Cisco Mobility Services Engine Ordering and Licensing Guide (up to Release 8.0 software)

This document details the ordering and licensing process for Cisco® Mobility Services Engine (MSE) running legacy software up to and including Release 8.0. For details regarding ordering the MSE with Release 10.0 (or newer) software, please see the Cisco MSE 10.0 Ordering and Licensing Guide.

Cisco Mobility Services provide a wide variety of location-based services. To deploy these services, the following are required:

- Cisco Mobility Services Engine appliance (physical or virtual appliance)
- Services licenses per access point (Base Location, CMX, and/or wIPS)
- Support (optional)

Ordering the Cisco MSE Physical or Virtual Appliance

The Cisco MSE is available in the following versions:

- Cisco 3365 MSE hardware appliance
- Cisco MSE Virtual Appliance (vMSE)

In addition, the Cisco MSE 3355 is still orderable until June 2015.

Table 1 provides an overview of the MSE hardware and virtual appliance SKUs.

Every instance of the virtual MSE requires an activation license (L-MSE-7.0-K9). Activation licenses are not required for physical MSE appliances.

Table 1.   Cisco MSE Hardware and Software SKUs and Scale

Cisco MSE Model	SKU	Base Location \CMX Scale	Presence Scale**	CMX Connect Scale	wIPS scale
MSE 3365 (physical appliance)	AIR-MSE-3365-K9	Supports up to **5000** access points for Base Location and CMX Supports up to **50,000** tracked devices	Supports up to **5000** access points Supports up to **250,000** tracked devices using presence	Supports up to 25,000 active guests with 45 logins per second	Supports up to **10,000** access points for wIPS
MSE 3355* (physical) appliance**	AIR-MSE-3355-K9	Supports up to 2500 access points for Base Location and CMX Supports up to 25,000 tracked devices	Supports up to 2500 access points Supports up to 125,000 tracked devices using presence	Supports up to 12,500 active guests with 45 logins per second	Supports up to 6000 access points for wIPS
MSE virtual appliance	L-MSE-7.0-K9	**High-End vMSE** Supports up to 5000 access points for Base Location and CMX Supports up to 50,000 tracked devices	**High-End vMSE** Supports up to 5000 access points Supports up to 250,000 tracked devices using presence	**High-End vMSE** Supports up to 25,000 active guests with 45 logins per second	**High-End vMSE** Supports up to 10,000 access points for wIPS

Cisco MSE Model	SKU	Base Location \CMX Scale	Presence Scale[**]	CMX Connect Scale	wIPS scale
		Standard vMSE Supports up to 2500 access points for Base Location and CMX Supports up to 25,000 tracked devices	**Standard vMSE** Supports up to 2500 access points Supports up to 125,000 tracked devices using presence	**Standard vMSE** Supports up to 12,500 active guests with 45 logins per second	**Standard vMSE** Supports up to 6000 access points for wIPS
		Low-End vMSE Supports up to 200 access points for Base Location Supports up to 2000 tracked devices Base Location functionality only. CMX license not supported in the low-end vMSE	**Low-End vMSE** CMX license not supported	**Low-End vMSE** CMX license not supported	**Low-End vMSE** Supports up to 2000 access points for wIPS

The scaling limits may differ when using earlier software versions.

[*] **Note:** Enabling **FastLocate** technology increases location update rates by processing data packets for devices that are connected to the network. Enabling FastLocate affects the MSE scale guidelines because data packets are more frequent than probe packets and therefore use more MSE compute resources. Every connected device takes up five times as many resources as a probing device. The supported number of end devices when using FastLocate is as follows:

Number of probing devices + (5 x number of connected devices) <= tracked devices platform scale.

For example, if using the MSE 3355 and planning on having 2000 devices connected to the network (and thereby using FastLocate), the platform scale would be:

Number of probing devices + 10,000 (5 x 2000) <= 25,000 (tracked devices platform scale).

Therefore, the MSE would support only 15,000 probing devices in addition to the 2000 connected devices.

For more details on FastLocate, please see the MSE data sheet.

[**] **Note: Presence** is a method of assessing the location of a device by determining the nearest access point to that device. It is not as accurate as the standard method of triangulating the device location; however, it can be used in venues that don't have enough access points to enable device triangulation. Presence is available only in the 8.0 software release. The scaling guidelines provided are for deployments that use only presence. Deployments that use both presence and location triangulation will scale according to the Base Location guidelines.

[***] **Note: The MSE 3355** has reached end of life, and sales will end in June 2015.

Ordering the Cisco MSE Services Licenses

The Cisco MSE requires licenses to enable functionality. Base Location and Connected Mobile Experiences (CMX) licenses are purchased on a per-access-point basis and are additive.

There are three types of MSE licenses:

- **Base Location license:** Provides the ability to detect, track, and trace Wi-Fi clients, rogue devices, Cisco CleanAir® interferers, and RFID tags as well as advanced spectrum capability. The Base Location license also enables customers and partners to use standard MSE APIs (REST or SOAP). For a list of partners, please see the Cisco Developer Network Mobility Services API page.
- **CMX license:** The CMX license provides all the functionality of the Base Location license with the addition of CMX capabilities:
  - **CMX Analytics**, a flexible location analytics platform to view and analyze how, where, and when visitors move through a venue.
  - **CMX Connect**, a customizable and location-aware captive portal to onboard guest users to the Wi-Fi network.
  - **CMX for Facebook Wi-Fi**, helping guests connect to the Wi-Fi network while providing organizations or merchants with social demographic data via Facebook Insights.
  - **CMX SDK**, a mobile app software development kit (SDK) that enables organizations to integrate Wi-Fi-based indoor navigation with push notification and auto-launch capabilities into mobile apps.

An upgrade license is also available (L-UPG-LS-1AP) for customers that have Base Location licenses and wish to upgrade to the CMX license.

Please note that you do not need separate, per-access-point licenses for every instance of MSE. If two MSEs are running different CMX services (for example, one MSE with CMX Analytics and another MSE with CMX Connect), only one of the MSEs needs to have CMX licenses hosted on it. The MSE that is actively calculating the location must have per-access-point licenses. For license scaling guidelines, refer to Table 1, which outlines the number of access points supported for each service and platform.

- **Wireless Intrusion Prevention System (wIPS) license:** Requires a separate MSE running the wIPS service. There are three deployment options:
  - **Monitor mode:** The number of wIPS licenses required equals the number of access points configured in the full-time monitor mode.
  - **Enhanced Local mode:** The number of wIPS licenses required equals the number of access points in local mode (data serving) deployed in the network.
  - **Monitor module:** The number of wIPS licenses required equals the number of Wireless Security Modules (WSMs) deployed in the network.

MSE licenses are available as options under **L-MSE-PAK** in the Order Tool. Table 2 provides an overview of the MSE license SKUs.

Table 2.   Cisco MSE License SKUs

Base Location License SKU	CMX License SKU	Upgrade License from Base Location to CMX	wIPS Monitor Mode/ Monitor Module SKUs	wIPS Enhanced Local Mode SKUs	Description
L-LS-1AP	L-AD-LS-1AP	L-UPG-LS-1AP	L-WIPS-MM-1AP	L-WIPS-ELM-1AP	Supports 1 access point
L-LS-100AP	L-AD-LS-100AP	-	L-WIPS-MM-100AP	L-WIPS-ELM-100AP	Supports 100 access points
L-LS-1000AP	L-AD-LS-1000AP	-	L-WIPS-MM-1000AP	L-WIPS-ELM-1000AP	Supports 1000 access points

Cisco Mobility Services Licenses for High Availability

For high-availability deployments, two physical or virtual appliances are required, but only one set of licenses is required to be installed on the primary appliance. Note that if using the vMSE, both virtual appliances require an activation license (L-MSE-7.0-K9). For detailed design and scaling information, please see the CMX Configuration Guide at http://www.cisco.com/en/US/products/ps9742/products_installation_and_configuration_guides_list.html.

Ordering Support for Physical and Virtual Appliances

Select the appropriate level of support. Table 3 lists the Cisco MSE support SKUs.

Note: If ordering the MSE 3355 or vMSE, a single service SKU covers both hardware as well as software support. If ordering the MSE 3365 appliance, hardware support and software support must be ordered separately.

Table 3.   Cisco MSE Support SKUs

MSE Model	SKU	Service SKU	Description
MSE 3365 physical appliance	AIR-MSE-3365-K9	CON-SNT-AIRMSE3K	Hardware and software support
MSE 3355 physical appliance	AIR-MSE-3355-K9	CON-SNT-MSE3355	Hardware and software support
MSE virtual appliance	L-MSE-7.0-K9	CON-SAU-LMSE7K	Software and software support
MSE 8.0 Base License	L-LS-xAP	CON-SAU-LLS1APSW	Software support (only if ordering the 3365 appliance)
MSE 8.0 CMX License	L-AD-LS-xAP	CON-SAU-LADLA1AP	Software support (only if ordering the 3365 appliance)

Ordering FastLocate

FastLocate increases the location update rate for all the associated devices. FastLocate requires a Wireless Security Module (WSM) on every access point that participates in the location calculation. In addition, the MSE requires either a Base Location or CMX license for every access point.

Ordering MSE Licenses for Legacy Software Versions

Prior to the 7.4 software release, the MSE licensing scheme was based on the number of tracked end devices. The current scheme is based on the number of WLAN access points.

The legacy end-device licenses are still orderable for MSEs using software up to and including the 7.3 release. The SKU is under L-MSE-PAK. Table 4 shows the SKUs for these licenses.

Table 4.   SKUs for End-Device Licenses for Release 7.3 and Earlier

License SKU	Description
L-CAS-1KC	Context-Aware Services license for 1000 devices
L-CAS-3KC	Context-Aware Services license for 3000 devices
L-CAS-6KC	Context-Aware Services license for 6000 devices
L-CAS-12KC	Context-Aware Services license for 12,000 devices

Migrating MSE Licenses

When upgrading from legacy software versions that use the older licensing scheme (up to and including Release 7.3) to software versions that use the newer licensing scheme (Release 7.4 and later), the older end-device licenses (L-CAS-xKC) will automatically convert to Base Location licenses (per WLAN access point). The number of Base Location licenses created during the conversion process depends on the number of end-device licenses present in the MSE prior to the upgrade. Please contact your Cisco account team if the number of Base Location licenses created during the upgrade process is less than the number of access points in the network.

Cisco MSE Licensing Help

For technical support related to licensing, contact the Cisco Technical Assistance Center (TAC) at 800 553-2447 or tac@cisco.com. For questions related to your licensing order, contact Cisco Customer Service at http://www.cisco.com/go/customerservice.

For More Information

- For more information about Cisco MSE, visit http://www.cisco.com/go/mse or the Cisco MSE Support site at http://www.cisco.com/en/US/products/ps9742/tsd_products_support_series_home.html.
- For additional licensing information, visit the Cisco licensing website at http://www.cisco.com/go/license.