CHAPTER 3

Getting Started

This chapter provides information about starting and stopping the Cisco Mobile Wireless Transport Manager (MWTM), and an overview of how to use the MWTM to manage your network.

This chapter contains:

For detailed information about the MWTM-supported platforms, and hardware and software requirements, see the *Installation Guide for the Cisco Mobile Wireless Transport Manager 6.1.3*.

Note The default directory for installing the MWTM is */opt*. In commands that call for the default directory, if you installed the MWTM in a different directory, you must specify that directory instead of */opt*.

Starting the MWTM Server

Before starting an MWTM server, verify that:

- Each node uses a supported IOS image
- The MWTM server has IP connectivity to each node
- SNMP is enabled on each node
- (Optional, but recommended) Traps are enabled on each node

- (Optional, but recommended) A trap host is defined on each node

Tip For a definition of MWTM nodes, see What Is ITP?, page 1-6, What Is IPRAN?, page 1-7, and What Is mSEF?, page 1-9.

Because the MWTM application comprises a server component and a client component, you must start both components to run the application.

To start the MWTM server on a Solaris or Linux system:

Step 1 You must be logged in as the root user or as a superuser, or your login must have administrator privileges. To log in as the root user, see the Becoming the Root User (Server Only), page 3-2.

Note For details on setting up administrator privileges, see Specifying a Super User (Server Only), page 2-19.

Step 2 Enter:

```
# cd /opt/CSCOsgm/bin
# ./mwtm start
```

Note If the database has an exception during start up, the server will fail to start.

Becoming the Root User (Server Only)

Some MWTM procedures require that you log in as the root user.

Caution As the root user, you can adversely affect your operating environment if you are unaware of the effects of the commands that you use. If you are a relatively inexperienced UNIX user, limit your activities as the root user to the tasks described in this manual.

If you are not logged in, log in as the root user:

```
> login: root
> Password: root-password
```

If you are already logged in, but not as the root user, use the **su** command to change your login to root:

```
# su
# Password: root-password
```

Starting the MWTM Client

This section contains:

Before Starting the MWTM Client

When you start an MWTM client, the version and release of the client must match that of the MWTM server.

If there is a client-server mismatch, the MWTM displays a warning message when you try to start the client. If you have a web browser installed, the MWTM optionally opens a web page from which you can download an allowed, matching client. For more information about downloading the MWTM client, see Downloading the MWTM Client from the Web, page 12-12.

Setting the DISPLAY Variable for Solaris or Linux Clients

If you see the following message upon client startup, you must set the DISPLAY variable:

```
Could not launch client: Can't connect to X11 window server using <x> as the value of the
DISPLAY variable.
```

The DISPLAY variable is set as part of your login environment on Solaris or Linux. However, if you use Telnet or SSH to access a workstation, you must set the DISPLAY variable to local display by using this command:

```
# setenv DISPLAY local_ws:0.0
```

where *local_ws* is your local workstation.

If your shell does not support the **setenv** command, enter:

```
# export DISPLAY=local_ws:0.0
```

Starting the MWTM Client on Solaris or Linux

To start the MWTM client on a Solaris or Linux system on which the MWTM server is installed, ensure that the MWTM server is running, then enter:

```
# cd /opt/CSCOsgm/bin
# ./mwtm client
```

To start the MWTM client on a Solaris or Linux system other than the one on which the MWTM server is installed, ensure that the MWTM server is running, then enter:

```
# cd /opt/CSCOsgmClient/bin
# ./mwtm client
```

To start the MWTM client on a Solaris or Linux system other than the one on which the MWTM server is installed, and connect to an MWTM server other than the default server, enter:

```
# cd /opt/CSCOsgmClient/bin
# ./mwtm client server_name_or_ip_address
```

where *server_name_or_ip_address* is the name or IP address of the Solaris or Linux system on which the MWTM server is running.

Access the Node

You use the MWTM to link to the node by using the connection protocol (Telnet or SSH) that you set in the Node SNMP and Credentials dialog box (see Credentials Fields, page 4-21).

To access the node, right-click a node in a window, then choose **Node Connect** from the right-click menu.

Note If your client workstation does not have network access to the IP address of the node (that is, if the node is behind a firewall or NAT device), you might be unable to access the node.

Starting the MWTM Client on Windows

To start the MWTM client on a Windows system, choose **Start > Programs > Cisco MWTM Client > Launch MWTM Client**, or double-click the MWTM Client icon on the Windows desktop.

Note You can change the amount of memory used by the Windows MWTM client, GTT Editor, and Address Table Editor by adding the following entries to the *C:\Program Files\Cisco Systems\MWTM Client\properties\System.properties file*:
JVM_CLIENT_HEAP=1200
JVM_ATBL_HEAP=1200
JVM_GTT_HEAP=1200
JVM_CLIENT_HEAP=1200
JVM_ATBL_HEAP=1200
JVM_GTT_HEAP=1200

This reserves 1,200 megabytes (MB) of memory for each application. The default is 768 MB.

Discovering Your Network

This section provides details on using the MWTM to discover your networks. It includes:

Discovery Overview

The MWTM uses a Discovery process to populate the MWTM database, discovering the objects in your network.

You can run Discovery if MWTM User-Based Access is disabled; or, if it is enabled, and you are a Network Administrator or System Administrator. (For more information about user authorization levels in the MWTM, see Configuring MWTM User Account Levels (Server Only), page 2-7.)

To discover your network:

Step 1 Start the MWTM client, as described in Starting the MWTM Client, page 3-3.

Step 2 If you want to change SNMP settings, do so *before* running Discovery. See Configuring SNMP Settings, page 4-15 for more information.

Step 3 If you want to discover ONS nodes and did not choose the option to discover your network during installation, you must add the ONS nodes and set the credentials before running discovery (see Adding Nodes, page 4-22 for more information.)

Step 4 Choose **Network > Network Discovery** from the MWTM main menu. The MWTM displays the Discovery dialog box. See Launching the Discovery Dialog, page 3-6 for more information.

Step 5 Select the **Seed Settings** tab, if it is not already chosen. You use the Seed Settings tab to create, save, load, and delete MWTM seed files. Load one or more seed nodes, or an existing seed file, by using the procedures in Loading Seed Nodes and Seed Files, page 3-7.

Step 6 Select the **Discovery** tab, or click **Next**. You use the Discovery tab to discover the objects in your network. See Running Discovery, page 3-12 for more information.

- To specify the extent of the network discovery, check the **Entire Network** check box. See the description of the Entire Network check box in Running Discovery, page 3-12 for more information.
- To specify whether the MWTM should keep or delete the existing database when discovering the network, check the **Delete Existing Data** check box. See the description of the Delete Existing Data check box in Running Discovery, page 3-12 for more information.
- To specify the maximum number of hops for discovering objects in your network, enter a value in the **Max. Hops** text box. For more information, see the description of the Max. Hops text box in the Running Discovery, page 3-12.

Step 7 Click the **Discover Network** button.

When the "Discovery In Progress" message disappears, discovery is running. The Discovered Nodes table in the Discovery tab lists all nodes that the MWTM discovered (all nodes, including new and excluded nodes, not just the nodes in the current view). See Discovered Nodes, page 3-14 for more information.

Note Event processing in the MWTM might experience congestion when discovering very large networks. If the number of events exceeds the capacity of the event queue, the event congestion icon  appears in the lower left of the MWTM client and web windows. If the icon appears, the presentation of event information in the MWTM will lag behind the actual state of the network objects until the congestion clears. No user action is necessary.

Step 8 Examine the Discovered Nodes table to verify that the MWTM discovered all of the nodes in the network. If you suspect that the MWTM did not discover all of the nodes, see Verifying Discovery, page 3-14 for troubleshooting information. You might need to add more seed nodes and run discovery again.

Step 9 When you are satisfied that the MWTM discovered all of the nodes in the network, save the list of seed nodes in a seed file. See Saving a Seed File, page 3-8 for more information.

Note (ITP only) You can run discovery multiple times to attempt to discover additional nodes based on the IP addresses defined in the Stream Control Transmission Protocol (SCTP) links. If you are using a separate management VLAN to manage your nodes, but private or unreachable IP addresses for your SCTP connectivity, uncheck the **Entire Network** check box in the Discovery dialog box. Otherwise, discovery attempts to reach those nodes continuously. Instead, enter all nodes to be discovered directly into the seed list and do a nonrecursive discovery.

Related Topics

- Configuring SNMP Settings, page 4-15
- Backing Up or Restoring MWTM Files (Server Only), page 2-30
- Investigating Data Problems, page D-1

Launching the Discovery Dialog

To launch the Discovery dialog box and begin the Discovery process, choose **Network > Network Discovery** from the MWTM main menu. The MWTM displays the Discovery dialog box.

You use the Discovery dialog box to load and configure seed nodes, and use those seed nodes to discover the objects in your network.

If you start the MWTM client and the MWTM database is empty (including the very first time you start the MWTM client), the MWTM automatically opens the Discovery dialog box so you can run Discovery and populate the database.

The Discovery dialog box contains:

- Discovery Dialog Menu, page 3-6
- Discovery Dialog Tabs, page 3-7

Discovery Dialog Menu

The menu on the Discovery dialog box contains:

Menu Command	Description
File > Load Seeds (Ctrl-L)	Opens the Load File Dialog: Seed File List, enabling you to load a seed file into the MWTM: • Enter the name of the seed file, and click **OK** to load it. • Click **Cancel** to return to the Seed Settings tab without loading a seed file.
File > Save Seeds (Ctrl-S)	Opens the Save File Dialog: Seed File List, which you use to save changes you have made to the chosen seed file.
File > Save As	Opens the Save File Dialog: Seed File List, which you use to save changes you have made to the chosen seed file with a new name, or overwrite an existing seed file.

Menu Command	Description
File > Close (Ctrl-W)	Closes the current window.
Edit > Node SNMP and Credentials Editor (Alt-D)	Opens the Node SNMP and Credentials Editor dialog box. If you have implemented MWTM User-Based Access, this option is available to users with authentication-level Network Administrator (level 4) and higher.
Help > Topics (F1)	Displays the table of contents for the MWTM online help.
Help > Window (Shift-F1)	Displays online help for the current window.
Help > About (F3)	Displays build date, version, SSL support, and copyright information about the MWTM application.

Discovery Dialog Tabs

The Discovery dialog box contains these tabs:

Tab	Description
Seed Settings	Displays the Seed Settings tab in the Discovery dialog box.
Discovery	Displays the Discovery tab in the Discovery dialog box.

Loading Seed Nodes and Seed Files

You use the MWTM to load one or more new seed nodes; or, to create, save, load, and delete existing MWTM seed files.

This section includes:

Loading a Seed Node

To load a seed node, enter the name or IP address of the seed node in the IP Address, Address range, Subnet, CIDR, or DNS Hostname field, and click **Add Node** (or press **Enter**).

Note Follow the guidelines for IP addresses in SNMP Configuration Table, page 4-16.

The MWTM displays details of the SNMP settings for the seed nodes in the Seed Details pane. Continue adding seed nodes until you are certain that the MWTM will be able to discover the entire network.

Loading a Seed File

If you have already created and saved one or more seed files, you can load a seed file, change the list of seed files, and select one seed file to be loaded automatically when the MWTM client is started or the Discovery dialog box is opened.

To load an existing seed file, choose **File > Load Seeds** from the Discovery Dialog menu. The MWTM displays the Load File Dialog: Seed File List dialog box.

The Load File Dialog: Seed File List contains:

Field or Button	Description
Type	Icon indicating whether the item in the table is a file or a folder.
Name	Name of the seed file or folder.
Last Modified	Date and time the seed file or folder was last modified.
Size (bytes)	Size of the seed file or folder, in bytes.
Make this my preferred start option	Specifies whether the chosen seed file should be loaded automatically whenever this MWTM client is started or the Discovery dialog box is opened. By default, this check box is unchecked for all seed files. That is, no seed file is loaded automatically when the MWTM client is started or the Discovery dialog box is opened.
Number of Files (appears in bottom-left corner)	Total number of seed files and folders.
OK	Loads the chosen seed file, saves any changes you made to the list of files, and closes the dialog box. To load a seed file, double-click it in the list, select it in the list and click **OK**, or enter the name of the file and click **OK**. The MWTM saves any changes you made to the list of files, closes the Load File Dialog: Seed File List dialog box, loads the seed file, and returns to the Discovery dialog box. The MWTM lists all of the seed nodes in the seed file in the Seed Nodes pane, and displays details of the SNMP settings for the seed nodes in the Seed Details pane.
Delete	Deletes the chosen file from the seed file list. The MWTM issues an informational message containing the name and location of the deleted file.
Cancel	Closes the dialog box without loading a seed file or saving any changes to the seed file list.
Help	Displays online help for the dialog box.

Saving a Seed File

You use the MWTM to save a specific seed file, change the list of seed files, and select one seed file to be loaded automatically when the MWTM client is started or the Discovery dialog box is opened.

When you are satisfied that the MWTM has discovered all of the nodes in the network, save the list of seed nodes in a seed file by using one of these procedures:

- To save the changes you made to the seed file without changing the name of the file, choose **File > Save** from the Discovery Dialog menu.
- To save the changes you have made to the seed file with a new name, choose **File > Save As** from the Discovery Dialog menu. The MWTM displays the Save File Dialog: Seed File List dialog box.

The MWTM stores the seed file in the seed file directory on the MWTM server:

- If you installed the MWTM in the default directory, */opt*, then the MWTM seed file directory is */opt/CSCOsgm/seeds*.
- If you installed the MWTM in a different directory, then the MWTM seed file directory is located in that directory.

Note If another user modifies and saves the seed file before you save your changes, the MWTM asks if you want to overwrite that user's changes. If you choose to do so, the other user's changes are overwritten and lost. If you choose not to do so, your changes are lost, unless you save the seed file to a different filename.

The Save File Dialog: Seed File List contains:

Field or Button	Description
Type	Icon indicating whether the item in the table is a file or a folder.
Name	Name of the seed file or folder.
Last Modified	Date and time the seed file or folder was last modified.
Size (bytes)	Size of the seed file or folder, in bytes.
Filename	Name by which you want to save the seed file. If you create a new seed filename, you can use any letters, numbers, or characters in the name that are allowed by your operating system. However, if you include any spaces in the new name, the MWTM converts those spaces to hyphens. For example, the MWTM saves file *a b c* as *a-b-c*.
Make this my preferred start option	Specifies whether the chosen seed file should be loaded automatically whenever this MWTM client is started or the Discovery dialog box is opened. By default, this check box is unchecked for all seed files. That is, no seed file is loaded automatically when the MWTM client is started or the Discovery dialog box is opened.
Number of Files (visible in bottom left corner)	Total number of seed files and folders.
OK	Saves the seed file and any changes you made to the seed file list and closes the dialog box. To save the seed file with a new name, you can either save the file with: • A completely new name. Enter the new name and click **OK**. • An existing name, overwriting an old seed file. Select the name in the list and click **OK**. The MWTM: • Saves the seed file with the new name • Saves any changes you made to the list of files • Closes the Save File Dialog: Seed File List dialog • Returns to the Discovery dialog box
Delete	Deletes the chosen file from the seed file list. The MWTM issues an informational message containing the name and location of the deleted file.

Field or Button	Description
Cancel	Closes the dialog box without saving the seed file or saving any changes to the seed file list.
Help	Displays online help for the dialog box.

Creating a New Seed File

To create a new seed file in the MWTM, launch the Discovery dialog box, as described in Launching the Discovery Dialog, page 3-6, then click the **Seed Settings** tab, if it is not already chosen.

You use the Seed Settings tab in the Discovery dialog box to create, save, load, and delete MWTM seed files.

The Seed Settings tab on the Discovery dialog box contains:

Field or Button	Description
Seed Nodes	Lists the seed nodes currently defined in the MWTM.
IP Address Range or Hostname	IP address of the seed node. The default value is *.*.*.*. **Note** Follow the guidelines for IP addresses in SNMP Configuration Table, page 4-16.
Retries	Number of times the MWTM attempts to connect to the seed node. The valid range is 0 to 99. The default value is 2.
Timeout (sec)	Time, in seconds, the MWTM waits for a response from the seed node. The valid range is 0 (no timeout) to 9999. The default value is 1 second.
Read Community	SNMP community name for read access to the information maintained by the SNMP agent on the node. This value can be up to 32 characters in length. Do not include special characters such as the opening single quote ('), at symbol (@), dollar sign ($), caret (^), closing single quote ('), double quote ("), ampersand (&), or pipe (|). This value is usually set to **public** (the default).
Poll Interval (mins)	Time, in minutes, between polls. The valid range is 0 to 9999. The default value is 15 minutes.
IP Address, Address range, Subnet, CIDR, or DNS Hostname	Address or name of the chosen seed node. To create a new seed file, enter the name or address of a seed node in this field. Examples of acceptable input include: • IP Address: 1.2.3.4 (see the guidelines for IP addresses in SNMP Configuration Table, page 4-16). • Address Range: 1.2.3.2-15 • Subnet, CIDR: 1.2.3.0/24, 1.2.3.0/255.255.255.0 • DNS Hostname: mwtm.cisco.com The MWTM displays details of the SNMP settings for the seed node in the Seed Details pane. Continue to add as many seed nodes as necessary to discover your entire network. When you are ready to save the list of seed nodes in a new seed file, choose **File > Save As** from the Discovery Dialog menu. The MWTM displays the Save File Dialog: Seed File List dialog box. See Saving a Seed File, page 3-8, for more information about saving seed files.
Add Node	Adds a new seed node to the MWTM.

Field or Button	Description
Delete	Deletes the chosen seed node. The MWTM deletes the seed node without asking for confirmation.
Next	Displays the Discovery tab in the Discovery dialog box. If you enter a seed node IP address or name in the IP Address, Address range, Subnet, CIDR, or DNS Hostname field, then click **Next**, MWTM automatically adds the seed node before displaying the Discovery tab.

Changing an Existing Seed File

To modify an existing seed file in MWTM:

Step 1 Load the seed file as described in Loading a Seed File, page 3-8.

Step 2 To add another seed node to the seed file, enter the name or IP address of the seed node in the IP Address, Address range, Subnet, CIDR, or DNS Hostname field, and click **Add Node**.

Step 3 To delete a seed node from the seed file, select the seed node and click **Delete Node**.

Step 4 To save the modified seed file, use the procedure described in Saving a Seed File, page 3-8.

Creating and Changing Seed Files Using a Text Editor

A seed file is simply an unformatted list of seed node names. To create a seed file by using a text editor, simply create a file and list the seed node names, one on each line, with no other formatting:

```
new-york-a
new-york-b
chicago-c
```

When you save and name the seed file, remember:

- You can use any letters, numbers, or characters in the name that your operating system allows, except blanks.
- The MWTM saves the seed file with a *.see* file extension.
- The MWTM saves the seed file in the MWTM server's seed file directory, *seeds*:
  - If you installed the MWTM in the default directory, */opt*, then the seed file directory is */opt/CSCOsgm/seeds/*.
  - If you installed the MWTM in a different directory, then the seed file directory resides in that directory.

When the MWTM loads the seed file, it verifies the syntax of the file, deleting blank lines and extraneous leading and trailing spaces as needed. The MWTM also verifies that each seed node name resolves to a valid IP address. If a name does not resolve to a valid IP address, the MWTM logs the erroneous entry and ignores it.

For example, given this seed file:

```
new-york-a<space>
<space>new-york-b
zzzzzzzzzzz
<blank line>
<tab>chicago-c<tab>
```

The MWTM loads these entries:

```
new-york-a
new-york-b
chicago-c
```

Running Discovery

Click the Discovery tab in the Discovery dialog box to discover the objects in your network.

To display the Discovery tab, launch the Discovery dialog box, as described in Launching the Discovery Dialog, page 3-6, then select the **Discovery** tab in the Discovery dialog box, or click **Next** in the Seed Settings tab. (If you enter a seed node IP address or name in the IP Address, Address range, Subnet, CIDR, or DNS Hostname field, then click **Next**, MWTM automatically adds the seed node before displaying the Discovery tab.)

The Discovery tab comprises:

- Discovery Settings, page 3-12
- Discovered Nodes, page 3-14

Related Topics

- Discovery Overview, page 3-5
- Polling Nodes, page 8-51

Discovery Settings

The Discovery Settings pane of the Discovery tab contains:

Field or Button	Description
Entire Network	Check box used to specify the extent of the network discovery: • To discover the entire network, check this check box. This is called *recursive discovery*, and it is the default setting. With this check box checked, the MWTM discovers all seed nodes and attempts to manage them; then attempts to discover and manage all nodes that are adjacent to those seed nodes (unless the nodes are connected by serial links only); then attempts to discover and manage all nodes that are adjacent to *those* nodes; and so on, until the Max Hops limit is reached. • To rediscover only seed nodes, uncheck this check box. This is called *nonrecursive discovery*. With this check box unchecked, the MWTM discovers all seed nodes and attempts to manage them, then labels all nodes that are adjacent to those seed nodes as Unmanaged.
Delete Existing Data	Check box used to keep or delete the existing MWTM database when discovering the network: • To keep all existing network data in the MWTM database before rediscovering the network, uncheck this check box. This is the default setting. • To delete all existing network data from the MWTM database before rediscovering the network, check this check box. Choose this option if you know that network elements have been deleted from your network since the last Discovery. If you discover the network with Delete Existing Data chosen, the MWTM stops any real-time polls that are running and issues appropriate messages.

Field or Button	Description
Max Hops	The maximum number of hops from the seed node to search for other nodes to discover. Default is 3.
Discover Network	Begins discovering the network. Click **Discover Network** to begin Discovery. If you have not defined at least one seed node in the Seed Settings tab, the MWTM prompts you to do so. When Discovery begins: • The **Discover Network** button changes to **Stop Discovery**. • The `Discovery In Progress` message appears in the title bar of all MWTM client windows. Discovery progresses in bursts. You might see a number of updates, followed by a pause, followed by more updates. The information that MWTM windows displays is not fully updated until Discovery is complete. By default, Discovery times out after 600 seconds (10 minutes). To change the Discovery timeout, change the value of the DISCOVERY_TIMELIMIT entry in the *Server.properties* file: • If you installed the MWTM in the default directory, */opt*, then the location of the *Server.properties* file is */opt/CSCOsgm/properties/Server.properties*. • If you installed the MWTM in a different directory, then the *Server.properties* file resides in that directory. Because the MWTM is an asynchronous system, with the MWTM server contacting clients one at a time, and because clients might run at different speeds, the information that MWTM clients display during Discovery might not always be synchronized. All other MWTM windows (Node, topology, and so on) are also populated with the newly discovered network data.
Stop Discovery	Stops the Discovery process. For example, if you click Discover Network, then you realize that you loaded a seed node that you did not intend to load, you can click Stop Discovery to stop the Discovery process. **Note** If you stop the Discovery process, the information in the MWTM database is incomplete and unreliable. To generate a new, complete, and reliable MWTM database, check the **Delete Existing Data** check box and run Discovery again. This button replaces the Discover Network button when the Discovery process begins, and changes back to the Discover Network button when the Discovery process ends.

If you run Discovery with the Entire Network check box unchecked, and then you run Discovery with the Entire Network check box checked, any Unmanaged nodes in the first Discovery are not rediscovered by the second Discovery.

To recover from this situation and generate a new, complete, and reliable MWTM database, you must perform one of these procedures:

- Run Discovery again, with **Entire Network** and **Delete Existing Data** checked.
- Change the Unmanaged nodes to managed status. See Unmanaging and Managing Nodes or ITP Signaling Points, page 7-46, for more information.
- Poll the nodes that were Unmanaged in the first Discovery. See Polling Nodes, page 8-51, for more information.

Discovered Nodes

The table in the Discovery tab lists all nodes that the MWTM discovered (all nodes, including new and excluded nodes, not just the nodes in the current view). By default, this table is sorted by Status.

- To see a tooltip for each column in the table, place the cursor over a column heading.
- If a cell is too small to show all of its data, place the cursor over the cell to see the full text in a tooltip.

You can resize each column, or sort the table based on the information in one of the columns. By default, the MWTM displays all of the columns in the Discovered Nodes section except Internal ID, Uptime, Reboot Reason, Process Traps, and Last Status Change.

- To display hidden columns, right-click in the table heading and select the check boxes for the columns that you want to display.
- To hide columns, right-click in the table heading and uncheck the check boxes for the columns that you want to hide.

For detailed information on working in tables, see Navigating Table Columns, page 5-23.

See Nodes Table, page 7-5, for descriptions of the columns and check boxes of the discovered nodes table.

Verifying Discovery

After you discover the network (see Discovery Overview, page 3-5), examine the Discovered Nodes table to verify that the MWTM discovered all of the nodes in the network. If you suspect that the MWTM did not discover all of the nodes, verify that:

- No nodes are excluded from your current view.
- The MWTM server can ping the nodes.
- The nodes are running images that are compatible with the MWTM server.
- SNMP is enabled on the nodes.
- The MWTM is configured with the correct SNMP community name. See Launching the Discovery Dialog, page 3-6 for details.
- (ITP only) The missing nodes are connected to the seed nodes by SCTP connections, not just serial connections. If they are not connected by SCTP connections, you must add the missing nodes to the seed file as seed nodes. See Changing an Existing Seed File, page 3-11 for more information.
- You chose Entire Network when you ran Discovery. If you suspect that you did not, run Discovery again with Entire Network chosen.

Displaying the MWTM Main Window

The MWTM main window is the primary MWTM client window. It is the first window to appear when you launch the MWTM client.

The MWTM main window displays information about the events and objects that the MWTM discovers. The MWTM main window is divided into two primary areas: the navigation tree in the left pane and the content area in the right pane. When you select an item in the navigation tree, MWTM displays detailed information about the item in the content area in the right pane, such as configuration details and real-time data.

The MWTM main window contains:

Element	Description
Title bar	MWTM main window title bar that displays: MWTM main window <(*networks*)> - <*server name*>.
Main menu	Main menu on the MWTM main window. For details, see Using the MWTM Main Menu, page 3-18.
Toolbar	Toolbar options on the MWTM main window. For details, see Using the MWTM Toolbar, page 3-23.
Navigation tree	Contains lists of objects and views. For details, see MWTM Client Navigation Tree, page 3-16.
Content area	Contains content for the object chosen in the navigation tree. For details, see MWTM Client Content Area, page 3-17.

When you start the MWTM for the first time, the MWTM displays the Discovery dialog box and the MWTM main window.

If you have already run Discovery, the events and objects that the MWTM discovered appear in the navigation tree and content area.

When you start the MWTM for the first time, if you did not configure the MWTM server to automatically discover your network the first time the server starts after installation, the Discovery dialog comes up automatically. Until you perform a discovery, the MWTM database contains no information, and the navigation tree and content area are blank. For details on the Discovery dialog, see Discovering Your Network, page 3-4.

Navigational Features

To help you keep track of which view you are currently using, as well as other important information, most MWTM windows display the name of the system on which the MWTM server is running in the title bar.

On the MWTM toolbar, there is a Location object that shows where you are currently in the MWTM navigation. For more information, see Using the MWTM Toolbar, page 3-23.

At the bottom of the MWTM main window, the following information might appear:

Information	Description
 Locked padlock icon	Appears if the MWTM server has a security certificate. To see the certificate, click the symbol.
 Unlocked padlock icon	Appears if the MWTM server does not have a security certificate.
 Number of objects	(Applicable for Active Alarms, Event History, and all Summary Lists) Shows the number of objects currently visible in the window, if any.
 Number of files	(Only for load or save dialog boxes) Shows the number of files currently visible in the load or save files dialog box, if any.

Information	Description

Updated Node sgm-75-93b
Status messages
	• Informational messages are visible in black. For example:
	`Discovery running`
	• Messages that indicate successful actions are visible in green. For example:
	`View Saved`
	• Error messages are visible in red. For example:
	`Node does not have a note`
	• The MWTM contains many fields into which you can enter information, such as a new node name or IP address. If you enter an incorrect value in the field, such as an IP address that contains letters or is too long, the MWTM alerts you of the incorrect value and retains the current value of the field. Check the message bar at the bottom of the window for information and assistance.

CHANGED Changed	Appears if you have changed but not yet saved a view. You must save the view if you want to save your changes. For details, see Saving a View, page 6-5.
NEW! New icon	Appears if there is at least one newly discovered object in the network that has not been added to your current view. To add or exclude the object to your current view, see New on the Network, page 6-11. **Note** Clicking the **New** icon in the topology window opens the New Objects pane in the left pane. Clicking the **New** icon in any other window opens the Edit View tab of the View Editor window.
View: AutoInstanceView View	Shows the name of the current view. **Note** If your personal default view has been deleted, then the next time you launch the client, the MWTM informs you that your default view has been deleted and that your view has been reset to the DEFAULT view. To choose another view as your default view, use the Load Dialog: View List. For details, see Loading a Client-Specific View, page 6-14.
dhcp-64-102-82-102-cisco-com Name	Shows the name of the current user, or the name of the node the user is using.
System Admin: n n n Authentication level	If you have implemented MWTM user access security, the authentication level of the user appears.

MWTM Client Navigation Tree

The MWTM client navigation tree displays objects in a variety of formats and views. The DEFAULT view, and other views that you can create, display a hierarchy of the objects that the MWTM manages. By default, the navigation tree is sorted by alarm severity, with objects having the most severe alarms appearing at the top of the tree.

Note To learn more about alarm severity, see Chapter 9, "Managing Alarms and Events."

The client navigation tree contains:

Object	Description
Active Alarms	Displays a summary of all currently active alarms in your network, including the current status of the associated network object. For details, see Chapter 9, "Managing Alarms and Events."
Event History	Displays information about the events that the MWTM event logger and event processor deliver for all objects in the current network view. For details, see Chapter 9, "Managing Alarms and Events."
Summary Lists	Displays basic summary alarm information about all discovered network objects, including alarm severity and the total number of objects in each severity level. For details, see Displaying Summary Lists Alarms, page 3-17.
DEFAULT View (or named view)	Displays the view name and all objects in that view. For details about views, see Chapter 6, "Managing Views."

Note For additional features that appear only in the navigation tree of the web interface, see MWTM Web Interface Navigation Tree, page 12-3.

MWTM Client Content Area

The content area in the right pane displays detailed information about your network, such as configuration and historical data. To view detailed information for an object, click the object in the navigation tree. The content area in the right pane shows the details about the chosen object.

The content area formats the information in a way that is easy to interpret. Descriptive information is usually organized into subpanes. Tabs along the top of the content area organize more complex sets of information. Large amounts of information are organized into tables with labeled columns and multiple rows of data.

For additional features that appear only in the content area of the MWTM web interface, see MWTM Web Interface Content Area, page 12-5.

Displaying Summary Lists Alarms

Summary Lists provides basic summary alarm information about all discovered network objects, including alarm severity and the total number of objects for each severity level.

Note If you click to expand the turner beside Summary Lists, all discovered object types in your network appear. For detailed information, see Displaying Object Windows, page 7-2.

To view the summary lists, click Summary Lists in the navigation tree in the MWTM main window. The Summary Lists table has two columns: Severity and Total. You can resize each column, or sort the table based on the information in one of the columns. By default, this table is sorted by Severity, with the highest severity (Critical) at the top. The Total column lists the total number of discovered objects for each severity level.

Note For detailed information on working in tables, see Navigating Table Columns, page 5-23.

The summary list table contains:

Column	Description
Severity	Alarm severity of the object. Possible values are: Critical Major Minor Warning Informational Indeterminate
Total	Total number of network objects with the indicated severity.

Note See Chapter 9, "Managing Alarms and Events" for information on alarm management.

Right-Click Menu for the Summary Lists

To see the right-click menu for the summary lists, select Summary Lists or any of the objects under Summary Lists in the navigation tree and press the right mouse button. The menu provides:

Menu Command	Description
Show In New Window	Opens the current window in a new window.
Back > List of Windows	Navigates back to a window viewed in this session. The MWTM maintains a list of up to 10 Back windows.
Forward > List of Windows	Navigates forward to a window viewed in this session. The MWTM maintains a list of up to 10 Forward windows.

Using the MWTM Main Menu

The MWTM main menu appears in the menu bar of most MWTM windows.

Some menu items do not appear on some windows. In addition, menu items that are dimmed are not available on that window.

For detailed information about the menu options provided by other windows, see the descriptions of those windows.

The MWTM main menu contains:

Menu Command	Description
File > Load DEFAULT View (Ctrl-D)	Loads the DEFAULT view, which is the view into which the MWTM places all discovered objects when discovering the network. The DEFAULT view is stored on the MWTM server and shared by all MWTM clients, but the clients cannot modify it.
File > Load View (Ctrl-L)	Loads an already existing view. The MWTM prompts you for the name of the view you want to load: • Select the name of the view, or accept the default view name, then click **OK** to load the view. • Click **Cancel** to close the prompt window without loading a view.
File > Save View (Ctrl-S)	Saves the current view: • If you have not already saved the current view, opens the Save File dialog box: View List, in which you enter or select a filename under which to save the current view. • If you have already saved the current view, saves the view to that filename. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Power User (level 2) and higher.
File > Save View As	Opens the Save File Dialog: View List, which you use to enter or select a filename under which to save the current view. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Power User (level 2) and higher.
File > Connect to New Server (Ctrl-O)	Connects to a new server. The MWTM prompts you for the new server's name or IP address, and UDP port number. The MWTM stops the MWTM client, then restarts the client connected to the new server. The MWTM stops the MWTM client, then restarts the client connected to the new server.
File > Print (Ctrl-P)	Opens the Print window where you can: • Specify options for printing • Print the current window • Save the current window to a file The MWTM printing options require that you define a printer on your system. If you choose **File > Print** and the Print window does not appear, ensure you have defined a printer on your system.
File > Exit (Ctrl-Q)	Exits the MWTM application, after prompting you for confirmation. If you are working in a custom view (that is, not the DEFAULT view), the MWTM automatically saves any changes you made to the view.
Edit > Views (Ctrl-M)	Opens the View Editor window to allow you to edit any views that you have created.
Edit > Clear All Events (Ctrl-E)	Deletes the event icon (orange triangle) from MWTM displays for all known objects. The actual events are not deleted from the MWTM, only the event icon for all known objects. **Note** During Discovery, the MWTM might flag most objects with an event icon. If the event icons are too distracting, use the **Edit > Clear All Events** menu option to remove them.

Menu Command	Description
Edit > Find (Ctrl-F)	Opens the Find dialog box, in which you find a specific object, event, or text in the window. If you select an object in the navigation tree in the MWTM main window, this option is dimmed and cannot be chosen.
Edit > Delete (Delete)	Deletes the currently chosen element or elements from the MWTM database. The MWTM displays the Confirm Deletion dialog box. To: • Delete the chosen elements, click **Yes**. The items are deleted from the MWTM database and the Confirm Deletion dialog box is closed. • Retain the chosen elements, click **No**. The items are kept in the MWTM database and the Confirm Deletion dialog box closes. • Prevent the MWTM from displaying the Confirm Deletion dialog box, select the **Do not show this again** check box. **Note** If you select the **Do not show this again** check box, and you later decide you want the MWTM to begin displaying the Confirm Deletion dialog box again, you must select the Confirm Deletions check box in the General GUI settings in the Preferences window. For more information, see the description of the Confirm Deletions check box in Startup/Exit Settings, page 5-3. To permanently delete all elements marked for deletion from the MWTM database, you can also run the **mwtm purgedb** command (see mwtm purgedb, page B-53). If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Administrator (level 4) and higher.
Edit > Preferences (Ctrl-H)	Opens the Preferences window.
Network> Node SNMP and Credentials Editor (Alt-S)	Opens the SNMP Configuration dialog box. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Administrator (level 4) and higher.
Network > Network Discovery (Ctrl-Y)	Opens the Discovery dialog box. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Administrator (level 4) and higher.
Network > Poll Nodes > Normal Poll (Alt-L)	Polls all chosen nodes. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Operator (level 3) and higher.
Network > Poll Nodes > Clean Poll (Alt-C)	Polls all chosen nodes and removes any **Unknown** objects after the completion of the poll. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Operator (level 3) and higher.
Network > ITP Node Archive Management	Opens the Archive Management dialog box, allowing you to view archived GTT files, route table files, or MLR address table files and perform various functions on the files. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Administrator (level 4) and higher.
Network > ITP Node File Management	Opens the Node File Management dialog box, allowing you to view GTT files, route table files, or MLR address table files and perform various functions on the files. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Administrator (level 4) and higher.

Menu Command	Description
View > Topology (Ctrl-T)	Opens the topology window.
View > MWTM Server > Connect via Telnet (Ctrl+Shift-T)	Opens a Telnet window to the server.
View > MWTM Server > Connect via SSH (Ctrl+Shift-S)	Opens a Secure Shell (SSH) window to the server. **Note** The key size on the SSH server must be a minimum of 512 bits and a maximum of 2048 bits.
View > MWTM Server > Server Status	Displays the MWTM web status page in a web browser.
View > MWTM Web Links > Home	Displays the MWTM web interface home page in a web browser.
View > MWTM Web Links > Administrative	Displays the MWTM web administrative page in a web browser.
View > MWTM Web Links > Groups	Displays the MWTM web groups page in a web browser.
View > MWTM Web Links > Tools	Displays the MWTM web tools page in a web browser.
View > MWTM Web Links > Reports	Displays the MWTM web reports main page in a web browser.
View > MWTM Web Links > CSV File Archive	Displays the MWTM web file archive page in a web browser.
View > MWTM Web Links > Archived Event Logs > Status Changes	Displays the archived status changes in a web browser.
View > MWTM Web Links > Archived Event Logs > SNMP Traps	Displays the archived SNMP traps in a web browser.
View > MWTM Web Links > Archived Event Logs > Status Changes and SNMP Traps	Displays both the archived status changes and archived SNMP traps in a web browser.
View > MWTM Web Links > Software Version Inventory	Displays the MWTM software versions for the server you are connected to, and which is currently running the MWTM server, in a web browser.
View > MWTM Web Links > Point Code Inventory	Displays the point codes inventory reports page which shows all point codes that are currently being used by all nodes that the MWTM detected, in a web browser.
View > MWTM Web Links > IP Address Inventory	Displays the report of IP addresses of the nodes that the MWTM manages, in a web browser.
View > Message of the Day	Opens the Message of the Day dialog box.
View > Cisco.com	Displays the Cisco.com Home Page in a web browser.
Go > Back (Alt-Left Arrow) [1]	Navigates back to the last window viewed in this session.
Go > Forward (Alt-Right Arrow) [1]	Navigates forward to the last window viewed in this session.

Menu Command	Description
Go > Back > *List of Windows*	Navigates back to a window viewed in this session. The MWTM maintains a list of up to 10 Back windows.
Go > Forward > *List of Windows*	Navigates forward to a window viewed in this session. The MWTM maintains a list of up to 10 Forward windows.
Tools > Route Table Editor > From Archive (Alt-J) (ITP only)	Opens the Load Route Table from Archive wizard. If you select an Unmanaged node, this option is dimmed and cannot be chosen. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Administrator (level 4) and higher.
Tools > Route Table > From Node (Alt-O) (ITP only)	Opens the Route Table dialog box by using a route table from an ITP node. If you select an Unmanaged node, this option is dimmed and cannot be chosen. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Administrator (level 4) and higher.
Tools > Route Table > From File (Alt-I) (ITP only)	Opens the Route Table dialog box by using a route table from a file. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Administrator (level 4) and higher.
Tools > Global Title Translator Editor (Ctrl-G) (ITP only)	Launches the GTT client. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Operator (level 3) and higher.
Tools > Address Table Editor (Alt-A) (ITP only)	Launches the Address Table Editor, which you use to create new address table files, load existing address table files, perform semantic checks, save address table files, and deploy address table files to an ITP. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Operator (level 3) and higher.
Tools > Event Editor (Alt-B)	Launches the Event Editor, which you use to: • Customize the visible category, severity, color, and message associated with events • Configure sounds for the MWTM to play for different types of events • Load, save, and deploy customized event configurations. If you have implemented MWTM User-Based Access, this option is available to users with authentication level Network Operator (level 3) and higher.
Tools > Event Sounds (Ctrl-U)	Opens the Event Sound Filters dialog box, which you use to define sounds that the MWTM client should play when specific events are logged.
Tools > Virtual RAN Backhaul Editor (Ctrl-B) (IP-RAN only)	Launches the Virtual RAN Backhaul Editor, which you use to create a virtual RAN backhaul by grouping real backhauls.

Menu Command	Description
Launch > CiscoView <*machine name*>	Launches CiscoView, which provides a real-time, color-coded, graphical representation of Cisco objects. You can use CiscoView to quickly identify an incorrect status on a port or interface. This option is dimmed if the chosen node is: not a recognized node; in Unmanaged status; or has a Device Type of Unknown. (CiscoWorks cannot monitor Unmanaged, Unknown, or unrecognized nodes.) This option is not visible if you did not specify a CiscoWorks server during installation. See the "Installing MWTM on Solaris" and "Installing MWTM on Windows" chapters of the *Installation Guide for the Cisco Mobile Wireless Transport Manager 6.1.3* for more information.
Launch > CiscoWorks LMS Portal <*machine name*>	Launches CiscoWorks LMS Portal, which provides a dashboard of tools and utilities such as CiscoView, Resource Manager Essentials, and Device Center.
Launch > Device Center <*machine name*>	Launches the CiscoWorks Device Center, which provides a number of web-based functions, including reachability trends, response time trends, interface status, syslog browsing, and detailed inventory. The MWTM prompts you for a CiscoWorks user ID and password before linking to CiscoWorks. The link to CiscoWorks has these prerequisites. CiscoWorks must: • Be installed somewhere in the network. • Monitor the specific device. This option is dimmed if the chosen node is: not an recognized node; in Unmanaged status; or has a Device Type of Unknown. (CiscoWorks cannot monitor Unmanaged, Unknown, or unrecognized nodes.) This option is not visible if you did not specify a CiscoWorks server during installation. See the "Installing MWTM on Solaris" and "Installing MWTM on Windows" chapters of the *Installation Guide for the Cisco Mobile Wireless Transport Manager 6.1.3* for more information.
Help > Topics (F1)	Displays the table of contents for the MWTM online help.
Help > Window (Shift-F1)	Displays online help for the current window.
Help > About (F3)	Displays build date, version, SSL support, and copyright information about the MWTM application.

1. In the UNIX environment (Solaris or Linux), this key combination can be mapped to a different function based on the Common Desktop Environment (CDE) that a user might have. For example, in Solaris CDE, Alt-Left Arrow and Alt-Right Arrow combinations are typically mapped to move back and forward through the different desktops. To remap the keys for use with the MWTM, see your UNIX Desktop Environment guide.

Using the MWTM Toolbar

The MWTM toolbar appears under the menu bar in the MWTM client windows, and above the navigation tree in the MWTM web interface.

The MWTM toolbar contains:

Element	Description
 Sort tree by name	Sorts all content in the navigation tree alphabetically by name.
 Sort tree by status	Sorts all content in the navigation tree by status, from the highest alarms to the lowest.
 Go back or forward one navigation change	(Only in MWTM client) Click to browse forward or backward in your navigation changes. In the MWTM web interface, click the browser's back and forward buttons.
 Location	Shows your current location in MWTM. Some locations are clickable links to which you can navigate directly.

Accessing the MWTM Through a Web Browser

You can manage network nodes through one of two graphical user interfaces:

- **MWTM client interface**—The standard interface for accessing MWTM data. (This interface is described in Displaying the MWTM Main Window, page 3-14.)
- **MWTM web interface**—A browser interface for accessing MWTM data. (This interface is introduced here and fully described in Chapter 12, "Accessing Data from the Web Interface.")

A comparison of the GUI features supported in each interface is shown in this matrix:

GUI Features	Web Interface	Client Interface	Notes
Main window	X	X	Slight differences exist between the interfaces (in the navigation tree and content area displays).
Discovery window	X	X	Exists in both client and web interface.
Historical Data	X		You enter a start and stop time for the data you are interested in, and the MWTM retrieves the data from its database. You can access the web interface display from the right-click menus in the client interface.
Real-time Data	X	X	The MWTM periodically polls the node for real-time data, and updates the graphs as new data is received.
Topology		X	Client-only feature.

GUI Features	Web Interface	Client Interface	Notes
High-level editors		X	These editors appear under the Tools menu of the MWTM main window: • Route Table Editor • GTT Title Editor • Address Table Editor • Event Editor
Provisioning	X		Web-only feature for ITP, IPRAN, CSG, GGSN, and HA objects. To launch web provisioning from the MWTM client, select the object in the navigation tree and click the Provision button in the web interface toolbar.

You access the web interface using one of two methods:

- Open a browser and enter **http://***server_name***:1774** in the Address field.
- From the MWTM client interface, choose **View > MWTM Web Links > Home**.

The web interface window opens in the browser window.

For detailed information about the MWTM web interface, see Chapter 12, "Accessing Data from the Web Interface."

Loading and Saving MWTM Files

You use the MWTM to quickly and easily load and save MWTM files. The files are on the MWTM server and you can load them on any connected MWTM client.

To display a Load File dialog box, use one of these procedures:

Launched From	Choose	Window Launched	Notes
Address Table Editor (ITP only)	**File > Load > Load from File**	Load File Dialog: Address Table File List	See Loading an Existing Address Table File, page 16-6.
Discovery dialog box	**File > Load Seeds**	Load File Dialog: Seed File List	See Loading Seed Nodes and Seed Files, page 3-7.
Event Filter dialog box	**Load**	Load File Dialog: Load Filter	See Loading Existing Filters, page 9-18.
GTT Editor (ITP only)	**File > Load**	Load File Dialog: GTT File List	See Loading an Existing GTT File, page 15-28.
Preferences window	**File > Load System Default Prefs**	None	See Displaying the Preferences Menu, page 5-2.
Route Table dialog box (ITP only)	**File > Load**	Load File Dialog: Route Table File List	See Loading an Existing Route Table File, page 14-11.
View Editor window	**File > Load**	Load File Dialog: View List	See Loading a Client-Specific View, page 6-14.

Note To load the DEFAULT network view, choose **File > Load DEFAULT View** from the MWTM main menu. The MWTM loads the DEFAULT view.

To display a Save File dialog box, use one of these procedures:

Launched From	Choose	Window Launched	Notes
Address Table Editor (ITP only)	**File > Save As**	Save File Dialog: Address Table File List	See Saving an Address Table File, page 16-17.
Discovery dialog box	**File > Save As**	Save File Dialog: Seed File List	See Saving a Seed File, page 3-8.
Event Filter dialog box	**File > Save As**	Save File Dialog: Save Filter	See Saving Filter Files, page 9-19.
GTT Editor (ITP only)	**File > Save As**	Save File Dialog: GTT File List	See Saving a GTT File, page 15-37.
Route Table dialog box (ITP only)	**File > Save As**	Save File Dialog: Route Table File List	See Saving a Route Table File, page 14-12.
View Editor window	**File > Save As**	Save File Dialog: View List	See Closing the View Editor Window, page 6-13.

Using the Windows Start Menu

This section includes:

Changing the Default MWTM Server Name

If the IP address or hostname to which your MWTM client is bound fails, you can change the default MWTM server name from the Windows Start menu.

To change the default MWTM server name:

Step 1 Close all open MWTM windows.

Step 2 Choose **Start > Programs > Cisco MWTM Client > Modify Default MWTM Server Name**. The MWTM opens a DOS window, and asks you to enter the name of the new default MWTM server.

Step 3 Enter the name of the new default MWTM server, and press **Enter**. The MWTM sets the default server to the new name that you entered.

Tip See Connecting to a New Server, page 5-40 for more information about changing the default MWTM server name.

Launching the MWTM Client

To launch the MWTM Client, choose **Start > Programs > Cisco MWTM Client > MWTM Client** from the Windows Start menu, or double-click the MWTM icon on the desktop. The MWTM launches the MWTM Client.

Launching the MWTM DOS Prompt

To launch a DOS prompt for the MWTM from the Windows Start menu, choose **Start > Programs > Cisco MWTM Client > MWTM DOS Prompt**. The MWTM opens a DOS window, starting in the *\bin* directory:

- If you installed the MWTM client in the default directory, *C:\Program Files*, then the DOS prompt starts at *C:\Program Files\MWTMClient\bin*.
- If you installed the MWTM client in a different directory, then the *\bin* directory is located in that directory.

Launching the MWTM Event Editor

To launch the MWTM Event Editor, choose **Start > Programs > Cisco MWTM Client > Launch MWTM Event Editor** from the Windows Start menu. The MWTM launches the MWTM Event Editor.

Note The MWTM Event Editor is available to power users (level 2) and higher.

Launching the MWTM SSL Certificate Tool

To launch the MWTM SSL Certificate Tool from the Windows Start menu, choose **Start > Programs > Cisco MWTM Client > MWTM SSL Certificate Tool**.

Displaying the MWTM README File

The MWTM README file contains late-breaking information about the MWTM that might not be found in the other product documentation. To open the MWTM README file from the Windows Start menu, choose **Start > Programs > Cisco MWTM Client > Readme**.

Uninstalling the MWTM

You can uninstall the MWTM from the Windows Start menu. For details, see the "Uninstalling the MWTM Client" section of the *Installation Guide for the Cisco Mobile Wireless Transport Manager 6.1.3*.

Locating Technology Specific Information

To help you locate information specific to a technology, the following table lists where to find information based on the specified technology.

Technology	Topic and Location
Managing ITP	• *User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – Managing and Deploying ITP Files, page 5-24 – Naming Information, page 8-17 – Status Information, page 8-26 – Viewing Data Specific for ITP Signaling Points, page 8-118 – Editing an ITP Route Table File, page 14-1 – Appendix E, “Status Definitions.” • *OSS Integration Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – ITP Provisioning Attributes • *Alarm Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – ITP Alarms
Managing the Cisco mSEF Infrastructure	• *User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – Displaying CSG2 Real-Time Statistics, page 12-33 – Displaying BWG Real-Time Statistics, page 12-46 – Displaying HA Real-Time Statistics, page 12-57 – Displaying GGSN Real-Time Statistics, page 12-60 – Displaying PDSN Real-Time Statistics, page 12-71 – Displaying SGW Real-Time Statistics, page 12-77 – Displaying PDNGW Real time statistics, page 12-90 – Appendix E, “Status Definitions.” • *OSS Integration Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – CSG2 Provisioning Attributes – GGSN Provisioning Attributes – HA Provisioning Attributes • *Alarm Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – BWG Alarms – CSG1 Alarms – CSG2 Alarms – GGSN Alarms – HA Alarms – PDSN Alarms – PDNGW Alarms – SGW Alarms – PCRF Alarms

Technology	Topic and Location
Managing IPRAN and RAN-O	• *User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – Displaying RAN-O Statistics, page 12-27 – Displaying PWE3 Real-Time Statistics, page 12-103 – Displaying QoS Statistics, page 12-99 • *OSS Integration Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – RAN Provisioning Attributes • *Alarm Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – IP-RAN Alarms
Managing all domains	• *Alarm Guide for the Cisco Mobile Wireless Transport Manager 6.1.3:* – Common Alarms

Exiting the MWTM Client

When you are finished monitoring network performance statistics, you can exit the MWTM client:

Step 1 From the MWTM main menu, choose **File > Exit**. The Exit MWTM confirmation window appears.

Step 2 Click **Yes** to close the MWTM client application.