Cisco Wireless Location Appliance Getting Started Guide

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.

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C O N T E N T S

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 fisicos. 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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C H A P T E R 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
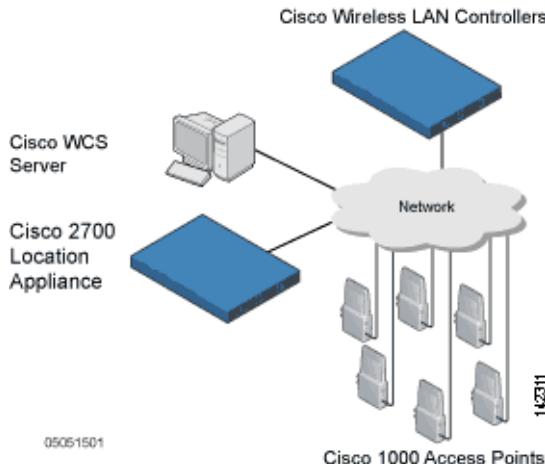
Installation and Initial Configuration

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

This chapter contains these sections:

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

System Compatibility

Please refer to the location appliance release notes for Cisco WCS, controller and location appliance compatibility updates at:

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

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.

System Configuration Parameters

Obtain these 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 IP address
- An IP address for the eth0 default gateway
- An IP address for the Ethernet-1 (eth1) port (location appliance 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   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 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
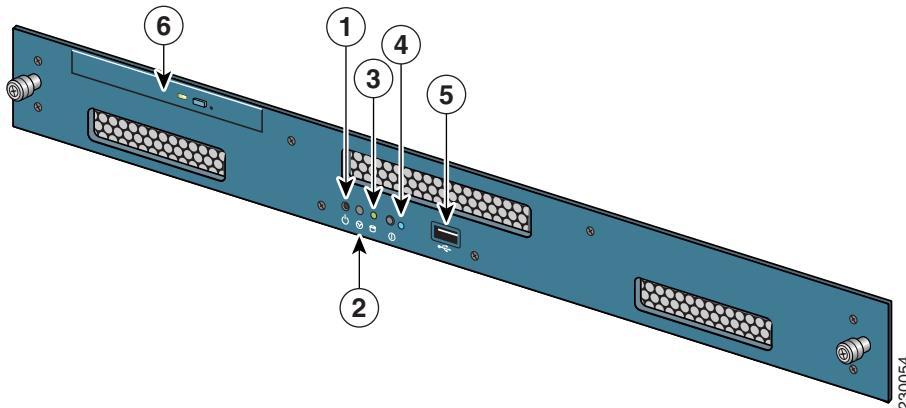
Table 2-1   Front Panel Components

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
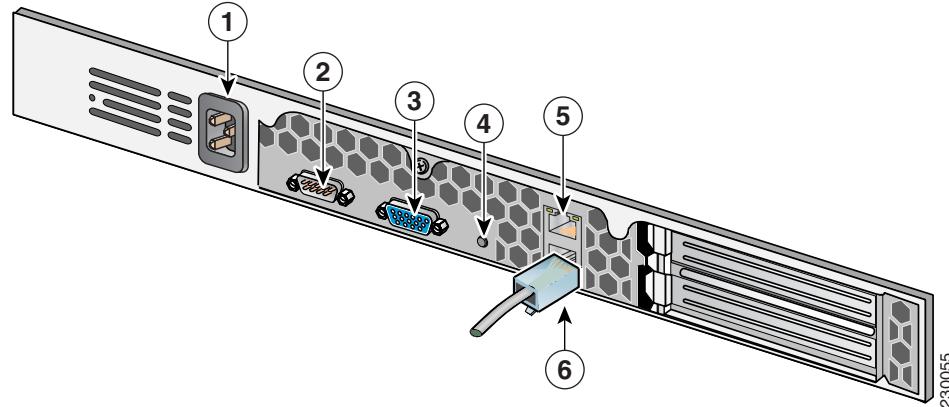
Table 2-3   Back Panel Components

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

Note   It is highly recommended that all relevant items be configured during initial setup to ensure optimum operation of the location appliance 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.

All configuration beyond the initial installation can be done with WCS.

Automatic Installation Script

> **Note**   The following installation script is for location appliances installed with release 5.1 (or later). For location appliances operating with releases 2.x, 3.x and 4.x refer to the *Cisco 2700 Series Location Appliance Installation and Configuration Guide, Release 4.0* at the following link: http://www.cisco.com/en/US/products/ps6386/prod_installation_guides_list.html

Follow these steps to configure the location appliance using the automatic 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 location appliance 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]: locapp-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=[171.71.132.233]
Current eth0 netmask=[255.255.254.0]
Current gateway address=[171.71.132.1]
Enter eth0 IP address [171.71.132.233]:
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 [171.71.132.233]:
Enter the network mask for IP address 171.71.132.233.
Enter network mask [255.255.254.0]:

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 [171.71.132.1]:

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: 171.68.226.120
Enter backup DNS server IP address (or none) [none]:
```

Enter time zone information.

> **Note** Communications between the location appliance, Cisco WCS and the controller are in universal
> time code (UTC). Local time zones are configured on the location appliance 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 location appliance 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 location appliance.

```
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.esl.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 Wireless Location Appliance.

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 location appliances) 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 Location Server General Parameters so that the WCS can
communicate with the Location Server.
```

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= locapp-nyc
Domain=cisco.com
Eth0 IP address=171.71.132.233, Eth0 network mask=255.255.254.0
Default gateway=171.71.132.1
Enable DNS=yes, DNS servers=171.68.226.120
Enable NTP=yes, NTP servers=1.ntp.esl.cisco.com
Login banner =
Cisco Wireless Location Appliance.
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 locapp-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 171.68.10.80 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 Fri 11 Apr 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/locserver/setup/setup.sh**.

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

Configuring an NTP Server

You can configure NTP servers to set up the time and date of the location appliance.

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 Location Appliance" section on page 2-6.

Note   If you need to add or change an NTP server installation after a location appliance 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/locserver/setup/setup.sh**.

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

Launching the Location Appliance

To configure a location applaince to automatically launch after bootup enter:

```
[root@locapp-server1]# chkconfig locserverd on
```

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
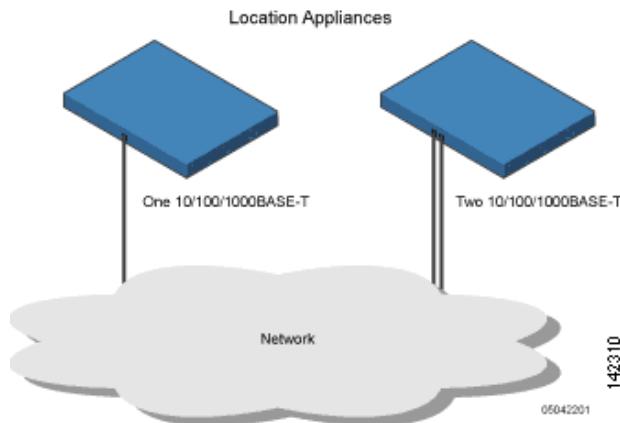
Verifying the Location Appliance Software State

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: 5.1.30.0
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: Fri May 23 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: 5.1.30.0
-------------
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 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 after each reboot.

Follow these steps to manually stop and restart the software:

Step 1   To stop the software, enter **etc/init.d/locserverd stop**.

Step 2   To check status enter **etc/init.d/locserverd status**.

Step 3   To start the software, enter: **etc/init.d/locserverd start**.

Updating Location Appliance Software

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

Note   For the latest Cisco WCS and location appliance 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/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. The software image automatically decompresses during its download from Cisco WCS.

- Approximately 5 minutes is required for the newly loaded location appliance software version to appear on the Cisco WCS **Mobility > Mobility Service Engines** window.

Note   Cisco 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, click **Mobility > Mobility Service Engines.**

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.

- 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 1800) after which software download times out.

> ✎
>
> **Note**   This time out setting represents the total time allowed before a software download to a location appliance expires. It is not a FTP packet timeout setting.

Step 8 Click **Download** to send the software to the /opt/installers directory on the location server.

Step 9 After the image has been transferred to the location server, log in to the location server CLI and run the installer image from the */opt/installers* directory by entering the **./.bin** *locserver image* command.

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

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

Manually Downloading Software

If you do not want to automatically update the location appliance 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 location appliance code 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-AIR-LOC2700-L-K9-x-x-x-x-64bit.bin.gz* and changes with each release.

✎
Note   The location appliance 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 AIR-LOC2700-L-K9-5-1-30-0-64bit.bin.gz
<CTRL-Z>
#
```

b. Verify that the application code (*CISCO-AIR-LOC2700-L-K9-x-x-x-x-64bit.bin.gz*) is in the location appliance */opt/installers* directory.

c. To decompress (unzip) the image file enter:

gunzip *CISCO-LOC2700-L-K9-x-x-x-x-64bit.bin.gz*

The decompression yields a *bin* file.

d. Make sure that the *CISCO-LOC2700-L-K9-x-x-x-x.bin* file has execute permissions for the root user. If not, enter:

chmod 755 *CISCO-LOC2700-L-K9-x-x-x-x.bin*

Step 2   To manually stop the location appliance, login as *root* and enter:

/etc/init.d/locserverd stop

Step 3   To install the new location appliance image, enter:

/opt/installers/*CISCO-AIR-LOC2700-L-K9-x-x-x-x.bin*

Step 4   To start the new location appliance image, enter:

/etc/init.d/locserverd start

⚠

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

Step 5   To uninstall the location appliance's script files, enter:

```
/opt/locserver/uninstall
```

Operational Notes

Recovering a Lost Root Password

If you lose or forget the root password for the location appliance, 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.

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 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

FONTOS BIZTONSÁGI ELOÍRÁSOK

Ez a figyelmezeto jel veszélyre utal. Sérülésveszélyt rejto helyzetben van. Mielott bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplo figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján keresheto 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.**

Ground Conductor Warning

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.
	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。

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.

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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 vältytään 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 personnelþ:**

- **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.**

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 töltse 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。

Chassis Warning for Rack-Mounting and Servicing

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.

Cisco Wireless Location Appliance Getting Started Guide

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 opremati 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 nejníže.
• Pokud je montážní rám vybaven stabilizačními zařízeními, nainstalujte stabilizátory ještě před montáží nebo opravou zařízení v montážním rámu.

Προειδοποίηση   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:
• 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   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:
• 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 הרכבת היחידה במעמד או טיפול בה.

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.

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 töltse 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 안
정된 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 opremati 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 nejníže.
- Pokud je montážní rám vybaven stabilizačními zařízeními, nainstalujte
  stabilizátory ještě před montáží nebo opravou zařízení v montážním rámu.

Προειδοποίηση   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:
• 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   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:
• 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   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.**

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.**
	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 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.

■ **Equipment Installation Warning**

Opomena   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.**

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.

Opomena   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.

Equipment Installation Warning

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.