



## CHAPTER 2

# Adding and Deleting Systems

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This chapter describes how to add and delete a mobility services engine from Cisco WCS.

This chapter contains the following sections:

- [Adding a Mobility Services Engine to WCS, page 2-1](#)
- [Deleting a Mobility Services Engine from the Cisco WCS, page 2-2](#)
- [MSE License Overview, page 2-3](#)
- [Registering Client and wIPS Product Authorization Keys, page 2-4](#)
- [Installing wIPS License Files, page 2-9](#)

## Adding a Mobility Services Engine to WCS

To add a mobility services engine to WCS, log in to WCS and follow these steps:

- 
- Step 1** Verify that you can ping the mobility services engine that you want to add from WCS.
  - Step 2** Choose **Services > Mobility Services** to display the Mobility Services page.
  - Step 3** From the Select a command drop-down list, choose **Add Mobility Services Engine**, and click **Go**.
  - Step 4** In the Device Name text box, enter a name for the mobility services engine.
  - Step 5** In the IP Address text box, enter the IP address of the mobility services engine.
  - Step 6** (Optional) In the Contact Name text box, enter the name of the mobility services engine administrator.
  - Step 7** In the User Name and Password text boxes, enter the username and password for the mobility services engine.

This refers to the WCS communication username and password created during the setup process.

If you did not specify the username and password during the setup process, use the default username and password, which are both *admin*.



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**Note** If you changed the username and password during the automatic installation script, enter those values at this step. If you did not change the default password, and username, we recommend that you rerun the automatic installation script and change the username and password.

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- Step 8** Select the **HTTP** check box to allow communication between the mobility services engine and third-party applications.

**Step 9** Select the **Delete synchronized service assignments** check box if you want to permanently remove all service assignments from the mobility services engine.

This option is applicable for network designs, wired switches, controllers, and event definitions. The existing location history data is retained, however, you must use manual service assignments to perform any future location calculations.

**Step 10** Click **Next**. The Select Mobility Service page appears.

**Step 11** To enable a service on the mobility services engine, select the check box next to the service. Services include Context Aware and wIPS.

You can choose CAS to track clients, rogues, interferers, wired clients, and tags.

Choose either of the following engines to track tags:

- Cisco Tag Engine
- or
- Partner Tag Engine




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**Note** A mobility services engine can support multiple services.

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**Step 12** Click **Save**.




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**Note** After adding a new mobility services engine, you can synchronize network designs (campus, building, and outdoor maps), controllers, switches (Catalyst Series 3000 only), and event groups on the local mobility services engine using WCS. You can perform this synchronization immediately after adding a new mobility services engine or at a later time. To synchronize the local and WCS databases, see [Chapter 3, “Synchronizing Mobility Services Engines”](#).

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## Deleting a Mobility Services Engine from the Cisco WCS

To delete a mobility services engine from the WCS database, follow these steps:

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**Step 1** Choose **Services > Mobility Services** to display the Mobility Services page.

**Step 2** Select the mobility services engine(s) to be deleted by selecting the corresponding check box(es).

**Step 3** From the Select a command drop-down list, choose **Delete Service(s)**, and click **Go**.

**Step 4** Click **OK** to confirm that you want to delete the selected mobility services engine from the WCS database.

**Step 5** Click **Cancel** to stop deletion.

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# MSE License Overview

The MSE packages together multiple product features related to network topology, design such as NMSP, and Network Repository along with related service engines and application processes, such as the following:

- Location Service or ContextAware Software
- Wireless Intrusion Prevention System (wIPS)

To enable smooth management of MSE and its services, various licenses are offered.

This section contains the following topics:

- [MSE License Structure Matrix, page 2-3](#)
- [Sample MSE License File, page 2-3](#)
- [Revoking and Reusing an MSE License, page 2-4](#)

## MSE License Structure Matrix

[Table 2-1](#) lists the breakup of the licenses between the high-end, low-end, and evaluation licenses for MSE, Location services or ContextAware software, and wIPS.

**Table 2-1** MSE License Structure Matrix

	High End	Low End	Evaluation
<b>MSE Platform</b>	High-end appliance and Infrastructure platform.	Low-end appliance and Infra-structure platform.	60 days.
<b>Location Service or ContextAware Software</b>	3000, 6000, 12,000 Tags	1000 Tags	60 days, 100 Tags and 100 Elements.
	3000, 6000, 12,000 Elements	1000 Elements	
<b>wIPS</b>	5000 access points	2000 access points	60 days, 20 access points.

## Sample MSE License File

The following is a sample MSE license file:

```
FEATURE MSE cisco 1.0 permanent uncounted \
    VENDOR_STRING=UDI=udi,COUNT=1 \
    HOSTID=ANY \
    NOTICE="<LicFileID>MSELicense</LicFileID><LicLineID>0</LicLineID> \
    <PAK>dummyPak</PAK>" \
    SIGN="0C04 1EBA BE34 F208 404F 98ED 43EC \
    45D7 F881 08F6 7FA5 4DED 43BC AF5C C359 0444 36B2 45CF 6EA6 \
    1DB1 899F 413F F543 F426 B055 4C7A D95D 2139 191F 04DE"
```

This sample file has 5 license entries. The first word of the first line of any license entry tells you what type of license it is. It can either be a Feature or Increment license. A Feature license is a static, lone-item license. There can be multiple service engines running in MSE. An Increment license is an additive license. In MSE, the individual service engines are treated as Increment licenses.

The second word of the first line defines the specific component to be licensed. Example: MSE, MSE. The third word depicts the vendor of the license, for example: Cisco. The fourth word denotes the version of the license, for example 1.0. The fifth word denotes the expiration date, this can be permanent for licenses that never expire or a date in the format dd-mmm-yyyy. The last word defines whether this license is counted.

For more information on the license types, see the *Cisco Wireless Control System Configuration Guide, Release 7.0.x*.

## Revoking and Reusing an MSE License

You can revoke an MSE appliance license from one system and reuse it on another system. When you revoke a license, the license file is deleted from the system. If you want to reuse the license on another system, then the license needs to be rehosted.

If you want to reuse a license with an upgrade SKU on another system, then you need to have the corresponding base license SKU installed in the system to which you want to reuse the upgrade SKU. You cannot reuse the upgrade license SKU in a system if the corresponding base license SKU is deleted from it.

When you revoke a license, MSE restarts the individual service engines to reflect the changes to the licenses. Then the service engines receives the updated capacity from MSE during startup.

For more information on licensing, see the *Cisco Wireless Control System Configuration Guide, Release 7.0.x*.

## Revoking an MSE License Using MSE CLI

You can also revoke an MSE license from the MSE CLI manually without using WCS.

To revoke an MSE license follow these steps:

- 
- Step 1** Log in to an MSE using CLI.
- Step 2** Navigate to `/opt/mse/licensing/`
- Step 3** Delete the license file by entering this command:
- ```
rm /opt/mse/licensing/license file name.lic
```
- where *license file name* is the name of the license file.
- Step 4** Restart the MSE process:
- ```
/etc/init.d/msed restart
```
- The MSE license is revoked.
- 

## Registering Client and wIPS Product Authorization Keys

You receive a product authorization key (PAK) when you order a client, wIPS or tag license from Cisco. You must register the PAK to receive the license file for install on the mobility services engine. License files are e-mailed to you after successfully registering a PAK.

Client and wIPS PAKs are registered with Cisco.

**Note**

Tag PAKs are registered with AeroScout only if Aeroscout engine for tags was selected during the Addition of MSE. This procedure is not necessary if Cisco tag engine was selected as the Cisco license will be shared between all devices including the tags. For more information, see the *Cisco Context-Aware Service Configuration Guide* at the following URL:

[http://www.cisco.com/en/US/products/ps9806/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9806/products_installation_and_configuration_guides_list.html)

To register a PAK to obtain a license file for installation, follow these steps:

**Step 1** Open a browser window and enter the following URL:

<http://www.cisco.com/go/license>

**Step 2** Enter the PAK, and click **SUBMIT** (see [Figure 2-1](#)).

**Figure 2-1** Enter PAK Number Page

The screenshot shows the Cisco Product License Registration page. The page has a navigation bar with links for Solutions, Products & Services, Ordering, Support, Training & Events, and Partner Central. The main content area is titled 'Product License Registration' and includes a progress bar with four steps: 1. Enter a PAK Number, 2. Validate Features, 3. Designate Licensee, and 4. Finish and Submit. The first step is active. Below the progress bar, there is a section for 'Licenses Not Requiring a PAK' and a section for 'Product Authorization Key (PAK)'. The PAK input field contains the value '1333352EFF'. Below the input field, there are instructions: 'Enter one value at a time including dashes. Example 1: 4XCD##V#### Example 2: UNTY-2X-SJ-XXXXXX Example 3: CRS-3X-CQ-XXXXXX'. At the bottom, there are 'Go Back' and 'SUBMIT' buttons.

**Step 3** Verify the license purchase. Click **Continue** if the license information is correct (see [Figure 2-2](#)). The licensee entry page appears (see [Figure 2-3](#)).

**Note**

If the license is incorrect, click the **TAC Service Request Tool** link to report the problem.

Figure 2-2 Validate Features Page

Worldwide [change] Logged In | Account | About Cisco

Search  Go

Solutions Products & Services Ordering Support Training & Events Partner Central

HOME

Product License Registration

Support

**Product License Registration**

1 Enter a PAK Number 2 **Validate Features** 3 Designate Licensee 4 Finish and Submit

Your product information is shown below. Displayed is the product name and associated features and quantity.

Product SKU	Option SKU	Description	Quantity
AIR-MSE-PAK=		AIR-MSE-PAK= : Mobility Services Configurable PAK	1
	AIR-CAS-12KC-K9	AIR-CAS-12KC-K9 : Context Aware Engine for Clients License For 12K Clients	1

If the information is incorrect, for a prompt response, please open a Service Request using the [TAC Service Request Tool](#). Please have your valid Cisco.com user id and password available. As an alternative you may also call our main Technical Assistance Center at 800-553-2447. If you would like to enter a different PAK, please use your browser's back button to return to the form.

Go Back Continue

Toolkit: Roll over tools below  
Feedback | Help

Related Tools  
[Dynamic Configuration Tool](#)  
[TAC Service Request Tool](#)

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Figure 2-3 Designate Licensee, Page 1 of 2

Worldwide [change] Logged In | Account | About Cisco

Search  Go

Solutions Products & Services Ordering Support Training & Events Partner Central

HOME

Product License Registration

Support

**Product License Registration**

1 Enter a PAK Number 2 Validate Features 3 **Designate Licensee** 4 Finish and Submit

Mobility Services Engine

**Note:** Partners registering on behalf of a customer must check the licensee check box in the End user section.

A \*\*\* denotes a required field

Please enter below the UDI of the MSE appliance that you will be installing your software on.

Host id\*  
AIR-MSE-3350-K9-V01:MXQ821A31P

About your License Key  
sent via email within 1 hour to the email address specified.

By submitting this form, you are acknowledging that you have read the End-User License Agreement, of which this Registration Form is a part "Agreement", and that you understand it and agree to be bound by its terms and conditions. You further agree that the Agreement is the complete and exclusive statement of the Agreement between the parties, and supersedes all proposals or prior agreements, oral or written, and all other communications between the parties relating to the subject matter of the Agreement.

Agreement:\*  Click here if you accept the conditions of the [End-User License Agreement](#)

Toolkit: Roll over tools below  
Feedback | Help

Related Tools  
[Dynamic Configuration Tool](#)  
[TAC Service Request Tool](#)

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**Step 4** In the Designate Licensee page:

- a. Enter the UDI of the mobility services engine in the host id text box. This is the mobility services engine on which the license will be installed.



**Note** UDI information for a mobility services engine is found on the General Properties page at Services > Mobility Services Engine > *Device Name* > System.

- b. Select the **Agreement** check box. Registrant information appears next to the Agreement check box (see [Figure 2-4](#)).

Modify the information as necessary.



**Note**

Ensure that the phone number for the registrant and end user does not include any characters in the string. For example, enter 555 1212 rather than 555.1212 or 555-1212.

**Figure 2-4** *Designate Licensee Page, 2 of 2*

The screenshot displays a web form titled "Registrant Information" with the following fields and values:

Registrant Information		
Name:	First Name:	Last Name:
	username1	username2
Company:	CISCO SYSTEMS	
Title	Technical Writer	
Address1:	3550 Cisco Way	
Address2		
City/Town:	State/Prov.:	Postal/Zip:
San Jose	CA	95134
Country:	USA	
Phone:	14085551234	
Fax		
Email:	username1@example.com	

- c. If registrant and end user are not the same person, select the **Licensee (End-User)** check box and enter the information for the end user.
- d. Click **Continue**. A summary of the entered data appears (see [Figure 2-5](#)).

Figure 2-5 Finish and Submit Page

HOME  
Product License Registration

Support  
**Product License Registration**

1 Enter a PAK Number 2 Validate Features 3 Designate Licensee 4 Finish and Submit

**Summarized Information**  
Please review information below and confirm that it's complete and accurate.

**Licensee Information**

Registrant Profile  
[Edit Details](#)

Full Name: username1  
Job Title: Technical Writer  
Company: CISCO SYSTEMS  
Business Address: 3550 Cisco Way, San Jose, CA 95134 USA  
Phone: 14085551234  
Fax:  
Email: username1@example.com

End User Profile  
[Edit Details](#)

Full Name: username1  
Job Title: Technical Writer  
Company: CISCO SYSTEMS  
Business Address: 3550 Cisco Way, San Jose, CA 95134 USA  
Phone: 14085551234  
Fax:  
Email: username1@example.com

Toolkit: Roll over tools below  
Feedback | Help

Related Tools  
[Dynamic Configuration Tool](#)  
[TAC Service Request Tool](#)

**Step 5** In the Finish and Submit page, review registrant and end user data. Click **Edit Details** to correct information. Click **Submit**. A confirmation page appears (see Figure 2-6).

Figure 2-6 Registration Confirmation Page

Worldwide [change] Logged In | Account | About Cisco

Search Go

Solutions Products & Services Ordering Support Training & Events Partner Central

HOME  
Product License Registration

Support  
**Product License Registration**

**Registration Complete**

Thank you for registering your product with Cisco Systems. Your registration is complete. Your license/s and user information will be sent via email within 1 hour to the email address you specified during the registration process. If you have not received an email within 1 hour, please send an email to [licensing@cisisco.com](mailto:licensing@cisisco.com) or call 1-800-553-2447. Please be sure to check your Junk/Spam email folders for this email from [licensing@cisisco.com](mailto:licensing@cisisco.com) with your license key attached.

Toolkit: Roll over tools below  
Feedback | Help

Related Tools  
[Dynamic Configuration Tool](#)  
[TAC Service Request Tool](#)



# Installing wIPS License Files

You can install client and wIPS licenses from WCS.



## Note

The tag license installation is separate only if Aeroscout engine was selected for tag calculation while adding the MSE.

To add a client or wIPS license to WCS after registering the PAK, follow these steps:

- Step 1** Choose **Administration > License Center** (see [Figure 2-7](#)).

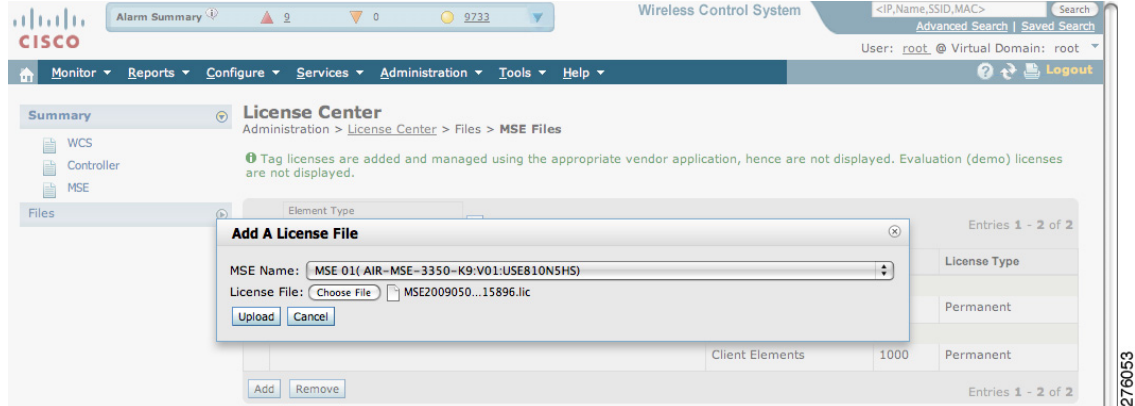
**Figure 2-7 Administration > License Center Page**

MSE Base (ID)	Type	Limit	License Type	Status	Count	Unlicensed Count	% Used
LMR_sanity_mse ( ADR-MSE-3310-K9-W01;not Specified)							
	CAS Elements	1010	Permanent	Active	52	0	5%
	wIPS Monitor/Local Mode APs	10	Evaluation ( 60 days left)	Inactive	0	0	0%
	wIPS Local Mode APs	10	Evaluation ( 60 days left)	Inactive	0	0	0%

- Step 2** Choose **Files > MSE Files** from the left sidebar menu.

- Step 3** Click **Add**. The Add a License File dialog box appears (see [Figure 2-8](#)).

Figure 2-8 Add a License File Dialog Box



**Step 4** Choose the applicable MSE name from the MSE Name drop-down list.



**Note** Verify that the UDI of the selected mobility services engine matches the one you entered when registering the PAK.

**Step 5** Click **Choose File** to select the license file.

**Step 6** Click **Upload**. The newly added license appears in the MSE license file list.