System Configuration

This chapter describes how to set up parameters for call handling in Cisco MobilityManager. Refer to the these topics to get started:

For information on setting up links to the Cisco CallManager system, see Chapter 2, "Getting Started."

Configuring System Parameters

Cisco MobilityManager includes system-level mobility parameters for mobile connection, desktop and cellular phone rules and timers, settings for the JAVA telephony programming interface (JTAPI), and SNMP[1] and Mobile Voice Access settings.

Many of the system parameters can also be configured for individual users in the User Information windows. Settings for individual users override the system-level settings assigned in the System Parameters window.

1. SNMP supports includes SNMP version 1, version 2c, and version 3 with multiple alarm/syslog recipients, setting of syslog read/write attributes, and periodic alarms.

Note For basic Cisco MobilityManager operation, it is not necessary to enter any information or change any of the default settings on the System Parameters page. Modify the settings only as needed to activate or modify desired features.

To configure system parameters, follow these steps:

Procedure

Step 1 From the Cisco MobilityManager administration window, choose **System > System** Parameters.

The System Parameters Configuration page opens.

Step 2 Use the Restart Cisco MobilityManager button if Cisco MobilityManager services have been stopped and you need start them again.

Step 3 Keep the default setting of Yes for the Gateway Early Media field. This field is sometimes used for troubleshooting.

Step 4 Choose Mobile Connect settings as described in Table 3-1.

Step 5 In the Maximum Wait Time for Desktop Phone Pickup field, enter the maximum delay in milliseconds that is permitted before the user must pick up the desktop phone. If the specified time is exceeded, the call is disconnected. The range is 5000-60000 milliseconds, and the default is 10000 milliseconds.

Step 6 Choose cellular phone pickup settings as described in Table 3-2.

Step 7 Choose cellular timer settings as described in Table 3-3.

Step 8 Choose settings for automatic update of JTAPI, as described in Table 3-4.

Step 9 Choose SNMP settings, as described in Table 3-5

Step 10 Choose Mobile Voice Access settings as described in Table 3-6.

Step 11 Enter Cisco CallManager AXL server settings as described in Table 3-7.

Step 12 Click **Save**.

Related Topics

- Mobile Connect Settings, page 3-3
- Cellular Phone Pickup Settings, page 3-5

Mobile Connect Settings

Table 3-1 describes the Mobile Connect settings available on the System Parameters screen.

Table 3-1 Mobile Connect Settings

Field	Description
Enable Caller ID Override	Choose **Yes** if you want the caller ID display to show a number other than the ID of the call initiator. Choose **No** to show the ID of the call initiator. The default is No.
Caller ID Override Number	Enter the telephone number to display for caller ID. Maximum field length is 20 characters; individual characters can take the values 0-9 or A-D. If the field is blank, then the display indicates that there is not caller ID. If Enable Caller ID Override is disabled, then this field is inactivated.
Enable Mobile Connect Feature	Choose **Yes** to activate Mobile Connect features. If you choose No, then the other fields in this window are ignored. The default is Yes.

Table 3-1 Mobile Connect Settings (continued)

Field	Description
Enable Delay Before Ringing Cellular Phone	Choose **Yes** to introduce a delay before causing the remote device (cellular phone) to ring when an incoming call is received. By introducing a delay, the desktop phone maintains priority status for receiving incoming calls. Choose **No** to have no delay introduced. The default is No.
Delay Before Ringing Cellular Phone	If you choose Yes for Enable Delay Before Ringing Cellular Phone, enter the time delay. The range is 1000-300000 milliseconds, and the default is 4000 milliseconds.

Related Topics

- Cellular Phone Pickup Settings, page 3-5
- Cellular Timer Settings, page 3-6
- Auto Update JTAPI File Settings, page 3-7
- SNMP Settings, page 3-9
- Mobile Voice Access Settings, page 3-10
- Cisco CallManager AXL Server Settings, page 3-11

Cellular Phone Pickup Settings

Table 3-2 describes the cellular phone pickup settings that determine rules regarding pick-up of the cellular phone on an incoming call.

Table 3-2 Cellular Phone Pick-Up Settings

Field	Description
Enable Cellular Phone Pickup	Choose **Yes** to permit a call to be switched from the desktop phone to a remote extension (cellular phone) while the call is taking place. The default is Yes.
Enable Maximum Cellular Phone Pickup Timer	Choose **Yes** to set the maximum waiting time for the cellular phone to answer when a call is switched from the desktop phone. The default is No.
Maximum Wait Time for Cellular Phone Pickup (msec)	If you choose Yes for Maximum Wait Time for Cellular Phone Pickup, enter the maximum number of milliseconds that is permitted to pass before the cellular phone must be picked up when a call is switched from the desktop phone. If the remote device does not answer in the specified time, the call is disconnected. The range is 1000-300000 milliseconds, and the default is 20,000 milliseconds.

Related Topics

- Mobile Connect Settings, page 3-3
- Cellular Timer Settings, page 3-6
- Auto Update JTAPI File Settings, page 3-7
- SNMP Settings, page 3-9
- Mobile Voice Access Settings, page 3-10
- Cisco CallManager AXL Server Settings, page 3-11

Cellular Timer Settings

Table 3-3 describes the cellular timer settings that control rings and timing for cellular phone pickup.

Table 3-3 Cellular Timer Settings

Field	Description
Enable Maximum Cellular Phone Ring Timer	Choose **Yes** to set timing intervals for calls switched from the desktop phone to cellular phone. The default is No.
Maximum Cellular Phone Ring Timer	If you choose Yes for Enable Maximum Cellular Phone Ring Timer, enter the maximum length of time the cellular phone rings before being disconnected. This value is measured from the end of the interval determined by the Delay Before Ringing Cellular Phone Field. (See Table 2-1 on page 2-19.) The range is 10000-300000 milliseconds, and the default is 19000 milliseconds. The timer should be set to be less than the No Answer Ring Duration timer configured for that line in Cisco CallManager. For further information, see the *Cisco CallManager Administration Guide*.

Table 3-3 Cellular Timer Settings (continued)

Field	Description
Enable Minimum Cellular Phone Ring Timer	Choose **Yes** to set the minimum timing for the cellular phone to ring for incoming calls and switching from the desktop phone to cellular phone. The default is Yes.
Minimum Cellular Phone Ring Timer	If you choose Yes for Minimum Cellular Phone Ring Time, enter the minimum time that must pass before the cellular phone can be answered. If an attempt is made to answer the cellular phone before this time passes, then the call is dropped (it is assumed that cellular phone voice mail has picked up the call). The range is 1000-10000 milliseconds, and the default is 1500 milliseconds. **Note** If you experience dropped inbound calls in cell phones that are configured as remote destinations, try adjusting them to suit your cell phone requirements for voice mail.

Related Topics

- Mobile Connect Settings, page 3-3
- Cellular Phone Pickup Settings, page 3-5
- Auto Update JTAPI File Settings, page 3-7
- SNMP Settings, page 3-9
- Mobile Voice Access Settings, page 3-10
- Cisco CallManager AXL Server Settings, page 3-11

Auto Update JTAPI File Settings

Table 3-4 describes the Auto Update JTAPI file settings that control updating of the JAVA telephony programming interface used for communications between Cisco MobilityManager and Cisco CallManager. Use the JTAPI file settings to

configure automatic synchronization of the JTAPI versions. If you enable the automatic update, then the version of JTAPI is updated automatically to match that of Cisco CallManager.

The jtapi.jar file from Cisco CallManager 4.1.3 is bundled in the Cisco MobilityManager software distribution. If you are using a different version of Cisco CallManager, you need to configure the JTAPI file settings as described in this section.

Note The JTAPI automatic update takes effect only after Cisco MobilityManager is restarted.

Table 3-4 Auto Update JTAPI File Settings

Field	Description
Enable Auto Update JTAPI file	Choose **Yes** to enable automatic update of the JAVA telephony settings. The default is No.
Always Update JTAPI File	Choose **Yes** to always update the JTAPI file when when Cisco MobilityManager restarts. The default is No.
Auto Update JTAPI Server Name or IP Address	If you choose Yes for automatic update of the JTAPI file, enter the name or IP address of the server that will provide the automatic update. There is no default.
Use Secured Auto JTAPI Update	Choose **Yes** to add security to the automatic JTAPI update. The default is No.
Auto Update JTAPI Server Path	Enter the absolute path or URL the JTAPI server: The default path is http://<Cisco CallManagerserver>/CCMPluginsServer You do not need to enter anything in this field if the default path is to be used.
Auto Update JTAPI Server File Name	Enter the name of the automatic update file on the server. The default is jtapi.jar. You do not need to enter anything in this field if the default file is to be used.
Auto Update JTAPI Local File Name	Enter the name of the local automatic update file. The default is jtapi.jar. You do not need to enter anything in this field if the default file is to be used.

Related Topics

- Mobile Connect Settings, page 3-3
- Cellular Phone Pickup Settings, page 3-5
- Cellular Timer Settings, page 3-6
- SNMP Settings, page 3-9
- Mobile Voice Access Settings, page 3-10
- Cisco CallManager AXL Server Settings, page 3-11

SNMP Settings

Table 3-6 describes the SNMP settings.

Table 3-5 SNMP Settings

Field	Description
SNMP Target IP Address	Enter the IP address for the system that will receive SNMP traps.
SNMP Target Port Number	Enter the SNMP port number. The default port is 162.
SNMP Community String	Enter the code for the SNMP grouping for Cisco MobilityManager.
SNMP Version	Choose SNMP version V1 or V2C from the pull-down list box.

Related Topics

- Mobile Connect Settings, page 3-3
- Cellular Phone Pickup Settings, page 3-5
- Cellular Timer Settings, page 3-6
- Auto Update JTAPI File Settings, page 3-7
- Cisco CallManager AXL Server Settings, page 3-11

Mobile Voice Access Settings

Table 3-6 describes the settings for Mobile Voice Access.

Table 3-6 Mobile Voice Access Settings

Field	Description
Mobile Voice Access Numbers	Enter the phone number for Mobile Voice Access. Maximum field length is 200 characters; individual characters can take the values 0-9 or A-D. Use commas to enter multiple numbers.
Mobile Voice Access User Lock Out Timer (min)	Enter the number of minutes a user is prevented from using Mobile Voice Access after providing incorrect entries three times in succession. This applies to incorrect PIN or remote destination entries. The range is 0-1440 minutes, and the default is 15 minutes.
Enable System Remote Access	Choose **yes** to enable the system remote access feature or **no** to disable the feature. **Note** In order for an individual user to be able to take advantage of system remote access, this field must be set to yes, and the Enable User Remote Access field in the Cisco Mobile Connect User Configuration window must also be set to yes for the individual user. See the "Adding a New User Account" section on page 2-12.
System Remote Access Blocked Numbers	Enter any phone numbers that you want to prohibit users from calling using Mobile Voice Access. Maximum field length is 200 characters; individual characters can take the values 0-9 or A-D. Use commas to enter multiple numbers.
System Remote Access Call Take Back Timer (sec)	Enter the number of seconds after which the Mobile Voice Access session times out. The range is 120-180 seconds, and the default is 120 seconds.

Related Topics

- Mobile Connect Settings, page 3-3

- Cellular Phone Pickup Settings, page 3-5
- Cellular Timer Settings, page 3-6
- Auto Update JTAPI File Settings, page 3-7
- SNMP Settings, page 3-9
- Cisco CallManager AXL Server Settings, page 3-11

Cisco CallManager AXL Server Settings

Table 3-7 describes the Cisco CallManager AXL Server settings required for communication with Cisco CallManager.

Table 3-7 Cisco CallManager AXL Server Settings

Field	Description
Cisco CallManager Version	Enter the software version number for Cisco CallManager. Example: 4.1
Cisco CallManager AXL Server Name or IP Address	Enter the host name or IP address of the Cisco CallManager AXL server.
Cisco CallManager AXL User Name	Enter the user name for administrator access to the Cisco CallManager AXL server.
Cisco CallManager AXL User Password	Enter the password for administrator access to the Cisco CallManager AXL server.

Related Topics

- Mobile Connect Settings, page 3-3
- Cellular Phone Pickup Settings, page 3-5
- Cellular Timer Settings, page 3-6
- Auto Update JTAPI File Settings, page 3-7
- SNMP Settings, page 3-9
- Mobile Voice Access Settings, page 3-10

Enabling Data Synchronization

To synchronize the MobilityManager database with current runtime memory, follow these steps:

Procedure

Step 1 Choose **System > Data Synchronization**.

Step 2 Click **Start Now**.

Step 3 Click **OK** to confirm that you want to begin the data synchronization process.

Related Topics

- Configuring System Parameters, page 3-1
- Backing Up and Restoring the Database, page 3-12

Backing Up and Restoring the Database

You can back up and restore the remote system information for Cisco MobilityManager using an SFTP server.

To set backup and restore parameters, follow these steps:

Procedure

Step 1 Choose **System > Backup and Restore**.

The Backup and Restore screen opens.

Step 2 In the Host Name or IP Address field, enter the appropriate information to identify the backup server.

Step 3 Enter the User ID and password for the backup server.

Step 4 Enter the password again in the Confirm Password field.

Step 5 In the File Path field, enter the location to store or retrieve the backup files.

Step 6 Click **Start Backup Now** to begin backing up the database to the specified location, or click **Start Restore Now** to begin restoring from the specified file.

Step 7 After restoring the remote system information, perform data synchronization according to the procedure in "Enabling Data Synchronization" section on page 3-12.

Related Topics

- Configuring System Parameters, page 3-1
- Enabling Data Synchronization, page 3-12

Configuring Directory User Settings

Directory user settings are required for connection to the directory server that Cisco CallManager uses. For a working connection, you must configure the directory user settings for Cisco MobilityManager to be identical to those in the Cisco CallManager in which directory services are configured. If the settings are not correctly configured, users cannot log in to the User pages or change their user profiles. The directory services information is stored in the DirectorySevices.ini file, which is located in the Cisco CallManager c$\dcdsrvr directory.

Note If your Cisco CallManager installation uses Active Directory or Netscape directory, then refer to the *Cisco Customer Directory Configuration Plugin Guide* for Cisco CallManager. The file DirectoryConfiguration.ini will be created after the Directory User Settings page is configured, and this file should be the same as the file in Call Manger \dcdsrvr directory.

To configure directory user settings, follow these steps:

Procedure

Step 1 Choose **System > Directory User Settings**.

Step 2 Enter values for each field in this window that are identical to those configured for Cisco CallManager, as shown Table 3-8.

Step 3 Click **Save**.

Table 3-8 Directory User Settings

Field	Description
Directory Administrator Host Name or IP Address	Enter the directory services hostname or IP address.
Directory Administrator Host Port Number	Enter the port number that is configured in the DirectoryConfiguration.ini file. Example: If you are using the Data Connection Directory (DC-Directory) in Cisco CallManager, then enter **8404**.
Directory Administrator DN	Enter the directory number for the administrator login that is configured in the DirectoryConfiguration.ini file. Example: If you are using the Data Connection Directory (DC-Directory) in Cisco CallManager, then enter **cn=Directory Manager, o=cisco.com**.
Directory Administrator Password	Enter the password used to log into Directory Services.
Confirm Directory Administrator Password	Reenter the password used to log into Directory Services.
Cisco Directory Administrator DN	Enter the number for the directory administrator that is configured in the DirectoryConfiguration.ini file. Example: If you are using the Data Connection Directory (DC-Directory) in Cisco CallManager, then enter **o=cisco.com**.
Directory Type	Enter Default, ADS, or NDS, as configured in the DirectoryConfiguration.ini file.

Related Topics

- Accessing Cisco MobilityManager Administration, page 2-2

- Configuring CallManager Links, page 2-3