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:

- Licensing Requirement, page 6-1
- Editing General Properties and Viewing Performance, page 6-1
- Viewing Active Sessions on a System, page 6-5
- Adding and Deleting Trap Destinations, page 6-6
- Viewing and Configuring Advanced Parameters, page 6-7
- Initiating Advanced Parameters, page 6-8

Licensing Requirement

All mobility services engines are shipped with an evaluation license of CAS and wIPS. Evaluation copies are good for a period of 60 days (480 hours) and have preset device limits for each service. Licenses are usage-based (time is decremented by the number of days you use it rather than by the number of calendar days passed).

For more information on purchasing and installing licenses, see the following URL:

http://www.cisco.com/en/US/prod/collateral/wireless/ps9733/ps9742/data_sheet_c07-473865.html

Editing General Properties and Viewing Performance

General Properties—You can use Cisco NCS to edit the general properties of a mobility services engine such as contact name, username, password, services enabled on the system, enabling or disabling a service, or enabling the mobility services engine for synchronization. See the "Editing General Properties" section on page 6-2 for more information.

> **Note** Use the general properties to modify the username and password that you defined during initial setup of the mobility services engine.

Performance—You can use the NCS to view CPU and memory usage for a given mobility services engine. See the "Viewing Performance Information" section on page 6-4 for more information.

This section contains the following topics:

Editing General Properties

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

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

Step 2 Click the name of the mobility services engine you want to edit. Two tabs appear with the following headings: General and Performance.

> ✎
>
> **Note** If the General Properties page is not displayed by default, choose **Systems > General Properties** from the left sidebar menu.

Step 3 Modify the fields as appropriate on the General tab. Table 6-1 lists the General Properties page fields.

Table 6-1   General Tab

Field	Configuration Options
Device Name	User-assigned name for the mobility services engine.
Device Type	Indicates the type of mobility services engine (for example, Cisco 3310 Mobility Services Engine). Indicates whether the device is a virtual appliance or not.
Device UDI	The Device UDI (Unique Device Identifier) is the string between double quote characters (including spaces in the end if any).
Version	Version of product identifier.
Start Time	Indicates the start time when the server was started.
IP Address	Indicates the IP address for the mobility services engine.
Contact Name	Enter a contact name for the mobility services engine.
Username	Enter the login username for the NCS server that manages the mobility services engine. This replaces any previously defined username including any set during initial setup.
Password	Enter the login password for the NCS server that manages the mobility services engine. This replaces any previously defined password including any set during initial setup.
HTTP	Select 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** NCS always communicates through HTTPS.
Legacy Port	Enter the mobility services port number that supports HTTPS communication. The Legacy HTTPS option must also be enabled.

Table 6-1   General Tab (continued)

Field	Configuration Options
Legacy HTTPS	This does not apply to mobility services engines. It applies only to location appliances.
Delete synchronized service assignments and enable synchronization	Select this check box if you want to permanently remove all service assignments from the mobility services engine. This option is available only if the delete synchronized service assignments check box was unselected while adding a mobility services engine.
Mobility Services	To enable a service on the mobility services engine, select the check box next to the service. The 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 **Note** Once selected, the service is displayed as Up (active). All inactive services are noted as Down (inactive) on the selected (current) system and on the network. **Note** CAS and wIPS can operate on a mobility services engine at the same time. Click the **here** link to see the number of devices that can be assigned for the current system. In the License Center page, choose **MSE** from the left sidebar menu option to see the license details for all mobility services engines on the network. **Note** For more information on purchasing and installing licenses, see the following URL: http://www.cisco.com/en/US/prod/collateral/wireless/ps9733/ps9742/data_sheet_c07-473865.html

Note   The following tcp ports are in use on the MSE in Release 6.0: tcp 22: MSE SSH port, tcp 80: MSE HTTP port, tcp 443: MSE HTTPS port, tcp 1411: AeroScout, tcp 1999: AeroScout internal port, tcp 4096: AeroScout notifications port, tcp 5900X: AeroScout (X can vary from 1 to 10), and tcp 8001: Legacy port. Used for location APIs.

Note   The following udp ports are in use on the MSE in Release 6.0: udp 123: NTPD port (open after NTP configuration), udp 162: AeroScout SNMP, udp/tcp 4000X: AeroScout proxy (X can vary from 1 to 5), udp 12091: AeroScout devices (TDOA Wi-Fi Receivers, chokepoints), udp 12092: AeroScout devices (TDOA Wi-Fi Receivers, chokepoints), udp 32768: Location internal port, udp 32769: AeroScout internal port, and udp 37008: AeroScout internal port.

✎

Note   Port 80 is enabled on the MSE if the **enable http** command was entered on the MSE. Ports 8880 and 8843 are closed on the MSE when the CA-issued certificates are installed on the MSE.

*Figure 6-1   License Summary for Selected Mobility Services Engine*

Step 4   Click **Save** to update the NCS and mobility services engine databases.

.

Viewing Performance Information

To view performance details, follow these steps:

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

Step 2   Click the name of the mobility services engine you want to view. Two tabs appear with the following headings: General and Performance.

Step 3   Click the **Performance** tab (see Figure 6-2).

Click a time period (such as *1w*) on the y-axis to see performance numbers for periods greater than one day.

To view a textual summary of performance, click the second icon under CPU.

To enlarge the page, click the icon at the lower right.

Figure 6-2   CPU and Memory Performance
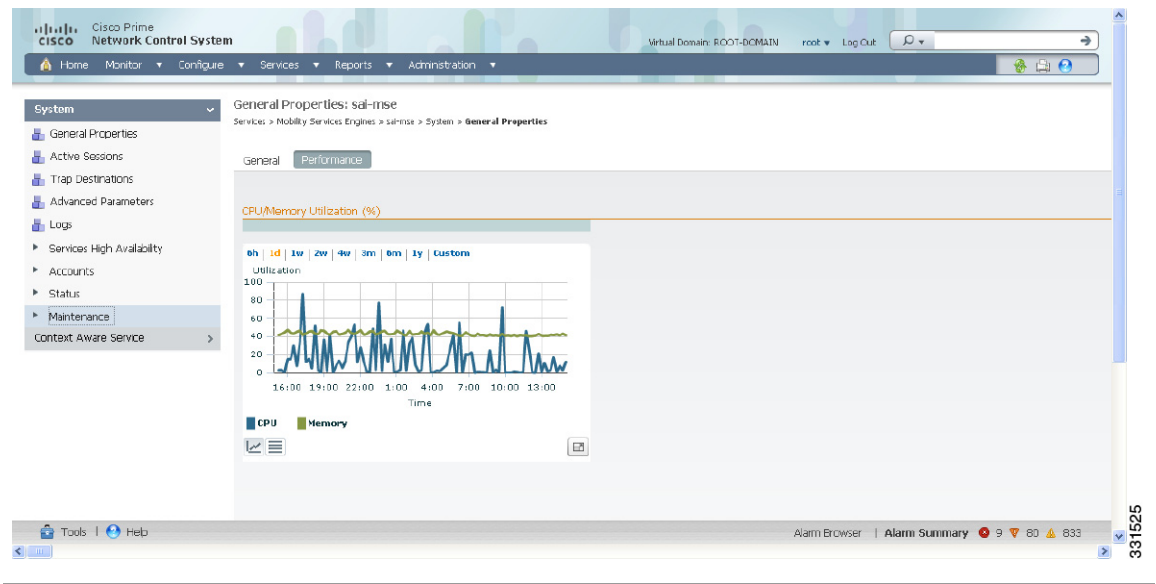
Viewing Active Sessions on a System

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

For every session, the NCS shows the following information:

- Session identifier
- IP address from which the mobility services engine is accessed
- Username 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   Choose **Services > Mobility Services Engines**.

Step 2   Click the name of the mobility services engine to view its active sessions.

Step 3   Choose **System > Active Sessions**.

Adding and Deleting Trap Destinations

You can specify which NCS 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 NCS, that NCS platform automatically establishes itself as the default trap destination. If a redundant NCS configuration exists, the backup NCS is not listed as the default trap destination unless the primary NCS fails and the backup system takes over. Only an active NCS is listed as a trap destination.

This section contains the following topics:

- Adding Trap Destinations, page 6-6
- Deleting Trap Destinations, page 6-7

Adding Trap Destinations

To add a trap destination, follow these steps:

Step 1   Choose **Services > Mobility Services Engines**.

Step 2   Click the name of the mobility services engine for which you want to define a new SNMP trap destination server.

Step 3   Choose **System > Trap Destinations**.

Step 4   From the Select a command drop-down list, choose **Add Trap Destination**. Click **Go**.

The New Trap Destination page appears.

Table 6-2 lists the Add Trap Destination page fields.

Table 6-2   Add Trap Destination Page Fields

Field	Description
IP Address	IP address for the trap destination.
Port No.	Port number for the trap destination. The default port number is 162.
Destination Type	This field is not editable and has a value of Other.
SNMP Version	Choose either **v2c** or **v3** from the SNMP Version drop-down list.
The following set of fields appear only if you select v3 as the SNMP version.	
User Name	Username for the SNMP Version 3.
Security Name	Security name for the SNMP Version 3.
Auth. Type	Choose either of the following from the drop-down list: • HMAC-MD5 • HMAC-SHA
Auth. Password	Authentication password for the SNMP Version 3.

Table 6-2   Add Trap Destination Page Fields (continued)

Field	Description
Privacy Type	Choose one of the following from the drop-down list: • CBC-DES • CFB-AES-128 • CFB-AES-192 • CFB-AES-256
Privacy Password	Privacy password for the SNMP Version 3.

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

Step 5   Click **Save**.

You are returned to the Trap Destination Summary page and the newly defined trap is listed.

Deleting Trap Destinations

To delete a trap destination, follow these steps:

Step 1   Choose **Services > Mobility Services Engines**.

Step 2   Click the name of the mobility services engine for which you want to delete a SNMP trap destination server.

Step 3   Choose **System > Trap Destinations**.

Step 4   Select the check box next to the trap destination entry that you want to delete.

Step 5   From the Select a command drop-down list, choose **Add Trap Destination**. Click **Go**.

Step 6   In the dialog box that appears, click **OK** to confirm deletion.

Viewing and Configuring Advanced Parameters

In the NCS Advanced Parameters page (see Figure 6-3) you can view general system level settings of the mobility services engine and configure monitoring parameters.

• See the "Viewing Advanced Parameter Settings" section on page 6-8 to view current system-level advanced parameters.

• See the "Initiating Advanced Commands" section on page 6-10 to modify the current system-level advanced parameters or initiate advanced commands such as system reboot, system shut down, or clear a configuration file.

Viewing Advanced Parameter Settings

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

Step 1   Choose **Services > Mobility Services Engines**.

Step 2   Click the name of a mobility services engine to view its status.

Step 3   Choose **System > Advanced Parameters** (see Figure 6-3).

Figure 6-3   Advanced Parameters Page

Initiating Advanced Parameters

The Advanced Parameters section of the NCS enables you to set the number of days events are kept and set session time out values. It also enables you to initiate a system reboot or shut down, or clear the system database.

![note icon]

Note   You can use the NCS to modify troubleshooting parameters for a mobility services engine or a location appliance.

In the Advanced Parameters page, you can use the NCS as follows:

- To set how long events are kept and amount of time before a session times out.

  For more information, see the "Configuring Advanced Parameters" section on page 6-9.

- To initiate a system reboot or shutdown, or clear the system database.

  For more information, see the "Initiating Advanced Commands" section on page 6-10.

Configuring Advanced Parameters

To configure advanced parameters, follow these steps:

Step 1   Choose **Services > Mobility Services Engines**.

Step 2   Click the name of the mobility service whose properties you want to edit.

Step 3   From the left sidebar menu, choose **System > Advanced Parameters**.

Step 4   View or modify the advanced parameters as necessary.

- General Information
    - Product Name
    - Version
    - Started At
    - Current Server Time
    - Hardware Restarts
    - Active Sessions

- Advanced Parameters

⚠

Caution   Enable advanced debugging only under the guidance of Cisco TAC personnel because advanced debugging slows the mobility service down.

- Number of Days to keep Events—Enter the number of days to keep logs. Change this value as required for monitoring and troubleshooting.
- Session Timeout—Enter the number of minutes before a session times out. Change this value as required for monitoring and troubleshooting. Currently this option appears dimmed.

- Cisco UDI
    - Product Identifier (PID)—The product ID of the mobility services engine.
    - Version Identifier (VID)—The version number of the mobility services engine.
    - Serial Number (SN)—Serial number of the mobility services engine.

- Advanced Commands
    - Reboot Hardware—Click to reboot the mobility services hardware. See "Rebooting or Shutting Down a System" section on page 6-10 for more information.
    - Shutdown Hardware—Click to turn off the mobility services hardware. See "Rebooting or Shutting Down a System" section on page 6-10 for more information.
    - Clear Database—Click to clear the mobility services database. See "Clearing the System Database" section on page 6-10 for more information. Unselect the **Retain current service assignments in NCS** check box to remove all existing service assignments from the NCS and MSE. The resources must be reassigned in the **Services > Synchronize Services** page. By default, this option is selected.

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

Initiating Advanced Commands

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

This section contains the following topics:

Rebooting or Shutting Down a System

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

Step 1   Choose **Services > Mobility Services Engines**.

Step 2   Click the name of a mobility services engine you want to reboot or shut down.

Step 3   Choose **System > Advanced Parameters** (see Figure 6-3).

Step 4   In the Advanced Commands group box, click the appropriate button (**Reboot Hardware** or **Shutdown Hardware**).

Click **OK** in the confirmation dialog box to initiate either the reboot or shutdown process. Click **Cancel** to stop the process.

Clearing the System Database

To clear a mobility services engine configuration and restore its factory defaults, follow these steps:

Step 1   Choose **Services > Mobility Services Engines**.

Step 2   Click the name of the mobility services engine you want to configure.

Step 3   Choose **System > Advanced Parameters**.

Step 4   In the Advanced Commands group box, unselect the **Retain current service assignments in NCS** check box to remove all existing service assignments from the NCS and MSE.

The resources must be reassigned in the Services > Synchronize Services page. By default, this option is selected.

Step 5   In the Advanced Commands group box, click **Clear Database**.

Step 6   Click **OK** to clear the mobility services engine database.