



CHAPTER 4

Configuring and Viewing System Properties

This chapter describes how to configure and view system properties on the mobility services engine.

This chapter contains the following sections:

- [“Configuring General Properties” section on page 4-2](#)
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Configuring General Properties

You can use Cisco WCS to edit the general properties of a mobility services engine such as contact name, user name, password, HTTP and HTTPS.

To edit the general properties of a mobility services engine, follow these steps:

- Step 1** In Cisco WCS, click **Mobility > Mobility Services** to display the Mobility Services window.
- Step 2** Click the name of the mobility services engine you want to edit. A two-tabbed panel labeled with General and Performance appears.



Note If the General Properties window does not display by default, select **General Properties** from the **Systems** menu left panel.

- Step 3** Modify the parameters as appropriate in the **General** panel. [Table 4-1](#) describes each parameter.

Table 4-1 General Properties

Parameter	Configuration Options
Contact Name	Enter a contact name for the mobility services engine.
User Name	Enter the login user name for the Cisco WCS server that manages the mobility services engine.
Password	Enter the login password for the Cisco WCS server that manages the mobility services engine.
Port	8001
HTTP	Check the Enable check box to enable HTTP. By default, HTTPS is enabled. Note HTTP is primarily enabled to allow third-party applications to communicate with the mobility services engine. Note Cisco WCS always communicates through HTTPS.
Legacy Port	Enter the mobility services port number that supports HTTPS communication. The Legacy HTTPS option must also be enabled.
Legacy HTTPS	This parameter does not apply to mobility services engines. It applies only to location appliances.
Mobility Services	To enable a service on a mobility services engine, select the button next to the desired service. Once selected, the service displays as active (UP). Note Only one service can operate on a mobility services engine at a time. Operation of multiple services on a mobility services engine is not supported. All inactive services are noted as (DOWN) on the selected (current) system and on the network.

- Step 4** Click **Save** to update the Cisco WCS and mobility services engine databases.

Modifying NMSP Parameters

Network Mobility Services Protocol (NMSP) is the protocol that manages communication between the mobility services engine and the controller. Transport of telemetry, emergency, and chokepoint information between the mobility services engine and the controller is managed by this protocol.


Note

No change in the default parameter values is recommended unless the network is experiencing slow response or excessive latency.

- Telemetry, emergency and chokepoint information is only seen on controllers and Cisco WCS installed with release 4.1 software or later.
- The TCP port (16113) that the controller and mobility services engine communicate over MUST be open (not blocked) on any firewall that exists between the controller and mobility services engine for NMSP to function.

To configure NMSP parameters, follow these steps:

- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
- Step 2** Click the name of the mobility services engine whose properties you want to edit.
- Step 3** From the **System** menu (left panel), select **NMSP Parameters**. The configuration options appear.
- Step 4** Modify the NMSP parameters as appropriate. [Table 4-2](#) describes each parameter.

Table 4-2 NMSP Parameters

Parameter	Description
Echo Interval	<p>Defines how frequently an echo request is sent from a mobility services engine to a controller. The default value is 15 seconds. Allowed values range from 1 to 120 seconds.</p> <p>Note If a network is experiencing slow response, you can increase the values of the echo interval, neighbor dead interval and the response timeout values to limit the number of failed echo acknowledgements.</p>
Neighbor Dead Interval	<p>The number of seconds that the mobility services engine waits for a successful echo response from the controller before declaring the neighbor dead. This timer begins when the echo request is sent.</p> <p>The default values is 30 seconds. Allowed values range from 1 to 240 seconds.</p> <p>Note This value must be at least two times the echo interval value.</p>
Response Timeout	<p>Indicates how long the mobility services engine waits before considering the pending request as timed out. The default value is 1 second. Minimum value is one (1). There is no maximum value.</p>

Table 4-2 NMSP Parameters (continued)

Parameter	Description
Retransmit Interval	Interval of time that the mobility services engine waits between notification of a response time out and initiation of a request retransmission. The default setting is 3 seconds. Allowed values range from 1 to 120 seconds.
Maximum Retransmits	Defines the maximum number of retransmits that are sent in the absence of a response to any request. The default setting is 5. Allowed minimum value is zero (0). There is no maximum value.

Step 5 Click **Save** to update the Cisco WCS and mobility services engine databases.

Viewing Active Sessions on a System

You can view active user sessions on the mobility services engine.

For every session, Cisco WCS displays the following information:

- Session identifier
- IP address from which the mobility services engine is accessed
- Surname of the connected user
- Date and time when the session started
- Date and time when the mobility services engine was last accessed
- How long the session was idle since it was last accessed

To view active user sessions, follow these steps:

- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
- Step 2** Click the name of the mobility services engine on which you want to view active sessions.
- Step 3** Click **System > Active Sessions**.

Adding and Deleting Trap Destinations

You can specify which Cisco WCS or Cisco Security Monitoring, Analysis and Response System (CS-MARS) network management platform is the recipient of SNMP traps generated by the mobility services engine.

When a user adds a mobility services engine using Cisco WCS, that WCS platform automatically establishes itself as the default trap destination. If a redundant Cisco WCS configuration exists, the backup WCS is not listed as the default trap destination unless the primary WCS fails and the back system takes over. Only an active Cisco WCS is listed as a trap destination.

Adding Trap Destinations

To add a trap destination, follow these steps:

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- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
 - Step 2** Click the name of the mobility services engine for which you want to define a new SNMP trap destination server.
 - Step 3** Click **System > Trap Destinations**.
 - Step 4** Select **Add Trap Destination** from the Select a command drop-down menu. Click **GO**.
 - Step 5** Enter IP address of destination SNMP server.
 - Step 6** Port number default of **162** is auto-populated. You can modify this as needed.
 - Step 7** Community default value of **public** is auto-populated. You can modify this as needed.
 - Step 8** Destination default value of *other* auto-populates.



Note All trap destinations are identified as *other* except for the automatically created *default* trap destination.

- Step 9** Click **Save** to save settings.
You are returned to the trap destinations summary window and the newly-defined trap is listed.
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Deleting Trap Destinations

To delete a trap destination, follow these steps;

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- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
 - Step 2** Click the name of the mobility services engine for which you want to delete a SNMP trap destination server.
 - Step 3** Click **System > Trap Destinations**.
 - Step 4** Check the check box next to the trap destination entry that you want to delete.
 - Step 5** Select **Delete Trap Destination** from the Select a command drop-down menu. Click **GO**.
 - Step 6** In the message box that appears, click **OK** to confirm deletion.
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Viewing and Configuring Advanced Parameters

In Cisco WCS, at the Advanced Parameters window ([Figure 4-1](#)) you can both view general system level settings of the mobility services engine, and configure monitoring parameters.

- Refer to the [“Viewing Advanced Parameters Settings”](#) section on page 4-6 to review current system level settings of the advanced parameters.

- Refer to the “[Configuring Advanced Parameters](#)” section on page 4-7 to modify the current system level settings of the advanced parameters.

**Note**

You can also initiate advanced commands such as a system reboot, a system shutdown, clearing the configuration file, and defragment the system database. Refer to the “[Initiating Advanced Commands](#)” section on page 4-8 for information on these commands and when they should be used

Viewing Advanced Parameters Settings

To view the advanced parameter settings of the mobility services engine, follow these steps:

- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
- Step 2** Click the name of a mobility services engine to view its status.
- Step 3** Click **System** (left panel).
- Step 4** Click **Advanced Parameters**. The following window appears ([Figure 4-1](#)).

Figure 4-1 System > Advanced Parameters

The screenshot displays the Cisco WCS interface for the 'Wireless Control System'. The user is logged in as 'root' in the 'Virtual Domain: root'. The navigation menu includes Monitor, Reports, Configure, Mobility, Administration, Tools, and Help. The left sidebar shows the 'System' menu expanded, with 'Advanced Parameters' selected. The main content area shows the configuration for the 'wips-sim-Sp' engine.

General Information		Cisco UDI	
Product Name	Cisco Mobility Service Engine	Product Identifier (PID)	AIR-MSE-3310-K9
Version	5.2.91.0	Version Identified (VID)	V01
Started At	11/14/08 2:31 PM	Serial Number (SN)	QSH77480066
Current Server Time	11/20/08 6:09 PM		
Timezone	America/Los_Angeles		
Hardware Restarts	0		
Active Sessions	1		

Advanced Commands

- Reboot Hardware
- Shutdown Hardware
- Clear Configuration
- Defragment Database

Logging Options

Logging Level: Information

Core Engine	<input checked="" type="checkbox"/> Enabled
Database	<input checked="" type="checkbox"/> Enabled
General	<input checked="" type="checkbox"/> Enabled
Object Manager	<input checked="" type="checkbox"/> Enabled
SNMP Mediation	<input checked="" type="checkbox"/> Enabled
XML Mediation	<input checked="" type="checkbox"/> Enabled
Asynchronous	<input checked="" type="checkbox"/> Enabled
NMSP Protocol	<input checked="" type="checkbox"/> Enabled

Advanced Parameters

Advanced Debug:

Number of Days to keep Events: 2

Session Timeout: 30 minutes.

Absent Data cleanup interval: 1440 minutes.

Buttons: Save, Cancel

Alarm Summary: Malicious AP: 0, 0, 0

Configuring Advanced Parameters

On the Advanced Parameters window, you can use Cisco WCS:

- To specify the logging level and types of messages to log.
Refer to the [“Configuring Logging Options” section on page 4-7](#).
- To set how long events are kept, how long before a session time-outs, interval between data clean ups and enable or disable advanced debug level messages in the logs.
Refer to the [“Configuring Advanced Parameters” section on page 4-7](#).

Configuring Logging Options

You can use Cisco WCS to specify the logging level and types of messages to log.

To configure logging options, follow these steps:

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- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
- Step 2** Click the name of the mobility services engine that you want to configure.
- Step 3** From the System menu (left panel) click **Advanced Parameters**. The advanced parameters for the selected mobility services engine appears.
- Step 4** Scroll down to the Logging Options section and choose the appropriate option from the Logging Level drop-down menu.

There are four logging options: **Off**, **Error**, **Information**, and **Trace**.



Caution

Use **Error** and **Trace** only when directed to do so by Cisco Technical Assistance Center (TAC) personnel.

- Step 5** Check the **Enabled** check box next to each item listed in that section to begin logging of its events.
- Step 6** Click **Save** to apply your changes.
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Configuring Advanced Parameters

You can use Cisco WCS to set how long events are kept, how long before a session time-outs, interval between data clean ups and enable or disable advanced debug level messages in the logs.

To configure advanced parameters, follow these steps:

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- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
- Step 2** Click the name of the mobility services engine that you want to configure.
- Step 3** From the System menu (left panel) click **Advanced Parameters**. The advanced parameters for the selected mobility services engine appears.
- Step 4** Scroll down to the Advanced Parameters and make the appropriate changes. [Table 4-3](#) describes the parameters.

Table 4-3 Advanced Parameters

Parameter	Configuration Options
Advanced debug	Check the check box to enable advanced debug. This enables reporting of advanced debug level messages to the log files.
Number of days to keep events	Enter the number of days that events are kept in the event table. Default value is 2.
Session time-out (minutes)	Enter the number of minutes a Cisco WCS or client session can remain inactive before it times out. Default value is 30.
Absent data cleanup interval (minutes)	Enter the number of minutes that data for <i>absent</i> mobile stations is kept. An <i>absent</i> mobile station is one that was discovered but does not appear in the network. Default value is 1440.

Initiating Advanced Commands

You can initiate a system reboot or shutdown, clear the system configuration or defragment a database by clicking the appropriate button on the Advanced Parameters page.

Reboot or Shutdown a System

To reboot or shutdown a mobility services engine, follow these steps:

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- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
 - Step 2** Click the name of a mobility services engine you want to reboot or shutdown
 - Step 3** Click **System** (left panel).
 - Step 4** Click **Advanced Parameters**.
 - Step 5** In the Advanced Commands section of the window (right), click the appropriate button (**Reboot Hardware** or **Shutdown Hardware**).
- Click **OK** in the confirmation pop-up window to initiate either the reboot or shutdown process. Click **Cancel** to stop the process.
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Clear a Configuration File

To clear a configuration file of a mobility services engine, follow these steps:

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- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
 - Step 2** Click the name of a mobility services engine for which you want to clear its configuration file.
 - Step 3** Click **System** (left panel).

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- Step 4** Click **Advanced Parameters**.
 - Step 5** In the Advanced Commands section of the window (right), click the **Clear Configuration** button. Click **OK** in the confirmation pop-up window to initiate the process. Click **Cancel** to stop the process.
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Defragment Database

To clear a configuration file of a mobility services engine, follow these steps:

- Step 1** In Cisco WCS, click **Mobility > Mobility Services**.
 - Step 2** Click the name of a mobility services engine for which you want to clear its configuration file.
 - Step 3** Click **System** (left panel).
 - Step 4** Click **Advanced Parameters**.
 - Step 5** In the Advanced Commands section of the window (right), click the **Clear Configuration** button. Click **OK** in the confirmation pop-up window to initiate the process. Click **Cancel** to stop the process.
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