措施确保系统固定。以下是确保安全的原则：

- 如果此部件是机架中唯一的部件，应将其安装在机架的底部。
- 如果在部分装满的机架中安装此部件，请按从下往上的顺序安装各个部件，并且最重的组件应安装在机架的底部。
- 如果机架配有固定装置，请先装好固定装置，然后再在机架中安装或维修部件。

**警告** この装置をラックに設置したり保守作業を行ったりするときは、人身事故を防ぐため、システムが安定しているかどうかを十分に確認する必要があります。次の注意事項に従ってください。

- ラックにこの装置を単独で設置する場合は、ラックの一番下に設置します。
- ラックに別の装置がすでに設置されている場合は、最も重量のある装置を一番下にして、重い順に下から上へ設置します。
- ラックに安定器具が付属している場合は、その安定器具を取り付けてから、装置をラックに設置するか、またはラック内の装置の保守作業を行ってください。

- 주의** 이 장치를 랙에 장착하거나 서비스할 때 신체 부상을 방지하려면, 시스템이 안정된 상태를 유지하도록 특별히 주의해야 합니다. 사용자의 안전을 위해 다음 지침 사항을 준수하십시오.
- 이 장치가 랙에 장착되는 유일한 것일 경우, 랙의 맨 아래 부분에 장착되어야 합니다.
  - 부분적으로 차 있는 랙에 이 장치를 장착할 경우, 가장 무거운 장치를 랙의 맨 아래 부분부터 차례로 장착하십시오.
  - 안정기가 랙과 함께 제공되는 경우, 이 안정기를 설치한 후 이 장치를 랙에 장착하거나 서비스하십시오.

**تحذير** لتجنب حدوث أي إصابات عند تركيب هذه الوحدة، يجب اتباع بعض الاحتياطات لضمان عمل النظام بشكل سليم. يتم ذكر الإرشادات التالية لضمان الأمان.

يجب تركيب هذه الوحدة في الجزء السفلي من الدولاب المتضمن قضبان إذا كانت هذه الوحدة هي الوحدة الوحيدة في الدولاب الذي يحتوي على قضبان.

عند تركيب هذه الوحدة في دولاب شبه ممتلئ، قم برفع الدولاب من الجزء السفلي لأعلى بحيث يكون الجزء الأثقل وزناً أسفل الدولاب.

إذا كان الدولاب المتضمن قضباناً يحتوي على أجهزة حفظ التوازن، قم بتثبيت هذه الأجهزة قبل تركيب الوحدة في الدولاب.

- Upozorenje** Kako ne bi došlo do tjelesnih ozljeda kod postavljanja ili servisiranja uređaja na polici, potrebno je poduzeti mjere predostrožnosti kako bi sustav uvijek bio stabilan. Sigurnost se može osigurati poštivanjem sljedećih smjernica:
- Ovaj uređaj treba ugraditi na dno police, ukoliko je to jedini uređaj na polici.
  - Kod ugradnje uređaja u policu na kojoj se već nalaze drugi uređaji, policu treba opremiti počevši od dna, te tako da se na dno stave najteži dijelovi.
  - Ukoliko su na polici ugrađeni stabilizatori, njih montirajte prije ugradnje ili servisiranja uređaja na polici.

- Upozornění** Abyste předešli poranění osob při montáži nebo opravě zařízení v montážním rámu, musíte dodržovat zvláštní preventivní opatření pro zajištění udržení stability systému. Pro zajištění bezpečnosti obsluhy jsou určeny následující zásady:
- Pokud je toto zařízení jedinou jednotkou v montážním rámu, musí být namontováno na nejnižší místo rámu.
  - Pokud je toto zařízení montováno do částečně obsazeného montážního rámu, obsazujte montážní rám ve směru zdola nahoru tak, aby byla nejtěžší součást nejnižší.
  - Pokud je montážní rám vybaven stabilizačními zařízeními, nainstalujte stabilizátory ještě před montáží nebo opravou zařízení v montážním rámu.

Προειδοποίηση	<p>Για να αποφύγετε τον τραυματισμό κατά την τοποθέτηση ή τη συντήρηση αυτής της συσκευής σε αρθρωτό σύστημα, πρέπει να λάβετε ειδικές προφυλάξεις για να διασφαλίσετε τη σταθερότητα του συστήματος. Οι παρακάτω οδηγίες παρέχονται για να εξασφαλίσουν την ασφάλειά σας:</p> <ul style="list-style-type: none"> <li>• Αυτή η συσκευή πρέπει να τοποθετείται στο κάτω μέρος του αρθρωτού συστήματος αν είναι η μοναδική συσκευή σε αυτό.</li> <li>• Όταν τοποθετείτε αυτήν τη συσκευή σε εν μέρει γεμάτο αρθρωτό σύστημα, τοποθετήστε συσκευές στο αρθρωτό σύστημα από κάτω προς τα επάνω, με τη βαρύτερη συσκευή στο κάτω μέρος του συστήματος.</li> <li>• Εάν το αρθρωτό σύστημα διαθέτει διατάξεις σταθεροποίησης, τοποθετήστε τους σταθεροποιητές πριν τοποθετήσετε ή συντηρήσετε τη συσκευή στο αρθρωτό σύστημα.</li> </ul>
אזהרה	<p>כדי למנוע פציעה בעת הרכבת יחידה זו במעמד או טיפול בה, עליך לנקוט אמצעי זהירות מיוחדים כדי להבטיח את יציבות המערכת. הקווים המנחים הבאים ניתנים על מנת להבטיח את ביטחונך:</p> <ul style="list-style-type: none"> <li>• אם יחידה זו היא יחידה בודדת במעמד, יש להרכיב את היחידה בחלקו התחתון של המעמד.</li> <li>• בעת הרכבת יחידה זו במעמד המלא בחלקו, טען את המעמד החל בחלק התחתון וכלפי מעלה כאשר הרכיב הכבד ביותר נמצא בחלקו התחתון של המעמד.</li> <li>• אם המעמד מסופק עם התקני ייצוב, התקן את המייצבים לפני הרכבה היחידה במעמד או טיפול בה.</li> </ul>
Opomena	<p>За да се не повредите кога го монтирате или го сервисирате уредот на полица, мора да бидете особено претпазливи за да ја обезбедите стабилноста на системот. Следите напатствија се дадени за да ја осигураат Вашата безбедност:</p> <ul style="list-style-type: none"> <li>• Уредот треба да се монтира најдолу на полицата ако е единствен уред на полицата.</li> <li>• Кога го монтирате уредот на делумно пополнета полица, полнете ја полицата од дното кон врвот со најтешката компонента на дното на полицата.</li> <li>• Ако полицата има стабилизаторски делови, наместете ги стабилизаторите пред да го монтирате или сервисирате уредот на полицата.</li> </ul>

- Ostrzeżenie** Aby zapobiec urazom podczas montażu lub serwisowania tego urządzenia w stojaku, należy zastosować szczególne środki ostrożności w celu zapewnienia stabilności układu. Poniżej przedstawiono wskazówki, których przestrzeganie zapewni bezpieczeństwo:
- Jeśli urządzenie to jest jedynym urządzeniem w stojaku, powinno być zamontowane na dole.
  - W przypadku montażu urządzenia w częściowo zapełnionym stojaku należy instalować kolejne urządzenia od najniższego do najwyższego, przy czym element najcięższy powinien być zamontowany najniżej w stojaku.
  - Jeśli stojak jest wyposażony w elementy stabilizujące, należy zamontować stabilizatory przed przystąpieniem do montażu lub serwisowania urządzeń w stojaku.
- Upozornenie** Aby ste predišli poraneniu osôb pri montáži alebo oprave zariadenia v montážnom ráme, musíte dodržiavať zvláštne preventívne opatrenia na zaistenie udržania stability systému. Na zaistenie bezpečnosti obsluhy sú určené nasledujúce zásady:
- Pokiaľ je toto zariadenie jedinou jednotkou v montážnom ráme, musí byť namontované na najnižšie miesto v ráme.
  - Pokiaľ je toto zariadenie montované do čiastočne obsadeného montážneho rámu, obsadzujte montážny rám v smere zdola nahor tak, aby bola najťažšia súčasť najnižšie.
  - Pokiaľ je montážny rám vybavený stabilizačnými zariadeniami, nainštalujte stabilizátory ešte pred montážou alebo opravou zariadenia v montážnom ráme.

## Equipment Installation Warning



### Warning

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

### Waarschuwing

Deze apparatuur mag alleen worden geïnstalleerd, vervangen of hersteld door bevoegd geschoold personeel.

### Varoitus

Tämän laitteen saa asentaa, vaihtaa tai huoltaa ainoastaan koulutettu ja laitteen tunteva henkilökunta.

### Attention

Il est vivement recommandé de confier l'installation, le remplacement et la maintenance de ces équipements à des personnels qualifiés et expérimentés.

### Warnung

Das Installieren, Ersetzen oder Bedienen dieser Ausrüstung sollte nur geschultem, qualifiziertem Personal gestattet werden.

<b>Avvertenza</b>	<b>Questo apparato può essere installato, sostituito o mantenuto unicamente da un personale competente.</b>
<b>Advarsel</b>	<b>Bare opplært og kvalifisert personell skal foreta installasjoner, utskiftninger eller service på dette utstyret.</b>
<b>Aviso</b>	<b>Apenas pessoal treinado e qualificado deve ser autorizado a instalar, substituir ou fazer a revisão deste equipamento.</b>
<b>¡Advertencia!</b>	<b>Solamente el personal calificado debe instalar, reemplazar o utilizar este equipo.</b>
<b>Varning!</b>	<b>Endast utbildad och kvalificerad personal bör få tillåtelse att installera, byta ut eller reparera denna utrustning.</b>
<b>Figyelem</b>	<b>A berendezést csak szakképzett személyek helyezhetik üzembe, cserélhetik és tarthatják karban.</b>
<b>Предупреждение</b>	Установку, замену и обслуживание этого оборудования может осуществлять только специально обученный квалифицированный персонал.
<b>警告</b>	只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。
<b>警告</b>	この装置の設置、交換、保守は、訓練を受けた相応の資格のある人が行ってください。
<b>주의</b>	교육을 받고 자격을 갖춘 사람만 이 장비를 설치, 교체, 또는 서비스를 수행해야 합니다.
<b>Aviso</b>	<b>Somente uma equipe treinada e qualificada tem permissão para instalar, substituir ou dar manutenção a este equipamento.</b>
<b>Advarsel</b>	<b>Kun uddannede personer må installere, udskifte komponenter i eller servicere dette udstyr.</b>
<b>تحذير</b>	يسمح للمنيين المتخصصين فقط بتركيب المعدة أو استبدالها أو إجراء الصيانة عليها.
<b>Upozorenje</b>	<b>Uređaj smije ugrađivati, mijenjati i servisirati samo za to obučeno i osposobljeno servisno osoblje.</b>
<b>Upozornění</b>	<b>Instalaci, výměnu nebo opravu tohoto zařízení směji provádět pouze proškolené a kvalifikované osoby.</b>
<b>Προειδοποίηση</b>	Η τοποθέτηση, η αντικατάσταση και η συντήρηση του εξοπλισμού επιτρέπεται να γίνονται μόνο από καταρτισμένο προσωπικό με τα κατάλληλα προσόντα.
<b>אזהרה</b>	

## Equipment Installation Warning

Оророна	Местењето, заменувањето и сервисирањето на оваа опрема треба да му биде дозволено само на обучен и квалификуван персонал.
<b>Ostrzeżenie</b>	<b>Do instalacji, wymiany i serwisowania tych urządzeń mogą być dopuszczone wyłącznie osoby wykwalifikowane i przeszkolone.</b>
<b>Upozornenie</b>	<b>Inštaláciu, výmenu alebo opravu tohto zariadenia smú vykonávať iba vyškolené a kvalifikované osoby.</b>
<hr/>	
Figyelem	<b>A berendezést csak szakképzett személyek helyezhetik üzembe, cserélhetik és tarthatják karban.</b>
<b>Предупреждение</b>	Установку, замену и обслуживание этого оборудования может осуществлять только специально обученный квалифицированный персонал.
警告	只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。
警告	この装置の設置、交換、保守は、訓練を受けた相応の資格のある人が行ってください。
주의	교육을 받고 자격을 갖춘 사람만 이 장비를 설치, 교체, 또는 서비스를 수행해야 합니다.
تحذير	يسمح للفنيين المتخصصين فقط بتركيب المعدة أو استبدالها أو إجراء الصيانة عليها.
<b>Upozorenje</b>	<b>Uređaj smije ugrađivati, mijenjati i servisirati samo za to obučeno i osposobljeno servisno osoblje.</b>
<b>Upozornění</b>	<b>Instalaci, výměnu nebo opravu tohoto zařízení smějí provádět pouze proškolené a kvalifikované osoby.</b>
Προειδοποίηση	Η τοποθέτηση, η αντικατάσταση και η συντήρηση του εξοπλισμού επιτρέπεται να γίνονται μόνο από καταρτισμένο προσωπικό με τα κατάλληλα προσόντα.
התראה	
Оророна	Местењето, заменувањето и сервисирањето на оваа опрема треба да му биде дозволено само на обучен и квалификуван персонал.

- Ostrzeżenie** Do instalacji, wymiany i serwisowania tych urządzeń mogą być dopuszczone wyłącznie osoby wykwalifikowane i przeszkolone.
- Upozornenie** Inštaláciu, výmenu alebo opravu tohto zariadenia smú vykonávať iba vyškolené a kvalifikované osoby.
- 

## Battery Handling



### Warning

There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Statement 1015

### Waarschuwing

Er is ontploffingsgevaar als de batterij verkeerd vervangen wordt. Vervang de batterij slechts met hetzelfde of een equivalent type dat door de fabrikant aanbevolen is. Gebruikte batterijen dienen overeenkomstig fabrieksvoorschriften weggegooid te worden.

### Varoitus

Räjähdyksen vaara, jos akku on vaihdettu väärään akkuun. Käytä vaihtamiseen ainoastaan samantai vastaavantyyppistä akkua, joka on valmistajan suosittelema. Hävitä käytetyt akut valmistajan ohjeiden mukaan.

### Attention

Danger d'explosion si la pile n'est pas remplacée correctement. Ne la remplacer que par une pile de type semblable ou équivalent, recommandée par le fabricant. Jeter les piles usagées conformément aux instructions du fabricant.

### Warnung

Bei Einsetzen einer falschen Batterie besteht Explosionsgefahr. Ersetzen Sie die Batterie nur durch den gleichen oder vom Hersteller empfohlenen Batterietyp. Entsorgen Sie die benutzten Batterien nach den Anweisungen des Herstellers.

### Avvertenza

Pericolo di esplosione se la batteria non è installata correttamente. Sostituire solo con una di tipo uguale o equivalente, consigliata dal produttore. Eliminare le batterie usate secondo le istruzioni del produttore.

### Advarsel

Det kan være fare for eksplosjon hvis batteriet skiftes på feil måte. Skift kun med samme eller tilsvarende type som er anbefalt av produsenten. Kasser brukte batterier i henhold til produsentens instruksjoner.

### Aviso

Existe perigo de explosão se a bateria for substituída incorrectamente. Substitua a bateria por uma bateria igual ou de um tipo equivalente recomendado pelo fabricante. Destrua as baterias usadas conforme as instruções do fabricante.

### ¡Advertencia!

Existe peligro de explosión si la batería se reemplaza de manera incorrecta. Reemplazar la batería exclusivamente con el mismo tipo o el equivalente recomendado por el fabricante. Desechar las baterías gastadas según las instrucciones del fabricante.

## Battery Handling

**Varning!** Explosionsfara vid felaktigt batteribyte. Ersätt endast batteriet med samma batterityp som rekommenderas av tillverkaren eller motsvarande. Följ tillverkarens anvisningar vid kassering av använda batterier.

**Figyelem** Robbanásveszélyt idézhet elő, ha helytelenül cserélik ki az akkumulátort. Csak a gyártó által javasolttal megegyező vagy azzal egyenértékű típusúra cserélje ki az akkumulátort! A használt akkumulátorok kidobásakor tartsa be a gyártó előírásait!

**Предупреждение** При неправильной замене батареи возможен взрыв. Для замены следует использовать батарею того же или аналогичного типа, рекомендованного изготовителем. Утилизацию батареи необходимо производить в соответствии с указаниями изготовителя.

**警告** 電池更換不當會有爆炸危險。請只用同類電池或製造商推薦的功能相當的電池更換原有電池。請按製造商的說明處理廢舊電池。

**警告** 不適切なバッテリーに交換すると、爆発の危険性があります。製造元が推奨するものと同じまたは同等のバッテリーだけを使用してください。使用済みのバッテリーは、製造元が指示する方法に従って処分してください。

**警告** 電池替換錯誤可能會發生爆炸。僅限以製造商建議的同樣或同款電池替換，並遵照製造商的指示處理使用過的電池。

**Figyelem** Robbanásveszélyt idézhet elő, ha helytelenül cserélik ki az akkumulátort. Csak a gyártó által javasolttal megegyező vagy azzal egyenértékű típusúra cserélje ki az akkumulátort! A használt akkumulátorok kidobásakor tartsa be a gyártó előírásait!

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# Product Disposal


**Warning**

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

**Waarschuwing**

**Het uiteindelijke wegruimen van dit product dient te geschieden in overeenstemming met alle nationale wetten en reglementen.**

**Varoitus**

**Tämä tuote on hävitettävä kansallisten lakien ja määräysten mukaisesti.**

**Attention**

**La mise au rebut ou le recyclage de ce produit sont généralement soumis à des lois et/ou directives de respect de l'environnement. Renseignez-vous auprès de l'organisme compétent.**

**Warnung**

**Die Entsorgung dieses Produkts sollte gemäß allen Bestimmungen und Gesetzen des Landes erfolgen.**

**Avvertenza**

**Lo smaltimento di questo prodotto deve essere eseguito secondo le leggi e regolazioni locali.**

**Advarsel**

**Endelig kassering av dette produktet skal være i henhold til alle relevante nasjonale lover og bestemmelser.**

**Aviso**

**Deitar fora este produto em conformidade com todas as leis e regulamentos nacionais.**

**¡Advertencia!**

**Al deshacerse por completo de este producto debe seguir todas las leyes y reglamentos nacionales.**

**Varning!**

**Vid deponering hanteras produkten enligt gällande lagar och bestämmelser.**

**Figyelem**

**A készülék végső elhelyezéséről az adott országban érvényes törvények és előírások szerint kell intézkedni.**

**Предупреждение**

**Окончательная установка данного изделия должна выполняться в соответствии со всеми региональными и местными правилами и нормами.**

**警告**

**本产品的废弃处理应根据所有国家的法律和规章进行。**

**警告**

**この製品を廃棄処分する際は、各国の法律および規制に従って取り扱ってください。**

**주의**

**시스템을 전원에 연결하기 전에 설치 지침을 읽으십시오.**

**Aviso**

**O descarte definitivo deste produto deve estar de acordo com todas as leis e regulamentações nacionais.**

**Advarsel**

**Endelig bortskaffelse af dette produkt skal ske i henhold til gældende love og regler.**

## Product Disposal

تحذير عند التخلص من المنتج يجب اتباع القوانين والتشريعات المحلية.

**Upozorenje** Zbrinjavanje ovoga proizvoda u otpad treba provesti u skladu s važećim zakonima i odredbama.

**Upozornění** **Upozornění: Likvidace tohoto výrobku musí být provedena podle platných zákonů a předpisů.**

Προειδοποίηση Η τελική απόρριψη αυτού του προϊόντος πρέπει να γίνεται σύμφωνα με όλους τους εθνικούς νόμους και κανονισμούς.

אזהרה סילוק סופי של מוצר זה חייב להיות בהתאם להנחיות ולחוקי המדינה.

Opomena Крајното фрлање на овој производ треба да се изврши во согласност со сите национални закони и прописи.

**Ostrzeżenie** **Ostateczna likwidacja tego urządzenia po jego wycofaniu z eksploatacji powinna odbywać się zgodnie z przepisami krajowymi.**

**Upozornenie** **Upozornenie Likvidácia tohto výrobku musí byť vykonaná podľa platných zákonov a predpisov.**

**Opozorilo** **Uničenje izdelka, ki ni več uporaben, mora potekati po državnih zakonih in predpisih.**

警告 本產品的最終處理必須遵照國家/地區的所有法律與法規。

**Figyelem** **A készülék végső elhelyezéséről az adott országban érvényes törvények és előírások szerint kell intézkedni.**

**Предупреждение** Окончательная установка данного изделия должна выполняться в соответствии со всеми региональными и местными правилами и нормами.

警告 本產品的廢棄處理應根據所有國家的法律和規章進行。

警告 この製品を廃棄処分する際は、各国の法律および規制に従って取り扱ってください。

주의 해당 국가의 관련 법규 및 규정에 따라 이 장치를 폐기해야 합니다.

تحذير	عند التخلص من المنتج يجب اتباع القوانين والتشريعات المحلية.
Upozorenje	Zbrinjavanje ovoga proizvoda u otpad treba provesti u skladu s važećim zakonima i odredbama.
Upozornění	Upozornění: Likvidace tohoto výrobku musí být provedena podle platných zákonů a předpisů.
Προειδοποίηση	Η τελική απόρριψη αυτού του προϊόντος πρέπει να γίνεται σύμφωνα με όλους τους εθνικούς νόμους και κανονισμούς.
אזהרה	סילוק סופי של מוצר זה חייב להיות בהתאם להנחיות ולחוקי המדינה.
Опoмена	Крајното фрлање на овој производ треба да се изврши во согласност со сите национални закони и прописи.
Ostrzeżenie	Ostateczna likwidacja tego urządzenia po jego wycofaniu z eksploatacji powinna odbywać się zgodnie z przepisami krajowymi.
Upozornenie	Upozornenie Likvidácia tohto výrobku musí byť vykonaná podľa platných zákonov a predpisov.
Opozorilo	Uničenje izdelka, ki ni več uporaben, mora potekati po državnih zakonih in predpisih.
警告	本產品的最終處理必須遵照國家/地區的所有法律與法規。

## Power Cable and AC Adapter

接続ケーブル、電源コード、ACアダプタ、バッテリーなどの部品は、必ず添付品または指定品をご使用ください。添付品・指定品以外の部品をご使用になると故障や動作不良、火災の原因となります。また、電気用品安全法により、当該法の認定（PSEとコードに表記）でなくUL認定（ULまたはCSAマークがコードに表記）の電源ケーブルは弊社が指定する製品以外の電気機器には使用できないためご注意ください。

### Statement 371





## Regulatory Information

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This appendix provides regulatory information for the Cisco 3350 Mobility Services Engine.

### **FCC Statement for Cisco 3350 Series Mobility Services Engine**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### **Declaration of Conformity with Regard to the EU Directive 1999/5/EC (R&TTE Directive)**

This declaration is only valid for configurations (combinations of software, firmware and hardware) provided and/or supported by Cisco Systems. The use software or firmware not supported/provided by Cisco Systems may result that the equipment is no longer compliant with the regulatory requirements.

## Statement 191—VCCI Class A Warning for Japan

**Warning**

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**This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.**

**警告**

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A