



# Release Notes for Cisco Mobility Services Engine, Release 7.6.132.0

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These release notes describe what is new in this release, instructions to upgrade to this release, open and resolved caveats for this release, and related information for release 7.6.132.0 of the Cisco Mobility Services Engine and its services.

- Location Service
- Wireless Intrusion Protection System (wIPS)
- Mobile Concierge Service
- CMX Analytics Service
- CMX Browser Engage
- CMX HTTP Proxy Service



**Note**

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Before installing this software, see the [“Upgrading the MSE” section on page 11](#) for details on compatibility with the Cisco Wireless LAN controllers (WLC) and the Cisco Prime Infrastructure.

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**Note**

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Licenses are required to run all services. For ordering information, see the [“Base Location license” section on page 16](#) section.

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**Note**

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Cisco MSE 3310 and Cisco 3350 are not supported beyond Release 7.3.

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## Introduction

This section introduces the Cisco Mobility Services Engine (MSE) and the various services that it supports.

## Cisco Mobility Services Engine and Services

The Cisco Mobility Services Engine supports various services within the overall Cisco Unified Wireless Network (CUWN).

The Cisco Mobility Services Engine currently supports the following services in Release 7.6.132.0:

- **Location Service**—Also known as Context Aware Service (CAS). This is the core service of the Mobility Services Engine (MSE) that turns on Wi-Fi client tracking and location API functionality. Allows MSE to simultaneously track thousands of mobile assets and clients by retrieving contextual information such as presence, location, telemetry data, and historical information.
- **Wireless Intrusion Protection Service**—Provides wireless-specific network threat detection and mitigation against malicious attacks, security vulnerabilities, and sources of performance disruption within the CUWN infrastructure. wIPS visualizes, analyzes, and identifies wireless threats, and centrally manages mitigation and resolution of security and performance issues using Cisco monitor mode and Enhanced Local Mode (ELM) Access Points. Proactive threat prevention is also supported to create a hardened wireless network core that is impenetrable by most wireless attacks.
- **Mobile Concierge**—Mobile Concierge enables the Cisco Mobility Services Advertisement Protocol (MSAP). This protocol enables direct communication between the MSE and mobile devices, allowing content to be pushed directly to the mobile device pre-association. This functionality is dependent on the mobile device supporting 802.11u and MSAP.
- **CMX Analytics Service**—The CMX Analytics service analyzes wireless device location information in a particular network. The CMX Analytics service uses the data provided by the Cisco Mobility Services Engine (MSE) to calculate the location of Wi-Fi devices in the Wireless Local Area Network (WLAN).

When a wireless device is enabled in a network, it transmits probe request packets to identify the wireless network in its neighborhood. Even after connecting to the access point in the WLAN, the client devices continue to transmit probe request packets to identify other access points for better quality of service. The access points gather these request and the associated RSSI from the various wireless devices and forwards them to the Wireless LAN Controller (WLC). The controller then forwards this information to the MSE.

The basic data that is collected from various APs, when analyzed, produces information and knowledge about the movement and behavior patterns of people who are using Wi-Fi devices in the building. For example, the building can be an airport, shopping mall, city center, and so on. The CMX Analytics service helps the airport authorities or the building owners to understand the movement of passengers or customers within their building. This helps them improve the signage, make changes to the under utilized areas, and so on.

- **CMX Browser Engage Service**—The CMX Browser Engage is a new way to transform the in-venue experience through browser engagement. This enables organizations to communicate with opt-in mobile users - shoppers, guests, and visitors - through their mobile browser. The CMX Dashboard is the back-end tool designed for administrative users to manage the CMX Browser engage experience. It allows the admin users to configure venue-specific menus, banners, and icons as well as content-aware search.



**Note** Consult your Cisco account team before deploying CMX Browser Engage.

- **HTTP Proxy Service**—Currently, CMX Dashboard relies on HTTP traffic flows to provide value added services and messages to the customers at the venue. The router intercepts the HTTP traffic and CMX Dashboard inserts a script at the end of the HTTP traffic. The HTTP Proxy is enabled on the MSE. The HTTP Proxy on the MSE terminates all HTTP traffic intercepted using Policy Based Routing (PBR) and acts as a forward proxy by pulling contents on behalf of wireless clients.



**Note** From Release 7.5 onwards, Cisco Location engine is used to track clients and tags. If AeroScout engine is detected when you are upgrading from Release 7.2 and later Releases to Release 7.5, then a warning message is displayed about removing the AeroScout license and engine. If you accept, the installer will remove all partner engine sub services. If you do not accept the removal of partner engine, then the installer will exit.



**Note** Starting from Release 7.4, the evaluation licenses for 100 clients, 100 tags, and 10 wIPs monitor mode access points comes installed for 120 days.



**Note** From Release 7.4 onwards, licensing is based on AP count and not based on tracked device count.

## Software Compatibility Matrix

[Table 1](#) lists the Cisco MSE compatibility matrix.

[Table 2](#) lists the Cisco MSE compatibility matrix for legacy software versions.

## Cisco MSE Compatibility Matrix

[Table 1](#) lists the Cisco MSE compatibility matrix.

**Table 1 Cisco MSE Compatibility Matrix**

<b>MSE 3355</b>	<b>MSE Virtual Appliance</b>	<b>PI</b>	<b>WLC</b>	<b>Converged Access</b>	<b>Remarks</b>
7.6.132.0	7.6.132.0	2.1** 1.4.2	7.6.130.0 7.6.120.0 7.6.110.0 7.6.100.0 7.5.102.0 7.4.121.0 7.4.110.0 7.4.100.60 7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	—	**Prime Infrastructure 2.1 allows you to manage Cisco MSE Releases 7.5.102.101 and 7.6.120.0 with feature compatibility of Cisco MSE Release 7.4.121.0. Prime Infrastructure 2.1 does not support any new features introduced in Cisco MSE Releases 7.5.102.101 and 7.6.120.0.

Table 1 Cisco MSE Compatibility Matrix (continued)

MSE 3355	MSE Virtual Appliance	PI	WLC	Converged Access	Remarks
7.6.120.0	7.6.120.0	2.1** 1.4.2	7.6.120.0 7.6.110.0 7.6.100.0 7.5.102.0 7.4.121.0 7.4.110.0 7.4.100.60 7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	—	**Prime Infrastructure 2.1 allows you to manage Cisco MSE Releases 7.5.102.101 and 7.6.120.0 with feature compatibility of Cisco MSE Release 7.4.121.0. Prime Infrastructure 2.1 does not support any new features introduced in Cisco MSE Releases 7.5.102.101 and 7.6.120.0.
7.6.100.0	7.6.100.0	Update 1 for 1.4.0.45*	7.6.110.0* 7.6.100.0* 7.5.102.0 7.4.121.0 7.4.110.0 7.4.100.60 7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	—	*The Update 1 for Cisco Prime Infrastructure 1.4.0.45 enables you to manage Cisco WLC 7.6.x with the features of Cisco WLC 7.5.102.0 and earlier releases. This release does not support any new features of Cisco WLC 7.6.x including the new access point platforms.  <b>Note</b> The wIPS profile cannot be applied to Cisco Wireless LAN Controller (WLC) Version 7.5 or prior using the Prime Infrastructure 1.4.x or 2.x with MSE 7.6 Release.

**Table 1 Cisco MSE Compatibility Matrix (continued)**

MSE 3355	MSE Virtual Appliance	PI	WLC	Converged Access	Remarks
7.6.100.0	7.6.100.0	2.0*	7.6.110.0** 7.6.100.0** 7.5.102.0** 7.4.121.0 7.4.110.0 7.4.100.60 7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	3.2.2** 3.3.2**	*Cisco Prime Infrastructure 2.0 enables you to manage Cisco WLC 7.5.102.0 with the features of Cisco WLC 7.4.110.0 and earlier releases. Prime Infrastructure 2.0 does not support any features that are introduced in Cisco WLC 7.5.102.0 or later releases including the new access point platforms.  **Supports 7.4 MSE feature parity—CAS, wIPS, and CMX Analytics service.  <b>Note</b> wIPS profile cannot be pushed to Cisco Wireless LAN Controller (WLC) Version 7.5 or prior using the Prime Infrastructure 1.4.x or 2.x with MSE 7.6 Release.
7.5.102.101	7.5.102.101	Update 1 for 1.4.0.45 1.4.0.45	7.5.102.0 7.4.121.0 7.4.110.0 7.4.100.60 7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	—	—

**Table 1** Cisco MSE Compatibility Matrix (continued)

MSE 3355	MSE Virtual Appliance	PI	WLC	Converged Access	Remarks
7.5.102.101	7.5.102.101	2.0*	7.5.102.0 7.4.121.0 7.4.110.0 7.4.100.60 7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	3.2.2** 3.3.2**	*Cisco Prime Infrastructure 2.0 enables you to manage Cisco WLC 7.5.102.0 with the features of Cisco WLC 7.4.110.0 and earlier releases. Prime Infrastructure 2.0 does not support any features that are introduced in Cisco WLC 7.5.102.0 or later releases including the new access point platforms.  **Supports 7.4 MSE feature parity—CAS, WIPS, and CMX Analytics service.

**Table 2** Cisco MSE Compatibility Matrix - Legacy Software Versions

MSE 3355	MSE 3350	MSE Virtual Appliance	AeroScout CLE	WCS	WLC	Prime Infrastructure / NCS
7.4.121.0	—	7.4.121.0	4.5.2.16 4.4.2.11	—	7.4.121.0 7.4.110.0 7.4.100.60 7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	2.0 Update 1 for 1.4.0.45 1.4.0.45 Update 4 for 1.3.0.20 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20

**Table 2 Cisco MSE Compatibility Matrix - Legacy Software Versions (continued)**

<b>MSE 3355</b>	<b>MSE 3350</b>	<b>MSE Virtual Appliance</b>	<b>AeroScout CLE</b>	<b>WCS</b>	<b>WLC</b>	<b>Prime Infrastructure / NCS</b>
7.4.110.0	—	7.4.110.0	4.5.2.16 4.4.2.11	—	7.4.110.0 7.4.100.60 7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	2.0 Update 1 for 1.4.0.45 1.4.0.45 Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20
7.4.100.0	—	7.4.100.0	4.5.2.16 4.4.2.11 4.4.2.7	—	7.4.100.0 7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	Update 1 for 1.4.0.45 1.4.0.45 Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20
7.3.101.0	7.3.101.0	7.3.101.0	4.4.2.4	—	7.3.112.0 7.3.101.0 7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12

Table 2 Cisco MSE Compatibility Matrix - Legacy Software Versions (continued)

MSE 3355	MSE 3350	MSE Virtual Appliance	AeroScout CLE	WCS	WLC	Prime Infrastructure / NCS
7.2.110.0	7.2.110.0	7.2.110.0	4.4.2.4	—	7.2.111.3 7.2.110.0 7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12 1.1.1.24 1.1.0.58
7.2.103.0	7.2.103.0	7.2.103.0	4.4.1.4	—	7.2.103.0 7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12 1.1.124 1.1.0.58
7.0.240.0	7.0.240.0	—	4.3.1.10	7.0.240.0	7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12 1.1.1.24 1.1.0.58 1.0.2.29
7.0.230.0	7.0.230.0	—	4.3.1.19	7.0.230.0	7.0.235.3 7.0.235.0 7.0.230.0 7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12 1.1.1.24 1.1.0.58 1.0.2.29

**Table 2 Cisco MSE Compatibility Matrix - Legacy Software Versions (continued)**

<b>MSE 3355</b>	<b>MSE 3350</b>	<b>MSE Virtual Appliance</b>	<b>AeroScout CLE</b>	<b>WCS</b>	<b>WLC</b>	<b>Prime Infrastructure / NCS</b>
7.0.220.0	7.0.220.0	—	4.3.1.19	7.0.220.0	7.1.91.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12 1.1.1.24 1.1.0.58 1.0.2.29 1.0.1.4
7.0.201.204	7.0.201.204	—	4.2.4.4	7.0.172.0	7.0.116.0 7.0.98.218 7.0.98.0	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12 1.1.1.24 1.1.0.58 1.0.2.29 1.0.1.4 1.0.0.96
7.0.112.0	7.0.112.0	—	4.2.4.4	7.0.164.3 7.0.164.0	7.0.98.218 7.0.98.0	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12 1.1.1.24 1.1.0.58 1.0.2.29 1.0.1.4 1.0.0.96
7.0.105.0	7.0.105.0	—	4.2.4.4	7.0.164.3	7.0.98.218	Update 4 for 1.3.0.20 Update 1 for 1.3.0.20 1.3.0.20 1.2.1.12 1.1.1.24 1.1.0.58 1.0.2.29 1.0.1.4 1.0.0.96

**Note**

AeroScout CLE is no longer bundled with MSE starting from Release 7.5 Release. However, AeroScout CLE is compatible with MSE Release 7.5 and above using the API interface.

**Note**

Cisco MSE 3310 and 3350 are not supported beyond Release 7.3.

**Note**

This compatibility matrix lists only the compatibility information of Cisco MSE with other Cisco wireless products. This matrix does not reflect compatibility information between Cisco WLC and Cisco Prime Infrastructure or Cisco NCS. For compatibility information about Cisco Prime Infrastructure with Cisco WLC and other wireless products, see the Cisco Prime Infrastructure Release Notes.

## Upgrading the MSE

For instructions on automatically downloading the software using the Prime Infrastructure or for manually downloading the software using a local or remote connection, see the “Updating Mobility Services Engine Software” section in Chapter 2 of the *Cisco Mobility Services Engine Getting Started Guide*.

You can find these documents at the following URL:

[http://www.cisco.com/en/US/products/ps9742/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9742/prod_installation_guides_list.html)

This section contains the following topics:

- [Upgrade Scenarios, page 11](#)
- [Compressed Software Image, page 13](#)
- [Updated Software Version Shown in the Prime Infrastructure After Polling, page 14](#)
- [Base Location, CMX, and WIPS License Requirements, page 14](#)
- [Licensing Information for MSE, page 14](#)

## Upgrade Scenarios

The following scenarios are available to upgrade MSE to 7.6.132.0 from 7.x releases:

**Note**

Do not run uninstall on the 7.4, 7.5, or 7.6 Release, instead stop the MSE and directly run the installer.

- [Upgrading the MSE to 7.6.132.0 from 7.x Release, page 11](#)
- [Restoring an Old Database to 7.6.132.0, page 13](#)

## Upgrading the MSE to 7.6.132.0 from 7.x Release

To upgrade from 7.x release to 7.6.132.0, follow these steps:

- 
- Step 1** Back up the MSE using Prime Infrastructure (highly recommended).

- Step 2** To download software to a Mobility Services Engine, choose **Services > Mobility Services Engine** from the Prime Infrastructure UI.
- Step 3** Click the name of the Mobility Services Engine to which you want to download software.
- Step 4** Choose **System > Maintenance > Download Software** from the left sidebar menu.
- Step 5** To download software, do one of the following:
- To download software listed in the Prime Infrastructure directory, select the **Select from uploaded images to transfer into the Server** radio button. Choose a binary image from the drop-down list. Prime Infrastructure downloads the binary image to the FTP server directory you specified during the Prime Infrastructure installation.
  - To use download software available locally or over the network, select the **Browse a new software image to transfer into the Server** radio button, and click **Choose File**. Locate the file, and click **Open**.
- Step 6** Click **Download** to send the software to the `/opt/installers` directory on the Mobility Services Engine.
- Step 7** Verify that the image (**CISCO-MSE-L-K9-7-6-132-0-64bit.bin.gz**) is in the `/opt/installers` directory on the Mobility Services Engine.
- Step 8** To decompress the image file, enter the following command:  
**gunzip CISCO-MSE-L-K9-7-6-132-0-64.bit.bin.gz**  
 The decompression yields the following files:
- 5 files
  - 4 zips
    - database\_installer\_part1of4.zip
    - database\_installer\_part2of4.zip
    - database\_installer\_part3of4.zip
    - database\_installer\_part4of4.zip
  - 1 Cisco-MSE-L-K9-7-6-132-0-64.bin
- Step 9** Make sure that the `CISCO-MSE-L-K9-7-6-132-0-64.bin` file has the execute permissions for the root user. If not, enter the following command:  
**chmod +x CISCO-MSE-L-K9-7-6-132-0-64.bin**
- Step 10** Manually stop the MSE service using the following command:  
**/etc/init.d/msed stop or service msed stop**
- Step 11** To install the new MSE image, enter the following command:  
`/opt/installers/CISCO-MSE-L-K9-7-6-132-0-64.bin`
- Step 12** Start the new MSE software by entering the following command:  
`/etc/init.d/msed start`

**Note**


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The system must be rebooted after upgrading the MSE. After exiting the installer, enter the command `reboot` at the prompt to reboot the MSE.

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## Restoring an Old Database to 7.6.132.0

To restore an old database, follow these steps:


**Note**

The regular Restore option on the Prime Infrastructure cannot be used to restore a backup from an older MSE release such as 6.0, 7.0.105.0, or 7.0.110.0 onto 7.6.132.0.

- Step 1** Stop the MSE service: `/etc/init.d/mse_d stop`
- Step 2** Uninstall the software and select to delete the database.
- Step 3** To restore the backup data, you must first install the appropriate version of the MSE software. Use the table below to determine the correct version of MSE to install.

**Table 3** Release Matrix

Version of Database to be restored	New Version that Should be Installed
5.2.0	6.0, 7.0
6.0	6.0, 7.0

- Step 4** Once you have installed the software, restore the desired database backup onto this new MSE using the regular procedure from Prime Infrastructure.
- Step 5** To migrate data to 7.x.x.x, follow the steps in the [“Upgrading the MSE to 7.6.132.0 from 7.x Release” section on page 11](#).

## Compressed Software Image

If you download the Mobility Services Engine image \*.gz file using the Prime Infrastructure, the Mobility Services Engine 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.

To make the bin file executable, use the **chmod +x filename.bin** command.

The MSE virtual appliance is distributed as:

- Open Virtualization Format (OVF) for VMware
- Virtual Hard Disk (VHD) for Microsoft Hyper-V
- Open Virtualization Format (OVF) for Citrix XenServer

For more information on deploying the MSE virtual appliance, see the *Cisco MSE Virtual Appliance Configuration Guide, Release 7.6*.

## Updated Software Version Shown in the Prime Infrastructure After Polling

After a software update, the new Mobility Services Engine software version does not immediately appear in Mobility Services Engine queries on the Prime Infrastructure. Up to 5 minutes is required for the new version to appear. Prime Infrastructure, by default, queries the Mobility Services Engine for status every 5 minutes.

## Base Location, CMX, and wIPS License Requirements

Client and wIPS licenses are installed from the Prime Infrastructure UI (Administration > License Center). See, Chapter 2: “Adding and Deleting Mobility Services Engines and Licenses” in the *Cisco Connected Mobile Experiences Configuration Guide, Release 7.6*, *Cisco Wireless Intrusion Prevention System, Release 7.6*, and *Cisco Location Analytics Configuration Guide, Release 7.6* respectively.

For complete details on ordering and downloading licenses, see the *Cisco Mobility Services Engine Licensing and Ordering Guide* at the following URL:

[http://www.cisco.com/en/US/prod/collateral/wireless/ps9733/ps9742/data\\_sheet\\_c07-473865.html](http://www.cisco.com/en/US/prod/collateral/wireless/ps9733/ps9742/data_sheet_c07-473865.html)

## Licensing Information for MSE

The Cisco Mobility Services Engine (MSE) provides a wide variety of location-based services. To enable these services, the following are required:

- Cisco MSE hardware or software appliance
  - Physical Appliance—An activation license is not required.
  - Virtual Appliance—Virtual Appliance instance requires a MSE Virtual Appliance Activation license (L-MSE-7.0-K9). It is not sufficient to simply have a service/feature license on an MSE Virtual Appliance.
- Licenses
- Support

There are three types of MSE licenses available:

**Table 4** MSE License Types

MSE Service License	Provides
Base Location License	Provides advanced spectrum capability with the ability to detect, track, and trace rogue devices, Cisco CleanAir® interferers, Wi-Fi clients, and RFID tags. The Base Location license also enables customers and partners to use standard MSE APIs.

**Table 4** MSE License Types (continued)

MSE Service License	Provides
CMX License	Provides the above Base Location license capabilities and the CMX features: <ul style="list-style-type: none"> <li>• CMX Analytics, a user-friendly location analytics platform to view and analyze how, where, and when visitors move through a venue.</li> <li>• CMX Browser Engage for a customizable and location-aware captive portal to on-board guest users.</li> </ul>
wIPS License	Provides complete wireless threat detection and mitigation in the wireless network infrastructure <ul style="list-style-type: none"> <li>• Rogue Detection, Classification, and Mitigation</li> <li>• Over-the-Air Attack Detection</li> <li>• Security Vulnerability Monitoring</li> <li>• Performance Monitoring, and Auto-Optimization</li> <li>• Management, Monitoring, and Reporting</li> </ul> Requires a separate MSE running the wIPS service. There are 3 deployment options: <ul style="list-style-type: none"> <li>• Enhanced Local mode: Number of wIPS licenses required equals the number of access points in local mode (data serving) deployed in the network.</li> <li>• Monitor mode: Number of wIPS licenses required equals the number of access points configured in the full-time monitor mode.</li> <li>• Wireless Security Module (WSM)/Monitor module: Number of wIPS licenses required equals the number of wireless security and spectrum intelligence modules deployed in the network.</li> </ul>

Client and wIPS licenses are installed from the Prime Infrastructure UI (Administration > License Center). See, Chapter 2: “Adding and Deleting Mobility Services Engines and Licenses” in the *Cisco Connected Mobile Experiences Configuration Guide, Release 7.6*, *Cisco Wireless Intrusion Prevention System, Release 7.6*, and *Cisco Location Analytics Configuration Guide, Release 7.6* respectively.

For complete details on ordering and downloading licenses, see the *Cisco Mobility Services Engine Licensing and Ordering Guide* at the following URL:

[http://www.cisco.com/en/US/prod/collateral/wireless/ps9733/ps9742/data\\_sheet\\_c07-473865.html](http://www.cisco.com/en/US/prod/collateral/wireless/ps9733/ps9742/data_sheet_c07-473865.html)

## Base Location license

**Table 5** *Base Location License*

MSE Release	License Name	Based On
Post 7.4	Base Location Services license	Number of APs
7.4	Location services license	Number of APs
Prior 7.4	Context Aware Services (CAS) license	Number of elements

The Base Location Services License is equivalent to the Location Services license in software release 7.4, which itself replaced the Context Aware Services (CAS) license in the software versions prior to release 7.4. This license is used for device endpoint tracking, enabling basic calculation of the x,y coordinates of a tracked device. The license count is based on the number of APs supported since release 7.4.

The part number format of this license is L-LS-100AP. Here 'LS' refers to Location Services and '100AP' refers to 100 AP count.

## CMX License

**Table 6** *CMX License*

MSE Release	License Name	Based On
Post 7.4	CMX license	Number of APs
7.4	Advanced Location Services license	Number of APs
Prior 7.4	Nonexistent	—

The CMX license, called Advanced Location license in release 7.4, supports new features, such as:

- CMX Analytics
- CMX Browser Engage
- Mobile Concierge

The CMX license includes the Base Location license features used for device tracking and the new additional features of CMX.

The part number format of this license is L-AD-LS-100AP. Here 'AD-LS' refers to Advanced Location services license and '100AP' gives the AP count supported.

## wIPS License

**Table 7** wIPS License

MSE Release	License Name	Based On
Post 7.4	wIPS license	Number of APs
7.4	wIPS license	Number of APs
Prior 7.4	wIPS license	Number of elements

There are 3 deployment options:

- Enhanced Local mode: Number of wIPS licenses required equals the number of access points in local mode (data serving) deployed in the network.
- Monitor mode: Number of wIPS licenses required equals the number of access points configured in the full-time monitor mode.
- Monitor module: Number of wIPS licenses required equals the number of wireless security and spectrum intelligence modules deployed in the network.
- Provides advanced spectrum capability and the ability to detect presence and track rogue device, interferers, Wi-Fi clients and RFID tags. Cisco Base Location also enables third-party solutions that use the MSE API.

Licensing is based on the number of access points in the environment. The licenses are additive.



**Note**

Connected Mobile Experiences licenses will be End of Life with standard 6 months of End of Sales and until then both Connected Mobile Experiences and LS licenses will co-exist.

## MSE License Product Numbers and SKUs

### Ordering Support for Physical and Virtual Appliance

The MSE Virtual appliance activation license is required for every instance of an MSE Virtual Appliance. No separate license is required for high availability. To enable high availability, you need to deploy a primary Cisco MSE appliance with Cisco Connected Mobile Experiences and wIPS licenses, and a secondary Cisco MSE appliance without any Cisco Connected Mobile Experiences or wIPS license

[Table 8](#) lists the ordering support for physical and virtual appliance.

**Table 8** Ordering Support for Physical and Virtual Appliance

MSE Model	SKU	Service SKU	Description
MSE 3355 (Physical Appliance)	AIR-MSE-3355-K9	CON-SNT-MSE3355	Hardware and licenses support
MSE Virtual Appliance	L-MSE-7.0-K9	CON-SAU-LMSE7K	Software and licenses support

## Licenses Summary

**Table 9 License Summary**

Base Location License SKU	CMX License SKU	wIPS Monitor Mode/Monitor Mode SKUs	wIPS Enhanced Local Mode SKUs	Description
L-LS-1AP	L-AD-LS-1AP	L-WIPS-MM-1AP	L-WIPS-ELM-1AP	Supports 1 AP
L-LS-100AP	L-AD-LS-100AP	L-WIPS-MM-100AP	L-WIPS-ELM-100AP	Supports 100 APs
L-LS-1000AP	L-AD-LS-1000AP	L-WIPS-MM-1000AP	L-WIPS-ELM-1000AP	Supports 1000 APs

- 1 AP license gives 10 elements for evaluation license.
- 100 AP license gives 1000 elements for evaluation license.
- 1000 AP license gives 10000 elements for evaluation license.

## Base Location Services Licenses

**Table 10 Base Location Services Licenses**

License SKU	Description
L-LS-1AP	1 AP Base Location Services license
L-LS-100AP	100 AP Base Location Services license
L-LS-1000AP	1000 AP Base Location Services license

## CMX Licenses (Previously known as Advanced Location Services)

**Table 11 CMX Licenses**

License SKU	Description
L-AD-LS-1AP	1 AP CMX license (Advanced Location Services)
L-AD-LS-100AP	100 AP CMX license (Advanced Location Services)
L-AD-LS-1000AP	1000 AP CMX license (Advanced Location Services)

The CMX licenses include the Base Location Service licenses. There is no need to purchase a separate Base Location Service license when purchasing a CMX license.

## Base Location Services to CMX Upgrade License

**Table 12** *Base Location Services to CMX Upgrade License*

License SKU	Description
L-UPG-LS-1AP	1 AP Upgrade from Base Location to CMX license.

## wIPS Enhanced Local Mode License

**Table 13** *wIPS Enhanced Local Mode License*

License SKU	Description
L-WIPS-ELM-1AP	1 AP wIPS Enhanced Local Mode License
L-WIPS-ELM-100AP	100 AP wIPS Enhanced Local Mode License
L-WIPS-ELM-1000AP	1000 AP wIPS Enhanced Local Mode License

## wIPS Monitor Mode/Monitor Module License

**Table 14** *wIPS Monitor Mode Licenses*

License SKU	Description
L-WIPS-MM-1AP	1 AP wIPS Monitor Mode License
L-WIPS-MM-100AP	100 AP wIPS Monitor Mode License
L-WIPS-MM-1000AP	1000 AP wIPS Monitor Mode License

## What's New in This Release

There are no new features or enhancements in this release. For more information about updates in this release, see the [Caveats](#) section.

## Important Notes

This section describes the operational notes and navigation changes for Connected Mobile Experiences, wIPS, and the Mobility Services Engine for Release 6.0.103.0 and later releases.

Features and operational notes are summarized separately for the Mobility Services Engine, Connected Mobile Experiences, and wIPS.

This section contains the following topics:

- [Operational Notes for a Mobility Services Engine, page 20](#)
- [Operational Notes for Connected Mobile Experiences, page 23](#)
- [Operational Notes for CMX Analytics, page 25](#)

# Operational Notes for a Mobility Services Engine

This section lists the operational notes for the Mobility Services Engine and contains the following topics:

- [How and When to Use the db.tar installer, page 20](#)
- [Reboot MSE After Fresh Installation or Upgrade, page 20](#)
- [Automatic Installation Script for Initial Setup, page 21](#)
- [Parameter Changes During Upgrade from 6.0.x to 7.0.x, page 21](#)
- [Controller and Associated Mobility Services Engine Must be Mapped to the Same NTP and Prime Infrastructure Server, page 21](#)
- [Mandatory Default Root Password Change, page 21](#)
- [Configuring the Prime Infrastructure Communication Username and Password Using MSE setup.sh, page 22](#)
- [Configuration Changes for Greater Location Accuracy, page 22](#)
- [WSSI Module with 3600 AP, page 22](#)
- [AeroScout Engine Module Changes, page 22](#)
- [Ports to be Opened for High Availability Between MSEs, page 23](#)
- [wIPS Profile, page 23](#)
- [Synchronizing Floor Maps in Location Service, page 23](#)

## How and When to Use the db.tar installer



### Note

You can use the db.tar installer file when you want to install a fresh MSE along with a fresh DB installation. The recommended method is to follow the usual Upgrade process unless you want a fresh installation.

- Stop the MSE software (`/etc/init.d/mse_d stop`).
- You must delete the following directories if you want to reinstall again:
  - `/opt/mse`
  - `/opt/data`
  - `/opt/oracle`
  - `/opt/ORCLfmap`
  - `/opt/installers/*`
- Scp the db.tar file to `/opt/installers` directory and untar it at that location.
- Run the MSE installer.

## Reboot MSE After Fresh Installation or Upgrade

After a new installation or upgrade of the MSE software, you must reboot the MSE using the “reboot” command.

## Automatic Installation Script for Initial Setup

An automatic setup wizard is available to help you initially set up the Mobility Services Engine.

An example of the complete automatic setup script is provided in the *Cisco Mobility Services Engine Getting Started Guide*.

You can find these documents at the following URL:

[http://www.cisco.com/en/US/products/ps9742/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9742/prod_installation_guides_list.html)

## Parameter Changes During Upgrade from 6.0.x to 7.0.x

You will notice a change in the tracking limits when you do the following:

1. Configure tracking limits in 6.0.x.
2. Upgrade to 7.0.x.

If limits are greater than licensed counts, limits are removed and licensed counts are enforced instead.

## Controller and Associated Mobility Services Engine Must be Mapped to the Same NTP and Prime Infrastructure Server

Communication between the Mobility Services Engine, the Prime Infrastructure, and the controller are in Coordinated Universal Time (UTC). Configuring the Network Time Protocol (NTP) on each system provides devices with the UTC time. An NTP server is required to automatically synchronize time between the controller, Prime Infrastructure, and the Mobility Services Engine.

The Mobility Services Engine and its associated controllers must be mapped to the same NTP server and the same Prime Infrastructure server.

Local time zones can be configured on a Mobility Services Engine to assist network operations center personnel in locating events within logs.



### Note

You can configure NTP server settings while running the automatic installation script. See the *Cisco Mobility Services Engine Getting Started Guide* for details on the automatic installation script at the following URL:

[http://www.cisco.com/en/US/products/ps9742/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9742/prod_installation_guides_list.html)

## Mandatory Default Root Password Change

You must change the default root password of the Mobility Services Engine while running the automatic installation script to ensure optimum network security.

You can also change the password using the Linux `passwd` command.



### Note

For the initial login, even if you choose Skip (S), you will be prompted to enter the password. This is because it is mandatory to change the root password at the initial login.

## Configuring the Prime Infrastructure Communication Username and Password Using MSE setup.sh

You can configure the Prime Infrastructure Communication username and password using the MSE setup.sh script file.

Scenarios which you might encounter while configuring the Prime Infrastructure username and password are as follows:

- If you configure a new Prime Infrastructure username and password, the password provided is applicable for the new Prime Infrastructure username created.
- If you only configure the Prime Infrastructure username without configuring the Prime Infrastructure password, then the default password admin is applied to the configured username.
- If you only configure the Prime Infrastructure password without configuring the Prime Infrastructure username, then the password for the admin user is changed.
- If you configure an existing username for the Prime Infrastructure username and also configure the password, then the password for that existing user is changed.



**Note**

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These users are API users, and they do not have corresponding OS users on the MSE appliance.

---

## 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 Context Aware Service > Advanced > Location Parameters page on the Prime Infrastructure.

The following RSSI parameters might require modification:

- locp-individual-rssi-change-threshold
- locp-aggregated-rssi-change-threshold
- locp-many-new-rssi-threshold-in-percent
- locp-many-missing-rssi-threshold-in-percent



**Caution**

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Contact Cisco TAC for assistance in modifying these parameters.

---

## WSSI Module with 3600 AP

If you are attempting to deploy WSSI module with 3600 APs, then APs should be placed in monitor mode with submode wIPS and advanced wIPS engine enabled on the Prime Infrastructure.

## AeroScout Engine Module Changes

Starting Release 7.5, the AeroScout engine module is removed from both the Connected Mobile Experiences setup and location code. During installation, if you are upgrading from Release 7.2 and later to Release 7.5, then you will be prompted to remove the AeroScout engine. If you agree to remove, the it removes the AeroScout engine and by default, the Cisco Tag Engine is started as part of Connected Mobile Experiences. If you do not agree to remove the AeroScout engine, then installation will exit.

## Ports to be Opened for High Availability Between MSEs

The following is the list of ports to be opened for High Availability between MSEs:

- tcp 22
- tcp 80
- tcp 443
- tcp 1411
- tcp 1521
- tcp 1522
- tcp 1523
- tcp 1524
- tcp 1525
- tcp 1621
- tcp 1622
- tcp 1623
- tcp 1624
- tcp 1625
- tcp 8001
- tcp 8080
- tcp 8081
- tcp 9006
- tcp 15080
- tcp 59000
- tcp 61617
- udp 12091

## wIPS Profile

wIPS profile cannot be pushed to Cisco Wireless LAN Controller (WLC) Version 7.5 or prior using the Prime Infrastructure 1.4.x or 2.x with MSE 7.6 Release.

## Synchronizing Floor Maps in Location Service

While synchronizing floor maps in location service, we recommend that you synchronize floor maps in batches of 1000 access points at a time.

## Operational Notes for Connected Mobile Experiences

This section lists the operational notes for a Mobility Services Engine and contains the following topics:

- [Synchronization Required When Upgrading to Release 7.6.132.0 or Importing CAD Floor Images, page 24](#)

- [Floor Change or Minimum Distance Required for Location Transitions to Post to the History Log, page 24](#)
- [Non-Cisco Compatible Extensions Tags Not Supported, page 24](#)
- [Cisco Compatible Extensions Version 1 Tags Required at a Minimum, page 24](#)
- [Calibration Models and Data, page 25](#)
- [Advanced Location Parameters, page 25](#)
- [Location History Time stamps Match Browser Location, page 25](#)
- [PDAs and Smartphone with Limited Probe Requests Might Affect Location, page 25](#)

## Synchronization Required When Upgrading to Release 7.6.132.0 or Importing CAD Floor Images

When upgrading to Release 7.6.132.0 from Release 7.x, you must synchronize after the software upgrade and also when CAD-generated floor images are imported into the Prime Infrastructure.

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

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



### Note

The other conditions for history logging are as follows:

- Clients: Association, authentication, re-association, re-authentication, or disassociation.
- Tags: Tag Emergency button.
- Interferers: Interferer severity change, cluster center change, or merge.

See Services > Mobility Services > Device Name > Context Aware Service > Administration > History Parameters.

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

## Non-Cisco Compatible Extensions Tags Not Supported

The Mobility Services Engine does not support non-Cisco CX Wi-Fi tags. Additionally, these non-compliant tags are not used in location calculations or shown on the Prime Infrastructure maps.

## Cisco Compatible Extensions Version 1 Tags Required at a Minimum

Only Cisco CX Version 1 (or later) tags are used in location calculations and mapped in the Prime Infrastructure.

## Monitoring Information Varies for Clients and Tags

In the Monitor > Clients page (when Location Debug is enabled), you can view information on the last heard access point and its corresponding Received Signal Strength Indicator (RSSI) reading.

## Calibration Models and Data

Calibration models always applies to Wireless clients, Interferers, Rogue APs, and Rogue Clients.

See Chapter 7, “Context-Aware Planning and Verification” in the *Cisco Connected Mobile Experiences Configuration Guide, Release 7.6* for more details on client calibration.

## Advanced Location Parameters

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

See the “Editing Advanced Location Parameters” section in Chapter 7 of the *Cisco Connected Mobile Experiences Configuration Guide, Release 7.6*.

See Services > Mobility Services > Device Name > Context Aware Service > Advanced > Location Parameters.

## Location History Time stamps Match Browser Location

The Prime Infrastructure time stamp is based on the browser location and not on the Mobility Services Engine settings. Changing the time zone on the Prime Infrastructure or on the Mobility Services Engine does not change the time stamp for the location history.

## Tablets and Smartphone with Limited Probe Requests Might Affect Location

Many tablets, smartphones, and other Wi-Fi devices with power save mode do not continuously send out probe requests after an initial association to the CUWN. Therefore, calculating the location accuracy of such PDAs using RSSI readings is not always optimal.

## Operational Notes for CMX Analytics

This section lists the operational notes for CMX Analytics service and contains the following topics:

- [WebGL Compatibility, page 25](#)
- [Jboss Issue, page 26](#)

### WebGL Compatibility

The CMX Analytics in Release 7.5 provides ability to view the analytic results in both 2D (Open Street Maps) and 3D (WebGL) environments. This provides improved understanding of results on multiple floor paths or when dwell times are calculated throughout a multi-storey building. The 3D environment presents the same information as the 2D environment.

WebGL is an advanced feature that provides graphic capabilities. All browsers do not support WebGL on a particular hardware. Verify your browser compatibility in the Get WebGL website. If your browser supports WebGL, then you must see a spinning cube.

If your browser does not support WebGL, you must do the following:

- Update your latest drivers for video card.
- For Google Chrome, follow the instructions given for WebGL and 3D Graphics in the Google Chrome support website.

- For Firefox, follow these steps to enable WebGL:
  - Download the latest build of Firefox browser and launch Firefox on your computer.
  - In the browser address line, enter **about:config**
  - In the Search text box, enter **webgl** to filter the settings
  - Double click **webgl.enabled\_for\_all\_sites**
  - Set the **webgl.enabled\_for\_all\_sites=true**
- For Safari, follow these steps to enable WebGL:
  - Choose **Safari > Preferences**.
  - Click the **Advanced** tab.
  - Select the **Show Develop menu in menu bar** check box.
  - Choose **Enable WebGL** from the Develop menu.

**Note**


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If your system does not support 3D, then the analytic results are displayed only in 2D Open Street Maps view.

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- Internet Explorer 10 does not have the built-in support for WebGL and Microsoft has not announced any plans for implementing it in the future. WebGL support can be manually added to Internet Explorer using third-party plugins. For more information, see the WebGL for Internet Explorer website.

## Jboss Issue

Sometimes CMX Analytics service does not start up because of a stray Jboss process that runs as a root user. If Analytics engine does not start and if you notice a stray Jboss process with root permissions running, then you must do the following:

- Stop CMX Analytics service from the Prime Infrastructure.
- Kill the Jboss process. command
- Run the `chown -R nobody:nobody /opt/mse/analytics` command.
- Start CMX Analytics service from the Prime Infrastructure.

## Caveats

- [Cisco Bug Search Tool, page 27](#)
- [Open Caveats, page 27](#)
- [Resolved Caveats, page 27](#)

## Cisco Bug Search Tool

The Bug Search Tool (BST), which is the online successor to Bug Toolkit, is designed to improve the effectiveness in network risk management and device troubleshooting. The BST allows partners and customers to search for software bugs based on product, release, and keyword, and aggregates key data such as bug details, product, and version. The tool has a provision to filter bugs based on credentials to provide external and internal bug views for the search input.

To view the details of a caveat listed in this document:

1. Access the BST (use your Cisco user ID and password) at <https://tools.cisco.com/bugsearch/>.
2. Enter the bug ID in the **Search For:** field.

## Open Caveats

Use the BST to view the details of a caveat listed in this section. For more information about the BST, see the “Cisco Bug Search Tool” section.

**Table 15**      **Open Caveats**

ID Number	Caveat Title
CSCuo20334	When selecting dwell time for All Zones, the dwell time for the entire venue appears wrong.
CSCup35467	Fix the issues in GetServerInfo command output.
CSCup48713	Analytics UI dashboard fails to generate chart for specific criteria.
CSCuq52355	Visitor Connect: The social authentication for LinkedIn gives blank page.
CSCuq36612	Client browser is not redirected when LinkedIn social authentication login is used with the Safari browser.

## Resolved Caveats

Use the BST to view the details of a caveat listed in this section. For more information about the BST, see the “Cisco Bug Search Tool” section

**Table 16**      **Resolved Caveats**

ID Number	Caveat Title
CSCup22619	Multiple Vulnerabilities in OpenSSL.
CSCup48319	High availability failover happens after few hours within a day.
CSCuo80959	Struts 2 CVE 2014-0094 vulnerability for MSE.
CSCup27525	Change the default value in Servicemix to fix the MSE unreachability from Prime Infrastructure.
CSCuq00930	HA: Primary and Secondary DBs ran out of archive log space.

**Table 16 Resolved Caveats**

<b>ID Number</b>	<b>Caveat Title</b>
CSCup22619	Multiple Vulnerabilities in OpenSSL.
CSCup98182	HA: Mismatch between archive log size config leads to primary MSE failure.
CSCup85881	The msed service is not stopped when shutdown command is issued.
CSCup78094	wIPS HurtMe test fails on level 3 MSE with 6k wIPS APs, 100 devices, and 50 alarms.
CSCup13832	MSE httpd core dumps on the system during wIPS Testing
CSCup92566	Connect and Engage maps loads mixed HTTP and HTTPS content
CSCuo80361	MSEclient and connection
CSCup62661	CAS returns different floor IDs over time and causes no data to be loaded
CSCuo14503	When the Detected Vs Connected devices report is run, the MSE shows only connected clients in reports and not the detected clients.
CSCup57830	Failure in starting the CMX Analytics service in MSE.
CSCup38905	Pathzone table upgrade clears out table.
CSCup77225	MSE may keep clients in map if client moves to an area not on the maps.
CSCup30029	Getting error at times while executing getserverinfo command.
CSCup40386	Runtime exception while invoking Operation getMseInfo.
CSCul83060	Context Aware Notification lastSeen fields are not updated.
CSCum85033	Problem in creating the mail notification.
CSCup45495	MSE Apache HTTP server and HTTP trace vulnerabilities.
CSCup45250	MSE OpenSSL and OpenSSH vulnerabilities.
CSCuq20610	Hourly logs is filling up disk space to 100% on MSE.
CSCuq55054	Upgrade from 7.4.121.0 to 7.6.120.5 is failing.
CSCuq57833	The MSE 7.6.12.0 backup fails which is installed using ISO DVD.
CSCuq47211	NAPP: MSE restore operation is getting failed from the MSE UI page.
CSCuq82161	Location Accuracy issue in 7.6 release.
CSCuq99353	Install script bug.
CSCur05207	Product evaluation for CVE-2014-6271 and CVE-2014-7169.
CSCuq24699	MSE NMSP status active, last activity time is old

## Troubleshooting

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

<http://www.cisco.com/cisco/web/support/index.html>

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

## Related Documentation

The following documents are related to the Mobility Services Engine:

- *Cisco Connected Mobile Experiences Configuration Guide, Release 7.6*  
[http://www.cisco.com/en/US/products/ps9742/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps9742/tsd_products_support_series_home.html)
- *Cisco Wireless Intrusion Prevention System Configuration Guide, Release 7.6*  
[http://www.cisco.com/en/US/products/ps9817/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9817/products_installation_and_configuration_guides_list.html)
- *Cisco CMX Analytics Configuration Guide, Release 7.6*  
[http://www.cisco.com/en/US/products/ps9742/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9742/products_installation_and_configuration_guides_list.html)
- *Cisco CMX Dashboard Configuration Guide, Release 7.6*  
[http://www.cisco.com/en/US/products/ps9742/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9742/products_installation_and_configuration_guides_list.html)
- Cisco Virtual Appliance Configuration Guide, Release 7.6  
[http://www.cisco.com/en/US/products/ps9742/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9742/products_installation_and_configuration_guides_list.html)
- *Cisco Mobility Services Engine Getting Started Guide*  
[http://www.cisco.com/en/US/products/ps9742/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9742/prod_installation_guides_list.html)
- The Prime Infrastructure Online Help is available with the Prime Infrastructure product.

# Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, 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>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

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