



Release Notes for Cisco 2700 and 2710 Location Appliances for Software Release 6.0.97.0

November 2009

These release notes describe caveats and important notes for maintenance software release 6.0.97.0 for Cisco Location Appliances. This release of location appliance software supports both Cisco 2700 and 2710 location appliances.



Note

Location appliances are identified as *location servers* on the Cisco WCS interface and in supporting documentation.



Note

For details on compatibility with Cisco Wireless LAN Controllers and Cisco Wireless Control Systems (WCS), refer to the “[System Requirements](#)” section on page 2 before installing this software.



Note

Refer to the online version of the *Cisco 2700 Series Location Appliance Getting Started Guide* for details on the physical installation and initial configuration of the location appliance at:
http://www.cisco.com/en/US/products/ps6386/prod_installation_guides_list.html

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Introduction

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. The collected location data can be viewed in GUI format in Cisco WCS.

System Requirements

You can install this software release on any 2700 or 2710 location appliance.

Table 1 summarizes the minimum software release requirements for the Cisco WCS and controller to interoperate with release 6.0.x of the location appliance.

Table 1 Minimum Software Requirements

| System | Minimum Software Release |
|---------------------|--|
| Controller | 6.0.182.0 (or later 6.0 release), 5.2.157.0 and 5.2.178.0, 5.1.151.0 and 5.1.163.0 4.2.130 (or later 4.2 release). Note Controller release 5.0.x is not compatible with location appliance release 5.1.x. |
| Cisco WCS | 6.0.132.0 (or later). |
| Cisco WCS Navigator | Release 1.5.132.0 (or later). |



The 2700 Series Location Appliance does not support 3500 series access points.

Backwards Compatibility of Location Appliance Software

Location appliance software is backwards compatible with the previous two location appliance releases. Therefore, you can only upgrade two releases forward. For example, you can directly upgrade from release 4.0 and 5.1 to 6.0 but you cannot directly upgrade to release 6.0 from releases earlier than 4.0.

Upgrading to this Software Release

For instructions for using either Cisco WCS or for manually downloading this software to location appliances, refer to the “Updating Location Appliance Software” section in the “Installation and Configuration” chapter of the *Cisco 2700 Series Installation and Configuration Guide* (78-17180-03 and later). You can find this document at this URL:

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

Backup of Software Cannot be Restored on Earlier Releases

A backup of location appliance software release 6.0 cannot be restored on any location appliance running an earlier software release. Before you upgrade a location appliance to 6.0, Cisco recommends that you create a backup of the earlier release and archive it. This enables you to convert an upgraded system to an earlier release, if necessary.

Location Appliance Image is Compressed

If you download the server image *.gz file using Cisco WCS, the location appliance automatically decompresses (unzips) it, and you can proceed with the installation as before.

If you manually download the compressed *.gz file using FTP, you must decompress the files before running the installer. These files are compressed under the LINUX operating system and must be decompressed using the gunzip utility program. The unzip method you use is defined by the filename you are trying to unzip.

To make the bin file executable, use the following command:

```
chmod +x filename.bin
```

Updated Location Appliance Software Version Shown in Cisco WCS after Polling

After a software update, the new location appliance software version does not immediately appear in location appliance queries on Cisco WCS. Up to five minutes is required for the new version to appear. Cisco WCS, by default, queries the location appliance every five minutes for status.

Important Notes

This section describes important information about new features and operational notes for software release 6.0.97.0 for location appliances.

Operational Notes

The following operational notes are relevant to this release.

Automatic Installation Script for Initial Setup

An automatic setup wizard is available to step you through the initial setup of the location appliance.

An example of the complete automatic setup script (and manual setup process) is provided in the *Cisco 2700 Series Getting Started Guide*. You can find this document online at:

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

Mandatory Default Root Password Change

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

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

Synchronization Required When Upgrading to Release 6.0 or Importing CAD Floor Images

When upgrading to release 6.0 from release 5.x (and earlier), you must synchronize after the software upgrade and also when CAD generated floor images are imported into Cisco WCS.

Controller and Associated Location Appliances Must be Mapped to the Same NTP and WCS Server

Communications between the location appliance, Cisco WCS, and the controller are in universal time code (UTC). Configuring NTP on each system provides devices with the UTC time. An NTP server is required to automatically synchronize time between the controller, Cisco WCS and the location appliance.

The location appliance and its associated controllers must be mapped to the same NTP server and the same Cisco WCS server.

Local time zones can be configured on a location appliance to assist network operations center (NOC) personnel in locating events within logs.



Note

You can configure NTP server settings during the automatic installation script. Refer to the *Cisco 2700 Series Location Appliance Getting Started Guide* for details on the automatic installation script. You can find this document online at:

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

Networks with Large Access Point Deployments Might Experience Slower Location Updates

In networks with a large number of access points (approximately 2000 or more), location appliances might experience a slow down in location calculation and heatmap updates for clients, tags, and access points (CSCsk18810).

Large Burst of Notifications Might Cause Drop of Notifications

A location appliance might fail to send notifications if it receives a large burst of notifications. The dropped notification count appears on the Services > Context Aware Notifications window.

Refer to CSCsu43201 in the Open Caveats section for workaround.

If a release of AeroScout MobileView *earlier than 4.1* is in use, incorrect responses are sent to those northbound notifications received from the location appliance. Northbound notifications are then resent by the location appliance, overloading the notification queue and resulting in reports of dropped notifications (CSCsx56618).

Configuration Changes for Greater Location Accuracy

In some RF environments, where location accuracy is around 60 to 70%, or where incorrect client or tag floor location map placements occur, you might need to modify the moment RSSI thresholds in the *aes-config.xml* file in the *opt/locserver/conf/* directory of the location server (CSCsw17583).

The RSSI parameters that might need modification are:

- *lhcp-individual-rssi-change-threshold*
- *lhcp-aggregated-rssi-change-threshold*
- *lhcp-many-new-rssi-threshold-in-percent*
- *lhcp-many-missing-rssi-threshold-in-percent*

Floor Change or Minimum Distance Required for Location Transitions to Post to History Log

When history logging is enabled for any or all elements (client stations, asset tags, and rogue clients and rogue access points), a location transition for an element is only posted if it changes floors or the element's new location is at least 30 feet or 10 meters from its original location.

Cisco Path: Services > Mobility Services > Device Name > Context Aware Service > Administration > History Parameters.

Logs can be viewed at Services > Mobility Services > Device Name > Systems > Log.

Location History Timestamps Match Browser's Location

The Cisco WCS timestamp is based on the browser's location and not on the location appliance settings. Changing the time zone of the Cisco WCS or on the location appliance does not change the timestamp for the location history.

PDAs with Limited Probe Requests Might Affect Location

Many PDAs do not continuously send out probe requests after initial association to the Cisco Unified Wireless Network (CUWN). Therefore, calculating the location accuracy of such PDAs using RSSI readings might not always be optimal.

Mandatory Setting Required on Intel 802.11n and 802.11 b/g/n Client Cards for Accurate Calibration

The Cisco CX RM option within Intel's Enterprise Security Profile must be enabled to ensure adequate calibration data points are collected for Intel 802.11n and 802.11 b/g/n client cards.

You can use the Intel Client Software PROSET package to enable the Cisco CX RM option in the Enterprise Security Profile (CSCsl40623).

Non-Cisco Compatible Extensions Tags Not Supported

The location appliance does not support non-Cisco CX Wi-Fi tags. Additionally, these non-compliant tags are not used in location calculations or shown on Cisco WCS maps.

Cisco Compatible Extensions, Version 1 Tags Required at a Minimum

Only Cisco CX version 1 tags (or later) are used in location calculations and mapped in Cisco WCS.

Monitoring Information Varies for Clients and Tags

On the Monitor > Clients page (when Location Debug is enabled), you can view information on the last heard access point and its corresponding RSSI reading. This information is not available on the Monitor > Tags page.

Calibration Models and Data Apply Only to Clients

Calibration models and data apply only to clients. Calibration for tags is done using the AeroScout System Manager.

Refer to Chapter 7, “Context-Aware Planning and Verification” in the *Cisco Location Appliance Configuration Guide, Release 6.0* for more details on client calibration.

Refer to the *AeroScout Context-Aware Engine for Tags, for Cisco Mobility Services Engine User’s Guide* at the following link:

<http://support.aeroscout.com>

Advanced Location Parameters Apply Only to Clients

Settings for advanced location parameters related to RSSI, chokepoint usage, location smoothing, and assignment of outside walls on floors, are not applicable to tags.

Refer to the “Editing Advanced Location Parameters” section in Chapter 7 of the *Cisco Context-Aware Software Configuration Guide, Release 6.0*.

Cisco WCS Path: Services > Mobility Services > Device Name > Context Aware Service > Advanced > Location Parameters.

WCS Screen Changes

- *Services* replaces *Mobility* in the navigation bar of Cisco WCS.

Common Vulnerabilities Exposure Notes

This section lists the notes for common vulnerabilities exposure:

- The CVE-2009-0591 and CVE-2009-0789 are not applicable for Red Hat Enterprise Linux 3. So it is not applicable for location appliance.
- Both Red Hat Enterprise Linux 3 and location server does not use the vulnerable API, and so CVE-2009-0590 is not applicable for location appliance.



Note

The Location Appliance OS is based on Redhat Enterprise Linux 3.

New Features

This release does not introduce new features.

Caveats

This section lists [Open Caveats](#) and [Resolved Caveats](#) in location appliance release 6.0.97.0.

Open Caveats

The following sections describe the caveats that remain open for Version 6.0.X.X. For your convenience in locating caveats in Cisco's Bug Toolkit, the caveat titles listed in this section are drawn directly from the Bug Toolkit database. These caveat titles are not intended to be read as complete sentences because the title field length is limited. In the caveat titles, some truncation of wording or punctuation might be necessary to provide the most complete and concise description. The only modifications made to these titles are as follows:

- Commands are in boldface type.
- Product names and acronyms may be standardized.
- Spelling errors and typos may be corrected.

Note If you are a registered cisco.com user, view Bug Toolkit on Cisco.com at the following website:

<http://tools.cisco.com/Support/BugToolKit/>

To become a registered cisco.com user, go to the following website:

<http://tools.cisco.com/RPF/register/register.do>

Table 2 lists open caveats in this release.

Table 2 *Open Caveats*

| ID Number | Caveat Title |
|------------|--|
| CSCsm53129 | 1310 w/ 2506 antenna heatmap is incorrect |
| CSCsw66937 | Tags cannot be located from non-root Virtual Domain in WCS |
| CSCta34216 | MSE failed to restart after setting history params Archive days to 0 |
| CSCta42551 | WCS: Monitor lite users are able to edit the asset information |
| CSCta54903 | Copy/Replacement action on AP should mark network design unsynchronized |
| CSCta60310 | Measurement notification timeout range inconsistent with WLC |
| CSCta99248 | RFID tags show up on MSE, when unsynched with ctrr |
| CSCtb48311 | Notification Scaling issue, OutOfMemory |
| CSCtb48347 | MSE does not recover after the down destination comes back after 90 mins |
| CSCtb56251 | Download software broken due to size limiting on WCS |
| CSCtb87143 | MAC wild card does not work in disallowed list for filtering params |
| CSCtb98803 | Special message when WLC and MSE don't talk coz of time difference |
| CSCtc15111 | Storing data during Calibration leads to Matlab memory allocation error |

Table 2 Open Caveats

| ID Number | Caveat Title |
|------------|---|
| CSCtc24529 | All List APIs with AesQueryCriteria getting StackOverflowError |
| CSCtc32231 | S/P Issue while doing a large database copy during Installation |
| CSCtc71530 | Modify the Location change notifications to 'Information' |

Resolved Caveats

Table 3 lists caveats resolved in this release.

Table 3 Resolved Caveats

| ID Number | Caveat Title |
|------------|--|
| CSCsy27746 | 2710 Location Appliance produces gratuitous arps for 192.168.0.1 |
| CSCsy65460 | H-MR: InfoTransitionTracker need not track transitions if history off. |
| CSCsy70786 | Adding new user to MSE should have additional password field and checks |
| CSCsy70790 | H-MR: GetTagHistoryListAPI with Query Criteria is not working |
| CSCsy77490 | H: Non-cisco ap interface heatmaps should be pruned out. |
| CSCsy85829 | H-MR: API call for macaddress not case in sensitive |
| CSCsz12367 | warning message for clear config need to be improved |
| CSCta39607 | MSE Server Events always displaying 20 entries per page |
| CSCta65597 | Location Appliance becomes unreachable when syncing large network design |
| CSCta76375 | Northbound Notifications functionality not working |
| CSCta88332 | Rogue Client Details page is broken |
| CSCta94340 | Tag reporting showing incorrect controller |
| CSCtb02748 | MSE Server Events missing one entry if no paging |
| CSCtb06249 | AesLocation Response attribute contain invalid datatype |
| CSCtb50272 | Case Insensitivity issue on Accuracy Tool - Discrepancy in Accuracy nos. |
| CSCtb61200 | Rails Regions x and y values will be off by binft with exclusion region |
| CSCtb65342 | Patches and Procedure for updating 2710 reg CVE-2008-1372 |
| CSCtb65365 | Timer for Absent Data getting set to) everytime log preference changes |
| CSCtb89877 | NPE in retrieving the Trap destinations |
| CSCtc05821 | Location History data is not updated properly |
| CSCtc44179 | Paging error on Location Client history |

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.)

Related Documentation

The following documents are related to location appliances:

- *Cisco 2700 Series Location Appliance Getting Started Guide*
- *Cisco Location Appliance Configuration Guide, Release 6.0*
- *Cisco Wireless Control System Configuration Guide, Release 6.0*
- *Cisco Wireless LAN Controller Configuration Guide, Release 6.0*



Note

You can see the latest online versions of these documents by selecting the Wireless category and then the appropriate product from the Wireless LAN Controller and Wireless LAN Management > Unified Wireless LAN Management sub-category panels at the following link:

http://www.cisco.com/web/psa/products/tsd_products_support_configure.html

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>

This document is to be used in conjunction with the documents listed in the Related Documents section.

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