



Cisco 2700 Series Location Appliance Installation and Configuration Guide

March 2008

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Cisco 2700 Series Location Appliance Installation and Configuration Guide
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CONTENTS

Preface	v
Purpose	v
Organization	v
Conventions	v
Related Publications	vii
If You Need More Information	viii
Troubleshooting	viii
Obtaining Documentation, Support, and Security Guidelines	viii

CHAPTER 1

Overview	1
System Overview	1
Front and Back Panel Components	2

CHAPTER 2

Installation and Initial Configuration	1
Collecting Required Tools and Information	2
Location Appliance Hardware	2
CLI Console Requirements	2
Cisco WCS Server	2
System Configuration Parameters	2
Choosing a Physical Location	3
Installing the Chassis	3
Connecting and Using the CLI Console	4
Powering On the Location Appliance	6
Configuring the Location Appliance	6
Automatic Installation Script	7
Manual Installation Script	10
Configuring an NTP Server	12
Launching the Location Appliance	13
Connecting to the Network	13
Verifying the Location Appliance Software State	13

Manually Stopping Location Appliance Software 14

Updating Location Appliance Software 15

 Downloading Software Using the WCS Server 16

 Downloading Software Using a Console Port 17

Operational Notes 18

 Recovering a Lost Root Password 18

 Using HTTPS or Non-Default Ports 18

APPENDIX A

Safety Considerations and Translated Safety Warnings 1

Safety Considerations 2

Warning Definition 2

Ground Conductor Warning 5

Chassis Warning for Rack-Mounting and Servicing 7

Equipment Installation Warning 16

APPENDIX B

Regulatory Information 1

FCC Statement for Cisco 2700 Series Location Appliances 1



Preface

This guide describes installation and preliminary configuration for Cisco 2700 and 2710 series location appliances. This guide is for the networking professional who installs and manages these devices. To use this guide, you should be familiar with the concepts and terminology of wireless LANs.

Purpose

This guide provides the information you need to install and initially configure a location appliance. For detailed information on configuring the location appliance please refer to the *Cisco Location Appliance Configuration Guide*.

Organization

This guide is organized into these chapters:

- Chapter 1, “Overview” which describes the location appliance and its role in your network.
- Chapter 2, “Installation” which describes how to install and initially configure your location appliance.
- Appendix A, “Safety Considerations and Translated Safety Warnings”
- Appendix B, “Regulatory Information”

Conventions

This publication uses these conventions to convey instructions and information:

Command descriptions use these conventions:

- Commands and keywords are in boldface text.
- Arguments for which you supply values are in italic.
- Square brackets ([]) mean optional elements.
- Braces ({ }) group required choices, and vertical bars (|) separate the alternative elements.
- Braces and vertical bars within square brackets ({ | }) mean a required choice within an optional element.

Interactive examples use these conventions:

- Terminal sessions and system displays are in `screen` font.
- Information you enter is in **boldface screen** font.
- Nonprinting characters, such as passwords or tabs, are in angle brackets (<>).

Notes, cautions, and timesavers use these conventions and symbols:



Tip

Means the following will help you solve a problem. The tips information might not be troubleshooting or even an action, but could be useful information.



Note

Means reader take note. Notes contain helpful suggestions or references to materials not contained in this manual.



Caution

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



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. (To see translations of the warnings that appear in this publication, refer to the appendix “Translated Safety Warnings.”)

Waarschuwing

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 standaard maatregelen om ongelukken te voorkomen. (Voor vertalingen van de waarschuwingen die in deze publicatie verschijnen, kunt u het aanhangsel “Translated Safety Warnings” (Vertalingen van veiligheidsvoorschriften) raadplegen.)

Varoitus

Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista. (Tässä julkaisussa esiintyvien varoitusten käännökset löydät liitteestä “Translated Safety Warnings” (käännetyt turvallisuutta koskevat varoitukset).)

Attention

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures. Avant d'accéder à cet équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures courantes de prévention des accidents. Pour obtenir les traductions des mises en garde figurant dans cette publication, veuillez consulter l'annexe intitulée « Translated Safety Warnings » (Traduction des avis de sécurité).

Warnung	Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewusst. (Übersetzungen der in dieser Veröffentlichung enthaltenen Warnhinweise finden Sie im Anhang mit dem Titel "Translated Safety Warnings" (Übersetzung der Warnhinweise).)
Avvertenza	Questo simbolo di avvertenza indica un pericolo. Si è in una situazione che può causare infortuni. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti. La traduzione delle avvertenze riportate in questa pubblicazione si trova nell'appendice, "Translated Safety Warnings" (Traduzione delle avvertenze di sicurezza).
Advarsel	Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du være oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker. (Hvis du vil se oversettelser av de advarslene som finnes i denne publikasjonen, kan du se i vedlegget "Translated Safety Warnings" [Oversatte sikkerhetsadvarsler].)
Aviso	Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos físicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes. (Para ver as traduções dos avisos que constam desta publicação, consulte o apêndice "Translated Safety Warnings" - "Traduções dos Avisos de Segurança").
¡Advertencia!	Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes. (Para ver traducciones de las advertencias que aparecen en esta publicación, consultar el apéndice titulado "Translated Safety Warnings.")
Varning!	Denna varningssymbol 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 vanligt förfarande för att förebygga skador. (Se förklaringar av de varningar som förekommer i denna publikation i appendix "Translated Safety Warnings" [Översatta säkerhetsvarningar].)

Related Publications

These documents provide complete information about the Cisco Wireless LAN Solution:

- *Cisco Location Appliance Configuration Guide*
- *Cisco Location Appliance Release Notes*
- *Cisco Wireless Control System Configuration Guide*

These documents are found at the following links:

http://www.cisco.com/en/US/products/ps6386/products_installation_and_configuration_guides_list.html

http://www.cisco.com/en/US/products/ps6305/products_installation_and_configuration_guides_list.html

If You Need More Information

If you need information about a specific caveat that does not appear in these release notes, you can use the Cisco Bug Toolkit to find caveats of any severity. Click this URL to browse to the Bug Toolkit:

http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl

(If you request a defect that cannot be displayed, the defect number might not exist, the defect might not yet have a customer-visible description, or the defect might be marked Cisco Confidential.)

Troubleshooting

For the most up-to-date, detailed troubleshooting information, refer to the Cisco TAC website at:

<http://www.cisco.com/tac>

Click **Troubleshooting**. Then choose your product and then select the **Troubleshoot and Alerts** heading on the product page to find information on the problem you are experiencing and other service advisories.

Obtaining Documentation, Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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CHAPTER 1

Overview

This chapter describes the Cisco 2700 and 2710 series location appliances and their role in your network.

System Overview

Cisco 2700 and 2710 series location appliances operate within the Cisco Wireless LAN Solution infrastructure.

The location appliance is a slim 19 x 23 x 1.7 in. (48.3 x 58.4 x 4.3 cm) one-rack chassis designed to be mounted in a standard 19-in. (48.3-cm) EIA equipment rack.

Location appliances compute, collect, and store historical location data using Cisco wireless LAN controllers and access points to track the physical location of wireless devices. In this role, the location appliance acts as a server to one or more Cisco WCS servers.

Up to 2,500 laptop clients, palmtop clients, VoIP telephone clients, active Radio Frequency Identifier (RFID) asset tags, rogue access points and clients can be tracked.

The command-line interface (CLI) is used for initial configuration at startup, thereafter, the Cisco WCS interface is used for all location appliance configuration, operation, and data display.

After it is configured, each location appliance communicates directly with its associated controllers to collect operator-defined location data. The associated Cisco WCS server operators can then communicate with each location appliance to transfer and display operator-selected data.

The location appliance database is backed up on any WCS server, and its database is restored using that same WCS server at both operator-defined intervals and on an ad hoc basis. Similarly, the location appliance database is synchronized with the Cisco WCS Server database on a configured, periodic basis or on an ad hoc basis.

Operators can download new application code to all associated location appliances from any Cisco WCS Server using Cisco WCS 3.0 or later. Note that the other location appliance features and functions can be accessed from any version of Cisco WCS, but the application code download can be performed only from Cisco WCS 3.0 or later.

Operators can configure location appliances to collect data for Cisco Wireless LAN Solution clients, rogue access points and clients, active RFID asset tags, and statistics at separate operator-defined intervals.

Front and Back Panel Components

The location appliance uses two redundant back-panel 10/100/1000BASE-T ports to connect to one or two network segments. These ethernet port interfaces are identified as ethernet0 (eth0) and ethernet 1 (eth01).

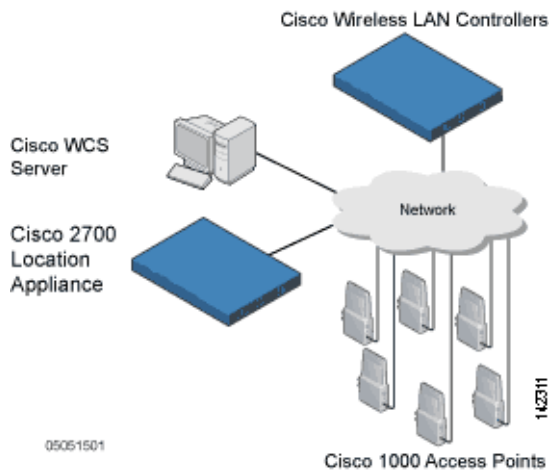
Either the Ethernet 0 or Ethernet 1 port can be used to transmit location updates to WCS. However, Ethernet 0 is generally configured to communicate with WCS and Ethernet 1 port is generally used for out-of-band management. Both ports are configured as part of the installation script described in Chapter 2.

The ON/OFF switch is on the front panel and the power cord on the back panel. The location appliance includes a back-panel DB-9 console port for initial configuration using a CLI console.

Note that each location appliance can be installed in any Network Operations Center (NOC) or wiring closet from which it can communicate with its associated Cisco WCS Servers and controllers.

Figure 1-1 shows the location appliance in a typical network configuration.

Figure 1-1 Location Appliance in a Typical Network Configuration





CHAPTER 2

Installation and Initial Configuration

This chapter describes how to initially install and configure your Cisco 2700 or 2710 Series Location Appliance.

This chapter contains these sections:

- [Collecting Required Tools and Information, page 2-2](#)
- [Choosing a Physical Location, page 2-3](#)
- [Installing the Chassis, page 2-3](#)
- [, page 2-4](#)
- [Powering On the Location Appliance, page 2-6](#)
- [Configuring the Location Appliance, page 2-6](#)
- [Launching the Location Appliance, page 2-13](#)
- [Connecting to the Network, page 2-13](#)
- [Verifying the Location Appliance Software State, page 2-13](#)
- [Manually Stopping Location Appliance Software, page 2-14](#)
- [Updating Location Appliance Software, page 2-15](#)
- [Operational Notes, page 2-18](#)



Note

For configuration details beyond initial installation, refer to the following documentation:

- *Cisco Location Appliance Configuration Guide*
- *Cisco Wireless Control System Configuration Guide*

This documentation can be found at the following links:

http://www.cisco.com/en/US/products/ps6386/products_installation_and_configuration_guides_list.html

http://www.cisco.com/en/US/products/ps6305/products_installation_and_configuration_guides_list.html

Collecting Required Tools and Information

This section lists the tools and information you need to install and configure the location appliance.

Location Appliance Hardware

You need this location appliance hardware:

- A location appliance
- Network cables
- One rack unit (RU) in a EIA-standard rack

CLI Console Requirements

You need this equipment to connect to the location appliance console:

- VT-100 terminal emulator on CLI console laptop, desktop, or palmtop
- Null modem serial cable to connect CLI console and location appliance DB-9 console port

Cisco WCS Server

You need a built-in Cisco WCS 3.0 or later FTP server required for location appliance software updates.



Note

Cisco WCS uses an integral FTP server. Third-party FTP servers cannot run on the same workstation as WCS because they use the same communication port.



Note

Please refer to the location appliance release notes for WCS and location appliance compatibility updates at http://www.cisco.com/en/US/products/ps6386/prod_release_notes_list.html.

System Configuration Parameters

Obtain these environmental parameters from your network administrator:

- A host name for the location appliance
- A broadcast address for the location appliance
- An IP address for the Ethernet-0 (eth0) port (location appliance back panel)
- A net mask for the eth0 port
- An IP address for the eth0 port gateway
- An IP address for the Ethernet-1 (eth1) port (location appliance back panel) (installation optional)
- A net mask for the eth1 port (only required if eth1 is installed)
- A IP address for the eth1 port gateway (only required if e1 is installed)

**Note**

Either the Ethernet 0 or Ethernet 1 port can be used to transmit location updates to WCS. However, Ethernet 0 is generally configured to communicate with WCS and 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 Location Appliance”](#) section on page 2-6.

Choosing a Physical Location

The location appliance can be installed almost anywhere, but security and reliability concerns can be addressed by installing the location appliance in a secure equipment room or wiring closet.

For maximum reliability, mount the location appliance using the following guidelines:

- Install the location appliance in a EIA-standard rack. Verify that one rack unit (RU) is required for each location appliance.
- Ensure that there is sufficient room at the back of the location appliance for all cables and connectors.
- Ensure you can reach the location appliance and all cables.
- Ensure that water or excessive moisture cannot get into the location appliance.
- Ensure that airflow through the location appliance is not obstructed. Leave at least 4 inches clear on the front, right, and back sides of the location appliance chassis.
- Verify that the ambient temperature remains between 0 and 40° C (32 and 104° F).
- Ensure the location appliance 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.

Installing the Chassis

**Warning**

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

The location appliance is shipped with integral rack-mounting ears ([Figure 2-1](#)). Mount the location appliance as follows:

- When you are mounting the location appliance in an EIA-standard rack (one rack unit required), attach the integral mounting ears to the equipment rack using the factory-supplied screws.

Figure 2-1 Cisco 2700 and 2710 Front Panel

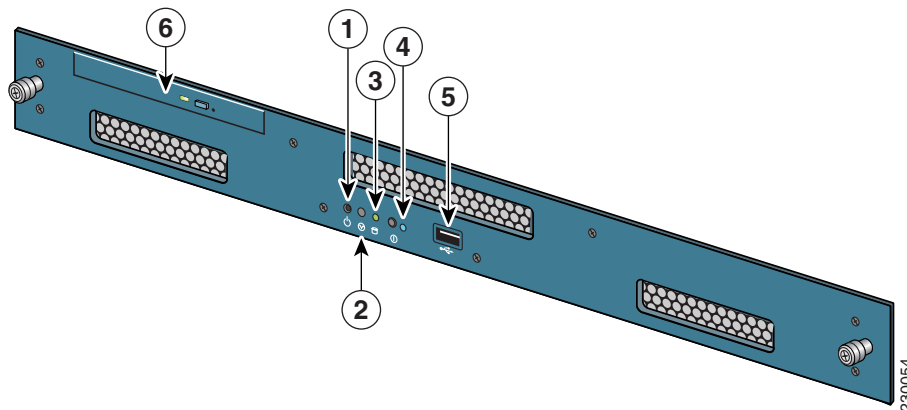


Table 2-1 Front Panel Components

Item No.	Description
1	Power switch. Press to turn system on or off. To power off, press and hold power switch for 4 seconds.
2	Reserved.
3	Hard drive indicator.
4	System LED. See Table 2-2 for details.
5	USB port (Reserved). Do not use as console port.
6	DVD tray (Reserved).

Table 2-2 System LED

Color	System Status
Blinking Amber	Indicates an event has occurred such as open system lid, incorrect fan speed, temperature or power supply tolerance exceeded.
Blinking Blue	Blinks on front and rear panel when the (I) button on the front panel is pressed and there are no outstanding events. Back panel blue light is designed to identify the unit within a rack mount.

Connecting and Using the CLI Console

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

Use these terminal emulator settings for the CLI console session:

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

Figure 2-2 Cisco 2700 and 2710 Back Panel

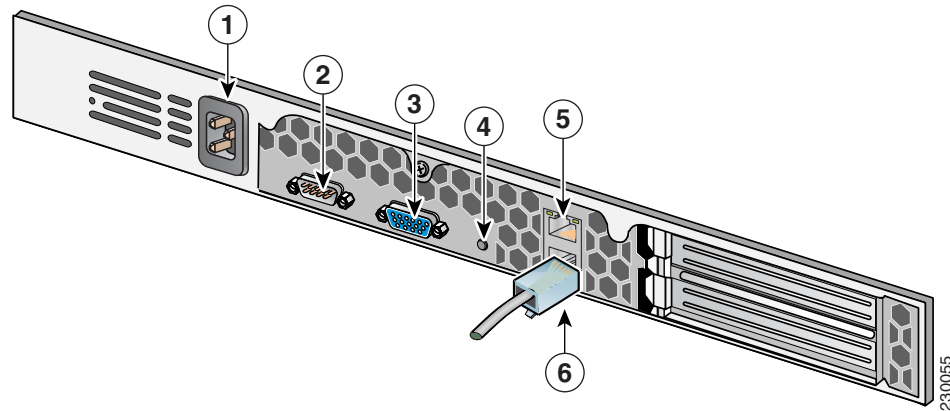


Table 2-3 Back Panel Components

Item No.	Description
1	AC power receptacle.
2	Console/serial DB-9 port.
3	Video output (Reserved).
4	Reserved.
5	Ethernet 0 connector.
6	Ethernet 1 connector.

Table 2-4 Pin Assignments for DB9 Pinout

Pin	Assignments	Description
1	DCD	Data Carrier Detect
2	RD	Receive Data
3	TD	Transmit Data

Table 2-4 Pin Assignments for DB9 Pinout (continued)

Pin	Assignments	Description
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

Powering On the Location Appliance

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

Follow these steps to power up the location appliance:

-
- Step 1** Plug an AC power cord into the back of the location appliance ([Figure 2-2](#), Item 1), 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 location appliance conforms with the IEC 320 standard.
- Step 2** Use the front-panel ON/OFF switch to turn the location appliance on ([Figure 2-1](#), Item 1).
- Step 3** At the login prompt, enter the location appliance 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 location appliance operating system.
- Continue to the [“Configuring the Location Appliance” section on page 2-6](#).
-

Configuring the Location Appliance

Minimal configuration is done for the location appliance as part of installation using the console. All configuration beyond the initial installation can be done with WCS.

Both an automatic and manual installation script are available depending on the software version.

- For all releases after 2.1.x, an automatic installation script appears after the system has powered up and the user ID and password are entered. Details are provided in the [“Automatic Installation Script” section on page 2-7](#).

- For all releases prior to 2.1.x, manual entry of the installation instructions using the console port is required. Details on the manual installation script is provided in the [“Manual Installation Script” section on page 2-10](#).

**Note**

You must change the default root password during initial configuration of the location appliance to ensure optimum network security.

- For releases 2.1.x and later, 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

Follow these steps to configure the location appliance using the automatic script (available for releases 2.1.x and later):

Script displays the following to the screen:

localhost.localdomain login:

- Enter the login *root*.

Password:

- Enter the password *setup*.

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.

Current hostname=[localhost]

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

The host name is a unique name that can identify the device on the network.

Enter a host name [localhost]:

The host name should start with a letter, end with a letter or number, and contain only letters, numbers, and dashes.

Current domain=[localdomain]

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

A domain name specifies to which network domain this device belongs.

Enter a domain name [localdomain]:

The domain name should start with a letter, end with a valid domain name suffix (such as .com), and contain only letters, numbers, dashes, and dots.

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

Press **Enter** to choose **Yes**.

Enter root password:

Confirm root password:

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

Remote root login is currently disabled.

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

To enable root login over secure shell for this machine, choose **Yes**. This allows a *root* login both from the console and using secure shell (SSH) version 2 (v2). Otherwise, choose **Skip**. If you choose to leave remote root login disabled, then a *root* login can only occur from the console.

Enable remote root login (yes/no) [no]

Choose **Yes** to allow remote login through SSH v2 in addition to console login. Choose no to allow *root* login only from the console.

Current IP address=[]

Current eth0 netmask=[]

Current gateway address=[]

Configure eth0 interface parameters? (Y)es/(S)kip/(U)se default [Yes]:

Choose **Yes** to begin setup for the main ethernet interface.

Enter eth0 IP address:

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

Enter network mask [255.255.0.0]:

Enter the network mask for the IP address you provided.

Enter default gateway address:

Provide the default gateway that must be reachable from the main ethernet (eth0) interface.

The second ethernet interface is currently disabled for this machine.

Configure eth1 interface parameters? (Y)es/(S)kip/(U)se default [Yes]:

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

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

Note Entry of a second ethernet interface (eth1) can be skipped by entering **none**, and the next prompt you would see is for DNS setup.

Enter eth1 IP address [none]:

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

Enter network mask [255.0.0.0]:

Enter the network mask for the IP address you specified.

Note Because 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.

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 network [none]:

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

Enter network mask [255.0.0.0]:

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

Enter gateway address:

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

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 [Yes]:

You can enter up to three DNS servers, but you can also leave it disabled. No servers have been defined.

Enable DNS (yes/no) [yes]:

Choose **Yes** to enable DNS.

Enter primary DNS server IP address:

Enter the IP address for this DNS server.

Enter backup DNS server IP address (or none) [none]:

Enter the backup IP address. If you enter a second DNS server, you are prompted for an optional third server.

Configure timezone? (Y)es/(S)kip/(U)se default [Yes]:

Choose **Yes** to configure the timezone.

Please identify a location so that time zone rules can be set correctly.

Please select a continent or ocean.

- 1) Africa
- 2) Americas
- 3) Antarctica
- 4) Arctic Ocean
- 5) Asia
- 6) Atlantic Ocean
- 7) Australia
- 8) Europe
- 9) Indian Ocean
- 10) Pacific Ocean
- 11) UTC - I want to use Coordinated Universal Time.
- 12) Return to previous setup step (^).

You need to select a location so that time zone rules can be set correctly. Choose the number for the appropriate continent or ocean.

Please select a country.

You are given a choice of countries based on the continent or ocean you selected. Choose the appropriate number.

Please select one of the following time zone regions.

Enter the number for the desired time zone region based on the country you selected.

The timezone information you chose is given.

Is the above information OK?

- 1) Yes
- 2) No

Choose **Yes** to verify if the information is correct. If No, you will be taken through the series of prompts again.

NTP is currently disabled.

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

If you choose to enable network time protocol (NTP), the system is configured from the NTP servers you select. If you choose Skip, you are prompted to enter the current date and time.

Enable NTP (yes/no) [no]:

If you choose Yes, you will be required to enter an NTP server name or address.

Enter NTP server name or address:

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

All of your selections are shown. You are then 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 yes, the configuration information will be applied. Cisco recommends that you reboot the system when prompted to ensure that changes occur.

**Note**

The message "***Configuration successful***" appears on the screen when complete.

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

The setup script generates a log file that can be found at `/opt/locserver/logs/setup.log`.

Manual Installation Script

Follow these steps to manually configure the location appliance (required for releases earlier than 2.1.x):

-
- Step 1** Verify that the location appliance application software is loaded on the hard drive.
- a. In the location appliance CLI interface, go to the application directory, enter **ls** to list the directory contents, and verify that the script file `locserverd` is in the `/etc/init.d` directory.
 - b. If the `/etc/init.d` application directory does not contain the location appliance software, load the location appliance software as described in the [“Downloading Software Using a Console Port” section on page 2-17](#).
- Step 2** Change the location appliance environment variables for your network. Use the System Configuration Parameter information collected and referenced in the [“Collecting Required Tools and Information” section on page 2-2](#) and follow these steps:
- a. Verify that the location appliance application is not running:


```
# /opt/locserver/bin/getserverinfo
-- OR --
# /etc/init.d/locserverd status
com.aes.common.util.AesException: Failed to connect to server: http://localhost: 8001
    at com.aes.client.AesClient.connect(AesClient.java:183)
    at com.aes.location.test.AesAbstractTest.init(AesAbstractTest.java:179)
    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)
#
```
 - b. If the result in Step a shows that the location appliance is running, stop the location appliance application:


```
# /etc/init.d/locserverd stop
Shutting down locserverd: Request server shutdown now...
Waiting for server...2 secs
Waiting for server...4 secs
Server shutdown complete.
#
```
 - c. (Optional) If necessary, use the **vi** editor to change the following line in the `/etc/hosts` file to name the location appliance:


```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1          <Location Appliance hostname> localhost.localdomain localhost
```

- d. Use the **vi** editor to change the following lines in the `/etc/sysconfig/network` file to create the location appliance hostname and gateway:

```
NETWORKING=yes
HOSTNAME=<Location Appliance hostname>
GATEWAY=<Gateway IP Address>
```



Note When the location appliance is a dual-home machine, this gateway is used for both ports.

- e. Use the **vi** editor to change the following lines in the `/etc/sysconfig/network-scripts/ifcfg-eth0` file to create the location appliance broadcast address, IP address, netmask, network, and gateway for back-panel Ethernet Port 0:

```
Intel Corp. |82547GI Gigabit Ethernet Controller
DEVICE=eth0
BOOTPROTO=none
BROADCAST=<Broadcast Address>
IPADDR=<Ethernet-0 IP Address>
NETMASK=<Ethernet-0 Netmask>
NETWORK=<Network IP Address>
ONBOOT=yes
TYPE=Ethernet
USERCTL=no
PEERDNS=yes
GATEWAY=<Gateway-0 IP Address>
```

- f. (Optional) If you need to use the second Ethernet port, use the **vi** editor to change the following lines in the `/etc/sysconfig/network-scripts/ifcfg-eth1` file to create the location appliance broadcast address, IP address, netmask, network, and gateway for back-panel Ethernet Port 1.

```
Intel Corp. |82547GI Gigabit Ethernet Controller
DEVICE=eth1
BOOTPROTO=none
BROADCAST=<Broadcast Address>
IPADDR=<Ethernet-1 IP Address>
NETMASK=<Ethernet-1 Netmask>
NETWORK=<Network IP Address>
ONBOOT=yes
TYPE=Ethernet
USERCTL=no
PEERDNS=yes
GATEWAY=<Gateway-1 IP Address>
```



Note For best results, configure only one gateway for the location appliance.

- g. To restart the location appliance network interface values, enter **service network restart** and select **OK** to reboot the location appliance.
- h. To change the location appliance date and time, enter:

```
# /bin/date -s "11/20/2005 12:48:00"
# /sbin/hwclock --utc --systohc
```



Note After the appliance is started, you must stop it before you can change the date, time, or timezone.

- i. To change the location appliance timezone, copy the appropriate timezone file to `/etc/localtime`:

```
# cp /usr/share/zoneinfo/<your country>/<your timezone> /etc/localtime
```

Verify that the file `/etc/sysconfig/clock` is defined as the following without any ZONE specified:

```
UTC=true
ARC=false
```

Configuring an NTP Server

You can configure NTP servers to set up the time and date of the 2700 and 2710 location appliances.



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 *Cisco 2700 Series Wireless Location Appliance Installation and Configuration Guide* at the following link: http://www.cisco.com/en/US/products/ps6386/prod_installation_guides_list.html

The `/etc/ntp.conf` file is the main configuration file in which you place the IP addresses or DNS names of the NTP servers you want to use (see the following example).

```
server ntp.mydomain.com # my corporate NTP
server 192.168.2.5 # my second NTP
```

To get NTP configured to start at bootup, enter the following:

```
[root@loc-server1]# chkconfig ntpd on
```

To start, stop, and restart NTP after booting, follow these examples:

```
[root@loc-server1]# service ntpd start
[root@loc-server1]# service ntpd stop
[root@loc-server1]# service ntpd restart
```

After configuring and starting NTP, make sure it is working properly. To test whether the NTP process is running, use the following command:

```
[root@loc-server1]# pgrep ntpd
```

You should get a response of plain old process ID numbers.

Enter the `ntpdate -u<serverIP>` command to force your server to become instantly synchronized with its NTP servers before starting the NTP daemon for the first time (see the following example).

```
[root@loc-server1]# service ntpd stop
[root@loc-server1] ntpdate -u 192.168.1.100
Looking for host 192.168.1.100 and service ntp
host found: ntpl.my-site.com
12 Aug 08:03:38 ntpdate[2472]: step time server 192.168.1.100 offset 28993.084943 sec
[root@smallfry tmp]# service ntpd start
```



Note

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

Launching the Location Appliance

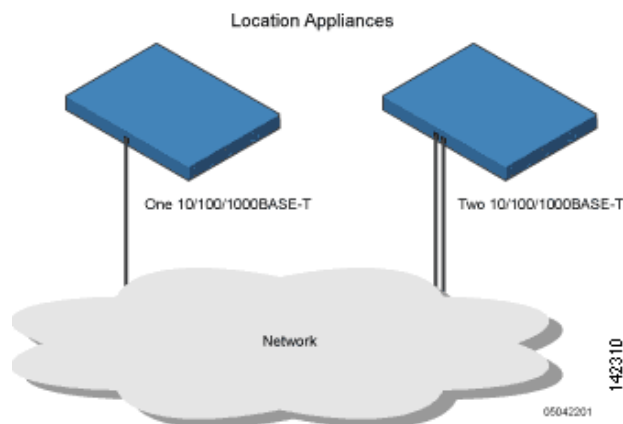
The location appliance automatically launches its application software upon reboot.

To start the application manually, enter `/etc/init.d/locserverd start`.

Connecting to the Network

Figure 2-3 shows two possible connections from the network to the location appliance. Use Ethernet Category-5 or higher Ethernet cables to connect the location appliance to your network equipment.

Figure 2-3 Network Connections to the Location Appliance



Verifying the Location Appliance Software State

You can verify the location appliance software state at any time. In the location appliance CLI interface, enter `/opt/locserver/bin/getserverinfo`. If the location appliance is running, the command output looks like this example:

```

-----
Server Config
-----
Product name: Cisco Wireless Location Appliance
Version: 2.1.39.0
Use HTTPS: false
Port: 8001
Log Modules: 4036
Log Level: TRACE
Days to keep events: 2
Keep absent data in mins: 1440
Session timeout in mins: 30
DB backup in days: 0
-----
Server Monitor
-----
Start time: Tue May 03 10:30:45 PDT 2006
Server current time: Wed May 04 12:10:44 PDT 2006
Server timezone: America/Los_Angeles

```

```

Restarts: 0
Used Memory: 7849768
Allocated Memory: 17477632
Max Memory: 530907136
DB virtual memory: 14501
DB disk memory: 81952768
Active Sessions: 3
-----
Active Sessions
-----
Session ID: 25994
Session User ID: 1
Session IP Address: 127.0.0.1
Session start time: Wed May 04 12:10:44 PDT 2006
Session last access time: Wed May 04 12:10:44 PDT 2006
Session ID: 5693
Session User ID: 1
Session IP Address: 1.100.52.13
Session start time: Tue May 03 10:31:15 PDT 2006
Session last access time: Wed May 04 12:06:19 PDT 2006
Session ID: 16228
Session User ID: 1
Session IP Address: 1.100.52.11
Session start time: Tue May 03 10:39:22 PDT 2006
Session last access time: Wed May 04 12:09:59 PDT 2006
#

```

If the location appliance 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 Location Appliance Software

The location appliance software automatically runs after initial configuration and each reboot. To manually stop the software, enter `/etc/init.d/locserverd stop`.

Updating Location Appliance Software

You can update the location appliance using the WCS server or manually download the software using a console port connected to the location appliance.

**Note**

For the latest WCS and location appliance compatibility and installation notes, refer to the appropriate location release note at http://www.cisco.com/en/US/products/ps6386/prod_release_notes_list.html.

Before downloading and updating software on the location appliance, note the following:

- The location appliance (server) image is compressed.
 - If upgrading a location appliance installed with a pre-2.0 version, you must first download and decompress the file (`gzip -d imageFilename`) **before** installing the image. After decompressing the file, run the resulting *.bin installer file.

Enter the following command after the file download to make the file executable:

```
chmod + x. *.bin
```

- If upgrading a location appliance installed with 2.0 or later version of the location server image already installed, the software image automatically decompresses during its download from WCS.
- A backup of location appliance software releases 2.0.x and later cannot be restored on any location appliance running an earlier software release.
 - Before you upgrade a location appliance to 2.0.x release or later, Cisco recommends that you create a backup of the earlier release and archive it. This will enable you to convert an upgraded system to an earlier release, if necessary.
- SSH version 1 (v1) is no longer supported in releases 2.1.x and later due to known security issues; however, SSH v2 is supported
 - If you are installing release 2.1.x or later, you must reboot the location appliance after software installation to remove support of SSH v1.

- If you are installing release 2.0.x or earlier, you must edit the `sshd_config` file to remove support for SSH v1 by adding **Protocol 2** to the end of the script as noted below.

```
#override default of no subsystems
Subsystem sftp /usr/libexec/openssh/sftp-server
Protocol 2
```

With this addition, the script will match that of releases 2.1.x and later.

A restart is required to reread the config file after the edit is made.

- Approximately 5 minutes is required for the newly loaded location appliance software version to appear on the WCS Location > Location Server screen.

**Note**

WCS queries for location appliance connectivity and database updates every 5 minutes by default.

Downloading Software Using the WCS Server

Follow these steps to download software to a location appliance using WCS:

-
- Step 1** Verify that you can ping the location appliance from the Cisco WCS Server or an external FTP server, whichever you are going to use for the application code download.
 - Step 2** In Cisco WCS, choose **Location > Location Servers**.
 - Step 3** Click the name of the server that is to receive the software download.
 - Step 4** Click **Maintenance** (left).
 - Step 5** Click **Download Software**.
 - Step 6** To download software, do one of the following:

- To download software listed in the WCS directory, select **Select from uploaded images to transfer into the Location 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.



Note If upgrading a location server installed with a pre-2.0 version, you must first download and decompress the file (`gzip -d imageFilename`) **before** installing the image. After decompressing the file, run the resulting *.bin installer file.



Note If you have a 2.0 or later version of the location server image already installed, the software image automatically decompresses during its download from WCS.

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



- Step 7** Enter the time in seconds (between 1 and 999) after which software download times out.
- Step 8** Click **Download** to send the software to the /opt/installers directory on the location server.



Note After the image has been transferred to the location appliance, follow the instructions on the screen. Log in to the location appliance's CLI, stop the server, and run the installer image from the /opt/installers directory.

Downloading Software Using a Console Port

If you do not want to update the location appliance software using WCS, follow these steps to upgrade the software manually using CLI and a console:

-
- Step 1** Transfer the new location appliance code onto the hard drive.
- a. Log in as root, and use the binary setting to send the application code (for example, *AIR-LOC2700-L-K9-1-2-17-0.bin*; 1-2-17-0 is the release number and changes with each release) from an external FTP server root directory. Your entries should look like this example:
-  **Note** The default login name for the FTP server is *ftp-user*.
-
- ```
cd /opt/installers
ftp <FTP Server IP address>
Name: <login>
Password: <password>
binary
get AIR-LOC2700-L-K9-1-2-17-0.bin
<CTRL-Z>
#
```
- b. Verify that the application code (*AIR-LOC2700-L-K9-x-x-x-x.bin*) is in the location appliance `/opt/installers` directory.
  - c. Make sure that the *AIR-LOC2700-L-K9-x-x-x-x.bin* file has execute permissions for the root user. If not, enter **chmod 755** *AIR-LOC2700-L-K9-x-x-x-x.bin*.
- Step 2** Manually stop the old location appliance application.
- a. Log in as root and enter **/etc/init.d/locserverd stop**.
- Step 3** Enter **/opt/installers/AIR-LOC2700-L-K9-x-x-x-x.bin** to install the new location appliance application files.
- Step 4** Start the new location appliance application by entering the following command:
- ```
/etc/init.d/locserverd start
```
-  **Caution** Only complete the next step that uninstalls the application files, if the system instructs you to do so. Removing the application files unnecessarily erases your historical data.
-
- Step 5** Enter **/opt/locserver/uninstall/uninstall** to uninstall the location appliance application files.
-

Operational Notes

Recovering a Lost Root Password

If you lose or forget the root password for the location appliance, do the following:

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

Using HTTPS or Non-Default Ports

When you have a non-default port or HTTPS turned on, you must pass the correct information along with the command. For example, *getserverinfo* must include `-port <<port>> -protocol <<HTTP/HTTPS>>`. Similarly, for stopping the server, *stoplocserver* - `port <<port>> -protocol <<HTTP/HTTPS>>`



APPENDIX **A**

Safety Considerations and Translated Safety Warnings

This appendix lists safety considerations and translations of the safety warnings that apply to location appliances. The following safety considerations and safety warnings appear in this appendix:

- [Safety Considerations, page A-2](#)
- [Warning Definition, page A-2](#)
- [Ground Conductor Warning, page A-5](#)
- [Chassis Warning for Rack-Mounting and Servicing, page A-7](#)
- [Equipment Installation Warning, page A-16](#)

Safety Considerations

Keep these guidelines in mind when installing location appliances:

- 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 location appliances 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 location appliances 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。

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 elektricien 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.
Advarsel	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.
Aviso	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 eletricista qualificado.
¡Advertencia!	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.
Varning!	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 besiktningsauktoritet eller elektriker kontaktas.
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.
Предупреждение	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.
警告	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。
警告	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:

- 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 raket.
 - Ved montering af denne enhed i et delvist fyldt rack, skal enhederne installeres fra bunden og opad med den tungeste enhed nederst.
 - Hvis raket leveres med stabiliseringsenheder, skal disse installeres for enheden monteres eller serviceres i raket.
- 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"> • 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	<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"> • 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"> • Αυτή η συσκευή πρέπει να τοποθετείται στο κάτω μέρος του αρθρωτού συστήματος αν είναι η μοναδική συσκευή σε αυτό. • 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. • Εάν το αρθρωτό σύστημα διαθέτει διατάξεις σταθεροποίησης, τοποθετήστε τους σταθεροποιητές πριν τοποθετήσετε ή συντηρήσετε τη συσκευή στο αρθρωτό σύστημα.
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"> • אם יחידה זו היא יחידה בודדת במעמד, יש להרכיב את היחידה בחלקו התחתון של המעמד. • בעת הרכבת יחידה זו במעמד המלא בחלקו, טען את המעמד החל בחלק התחתון וכלפי מעלה כאשר הרכיב הכבד ביותר נמצא בחלקו התחתון של המעמד. • אם המעמד מסופק עם התקני ייצוב, התקן את המייצבים לפני הרכבה היחידה במעמד או טיפול בה.
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"> • 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.
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- 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"> • Αυτή η συσκευή πρέπει να τοποθετείται στο κάτω μέρος του αρθρωτού συστήματος αν είναι η μοναδική συσκευή σε αυτό. • 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. • Εάν το αρθρωτό σύστημα διαθέτει διατάξεις σταθεροποίησης, τοποθετήστε τους σταθεροποιητές πριν τοποθετήσετε ή συντηρήσετε τη συσκευή στο αρθρωτό σύστημα.
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"> • אם יחידה זו היא יחידה בודדת במעמד, יש להרכיב את היחידה בחלקו התחתון של המעמד. • בעת הרכבת יחידה זו במעמד המלא בחלקו, טען את המעמד החל בחלק התחתון וכלפי מעלה כאשר הרכיב הכבד ביותר נמצא בחלקו התחתון של המעמד. • אם המעמד מסופק עם התקני ייצוב, התקן את המייצבים לפני הרכבה היחידה במעמד או טיפול בה.
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"> • 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.

Equipment Installation Warning



Warning

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

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.

Avvertenza	Questo apparato può essere installato, sostituito o mantenuto unicamente da un personale competente.
Advarsel	Bare opplært og kvalifisert personell skal foreta installasjoner, utskiftninger eller service på dette utstyret.
Aviso	Apenas pessoal treinado e qualificado deve ser autorizado a instalar, substituir ou fazer a revisão deste equipamento.
¡Advertencia!	Solamente el personal calificado debe instalar, reemplazar o utilizar este equipo.
Varning!	Endast utbildad och kvalificerad personal bör få tillåtelse att installera, byta ut eller reparera denna utrustning.
Figyelem	A berendezést csak szakképzett személyek helyezhetik üzembe, cserélhetik és tarthatják karban.
Предупреждение	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.
Aviso	Somente uma equipe treinada e qualificada tem permissão para instalar, substituir ou dar manutenção a este equipamento.
Advarsel	Kun uddannede personer må installere, udskifte komponenter i eller servicere dette udstyr.
تحذير	يسمح للمنيين المتخصصين فقط بتركيب المعدة أو استبدالها أو إجراء الصيانة عليها.
Upozorenje	Uređaj smije ugrađivati, mijenjati i servisirati samo za to obučeno i osposobljeno servisno osoblje.
Upozornění	Instalaci, výměnu nebo opravu tohoto zařízení směji provádět pouze proškolené a kvalifikované osoby.
Προειδοποίηση	Η τοποθέτηση, η αντικατάσταση και η συντήρηση του εξοπλισμού επιτρέπεται να γίνονται μόνο από καταρτισμένο προσωπικό με τα κατάλληλα προσόντα.
אזהרה	רק עובדים מיומנים ומוסמכים רשאים להתקין, להחליף, או לטפל בידי זה.

Equipment Installation Warning

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.
<hr/>	
Figyelem	A berendezést csak szakképzett személyek helyezhetik üzembe, cserélhetik és tarthatják karban.
Предупреждение	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.
Upozorenje	Uređaj smije ugrađivati, mijenjati i servisirati samo za to obučeno i osposobljeno servisno osoblje.
Upozornění	Instalaci, výměnu nebo opravu tohoto zařízení smějí provádět pouze proškolené a kvalifikované osoby.
Προειδοποίηση	Η τοποθέτηση, η αντικατάσταση και η συντήρηση του εξοπλισμού επιτρέπεται να γίνονται μόνο από καταρτισμένο προσωπικό με τα κατάλληλα προσόντα.
אזהרה	רק עובדים מיומנים ומוסמכים רשאים להתקין, להחליף, או לטפל בציד זה.
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.



APPENDIX **B**

Regulatory Information

This appendix provides regulatory information for Cisco 2700 Series Location Appliances.

FCC Statement for Cisco 2700 Series Location Appliances

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.

