Configuring MWTM for Your Network

This chapter provides the following information about configuring MWTM to better suit your needs:

Importing SNMP Community Names from CiscoWorks (Solaris Only)

MWTM enables you to store all SNMP community names in a single database in CiscoWorks Resource Manager Essentials (RME), and to export those names for use by MWTM.

To export the database from CiscoWorks RME to MWTM, use the following procedure:

Step 1 Log into CiscoWorks and select **Common Services > Device and Credentials > Device Management**. Then click the **Export** button.

Step 2 In the Device Export window, choose the device from the Device Selector panel. Then choose the following settings:

> **File Name Field = mwtm**
>
> **Format = CSV**
>
> **Run Type = Immediate**

Step 3 Click **OK**.

CiscoWorks creates the */opt/CSCOpx/objects/dmgt/mwtm* file in the default directory.

Step 4 When you start the MWTM server, MWTM looks for this file. If the file exists, MWTM merges the file with its own community name database, the */opt/CSCOsgm/etc/communities.conf* file.

For more information about SNMP, refer to "Configuring SNMP Support" in the Cisco IOS Release 12.2 *Configuration Fundamentals Configuration Guide*, Part 3, System Management.

Retaining Unknown Objects from the MWTM Database (Server Only)

By default, MWTM deletes all **Unknown** objects from the MWTM database after 7 days. To change the length of time unknown objects stay in the MWTM database, use the **mwtm unknownage** command. See the "mwtm unknownage" section on page C-70 for more information.

This method requires you to be logged in as the root user or as a super user. See the "Becoming the Root User (Server Only)" section on page 3-3 and the "Specifying a Super User (Server Only)" section on page 10-19 for more information.

Changing MWTM Client Preference Settings

When a user changes some aspect of the MWTM client, such as the size of a window or the order of columns in a window, MWTM makes note of the user's preferences on the MWTM client and server. MWTM saves the user's preferences to the MWTM server when the MWTM client exits.

Thereafter, whenever the user launches the MWTM client, MWTM searches for the user's MWTM preferences. If MWTM finds the user's preferences on the MWTM server, MWTM launches the MWTM client with those preferences. Otherwise, MWTM launches the MWTM client with the default MWTM preferences file.

In addition to the user preferences that are automatically saved, MWTM enables you to change many GUI, data, topology, and table settings that affect the way MWTM presents its information.

> **Note** Anyone who uses this MWTM client can change its preference settings, and the changes affect all views running on this client.

This section includes the following information:

Related Topics:

Displaying the Preferences Window

When you change overall MWTM preference settings, you must first display the Preferences window. The Preferences window enables you to change the way MWTM presents information.

To display the Preferences window, select **Edit > Preferences** from the MWTM Main Menu. MWTM displays the Preferences window.

The Preferences window is composed of the following sections:

Related Topics:

Preferences Menu

The menu on the Preferences window provides the following options:

Menu Command	Description
File > Load System Default Prefs	Restores all preference settings to the original system default settings.
File > Load (Ctrl-L)	Loads an already existing set of preferences. MWTM prompts you for the name of the preferences file you want to load: • Select the name of the preferences file, or accept the default filename, then click **OK** to load the preferences file. • Click **Cancel** to close the prompt window without loading a preferences file.
File > Save (Ctrl-S)	Saves the preference changes.
File > Save As	Opens the Save File Dialog: Preferences File List, which enables you to save the preferences file with a new name, or overwrite an existing preferences file.
File > Close (Ctrl-W)	Closes the Preferences window. To close the Preferences window at any time, click **File > Close**. If you have changed any preferences, MWTM asks if you want to apply the changes before leaving the window: • Click **Yes** to apply the changes and close the prompt window and the Preferences window. • Click **No** to close the prompt window and the Preferences window without applying or saving any changes. • Click **Cancel** to close the prompt window without applying any changes. The Preferences window remains open.
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.

General GUI Settings

The General GUI settings in the Preferences window enable you to change general display settings for MWTM, including which window to display first when starting MWTM, and whether to display values in bits or bytes.

To display the General GUI settings, select **General GUI** in the left pane of the Preferences window.

The General GUI settings contain the following sections:

- Startup/Exit Settings, page 11-6
- General Display Settings, page 11-7
- Node Name Settings, page 11-8
- Poller Settings, page 11-8
- Repaint Priority, page 11-9

Startup/Exit Settings

Use the Startup/Exit Settings section of the General GUI settings to specify whether you want to display the Topology Window when you launch the MWTM client, and whether you want MWTM to prompt you for confirmation when you exit the MWTM client.

The Startup/Exit Settings section contains the following fields:

Field	Description
MWTM: Topology Window	Checkbox used to indicate whether the Topology Window is to be displayed when MWTM is started. The default setting for this checkbox is cleared.
Confirm Exit	Checkbox used to indicate whether MWTM is to prompt you for confirmation when you exit the MWTM client. The default setting for this checkbox is selected.
Confirm Deletions	Checkbox used to indicate whether MWTM is to prompt you for confirmation when you delete an object. The default setting for this checkbox is selected. **Note** If you select the **Do not show this again** checkbox in a Confirm Deletion dialog, and you later decide you want MWTM to begin displaying the Confirm Deletion dialog again, you must select the **Confirm Deletions** checkbox to do so.

General Display Settings

Use the General Display section of the General GUI settings to specify whether MWTM is to:

- Display node domain names.
- Show details in bits instead of bytes.
- Show receive and send utilizations as percentages.
- Show the point code mask in bits instead of dotted notation.

The General Display settings contain the following fields:

Field	Description
Show Node Domain Names	Checkbox used to indicate whether MWTM is to show node domain names in its displays. The default setting for this checkbox is cleared (do not show node domain names).
Show Details in Bits Instead of Bytes	Checkbox used to indicate whether you want MWTM to display data and data rates in bits or bytes: • If you want MWTM to display data in bits, and data rates in bits per second, select this checkbox. This is the default setting. • If you want MWTM to display data in bytes, and data rates in bytes per second, clear this checkbox.
Show Utilization as Percentage	Checkbox used to indicate whether you want MWTM to display receive and send utilization for linksets and links as a percentage or in Erlangs: • If you want MWTM to display utilization as a percentage, select this checkbox. This is the default setting. • If you want MWTM to display utilization in Erlangs, clear this checkbox.

Node Name Settings

Use the Node Name section of the General GUI settings to specify how MWTM is to display node names.

The Node Name settings contain the following radio buttons:

Radio Buttons	Description
Show DNS or User-Defined Names	Radio button used to indicate whether MWTM is to identify nodes by their DNS or user-defined names. The default setting for this radio button is selected.
Show IP Addr in Name Field	Radio button used to indicate whether MWTM is to identify nodes by their IP addresses. The default setting for this radio button is cleared.

Poller Settings

Use the Poller section of the General GUI settings to change MWTM poller and counter settings.

The Poller settings contain the following fields and radio buttons:

Field or Radio Button	Description
Fast Poller Default (secs)	Default interval, in seconds, for the fast poller. The valid range is 15 seconds to 60 seconds. The default setting is 15 settings.
	The fast poller is used in the MWTM Real-Time Statistics: CPU Statistics Window
	You can change the valid range and default setting in the *System.properties* file. For more information, see the "Changing MWTM System Poller Settings" section on page 11-24.
Slow Poller Default (secs)	Default interval, in seconds, for the slow poller. The valid range is 60 seconds to 300 seconds. The default setting is 15 settings.
	The slow poller is used in all MWTM client windows except those listed above that use the fast poller.
	You can change the valid range and default setting in the *System.properties* file. For more information, see the "Changing MWTM System Poller Settings" section on page 11-24.
Show Counters Since Reboot	Radio button used to configure the MWTM client to clear all counters in MWTM Web pages whenever the ITP reboots. The default setting for this radio button is selected.

Field or Radio Button	Description
Show Counters Since Last Poll	Radio button used to configure the MWTM client to clear all counters whenever an MWTM Web page is polled. The default setting for this radio button is cleared.
Show Counters Since User Reset	Radio button used to configure the MWTM client to clear all MWTM counters whenever the user resets the counters on an MWTM Web page. The default setting for this radio button is cleared.

Repaint Priority

Use the Repaint Priority section of the General GUI settings to balance the responsiveness versus efficiency of the MWTM client. This setting controls how quickly the MWTM client repaints its displays.

The Repaint Priority section contains the following sliding control:

Field	Description
Repaint Priority	Balances the MWTM client's responsiveness versus efficiency. The valid range is 0 through 10, with 0 representing a high repaint priority (high responsiveness, low efficiency) and 10 representing a high communication priority (high efficiency, low responsiveness): - Slide the selector toward **High Repaint Priority** if you want to maximize repainting (responsiveness) over communication (efficiency). - Slide the selector toward **High Comm. Priority** if you want to maximize communication (efficiency) over repainting (responsiveness). - The default setting is 2 (the third mark from the left).

Topology Settings

Use the Topology settings in the Preferences window to change default settings for the Topology Window.

To display the Topology settings, select **Topology** in the left pane of the Preferences window.

The Topology settings contain the following fields:

Field	Description
Spring Layout Spacing Factor (1-10)	Indicates how far apart nodes are to be spaced when MWTM draws the Spring Layout topology map. Valid values are 1 through 10, with 1 being closer together and 10 being farther apart. The default spacing factor is 5. Even if you apply preferences and close the Preferences window, the new spacing factor is not reflected in the topology map until you select **Topology Tools > Layout > Spring**, or click the **Spring Layout** button.
Show Mouse Overs	Checkbox used to specify whether mouse over popups are enabled in topology maps. The default setting for this checkbox is selected.
Draw Connections When Dragging Node	Checkbox used to specify whether MWTM is to draw connection lines in the topology map as you move nodes: • If you want MWTM to draw the associated connection lines dynamically as you move a node, select this checkbox. • If you do not want MWTM to draw the associated connection lines until after you have finished moving a node, clear this checkbox. This is the default setting.
X Performance Enhancer (AntiAliasing Off)	Checkbox used to specify whether antialiasing is on in the topology map. Antialiasing, which is on by default, improves the appearance of the icons and connections in the map. However, antialiasing can impact the performance of the MWTM client on a remote workstation (that is, a Solaris/Linux workstation using **xhost**, or a Windows workstation using an X-Window system emulator such as eXceed or Reflection X). • If you want to turn on antialiasing in the topology map, clear this checkbox. This is the default setting. • If you want to turn off antialiasing, select this checkbox. Keep in mind that performance is always better if you access MWTM by installing the MWTM client on the remote workstation.

Event Settings

Use the Event settings in the Preferences window to change the default background color for each type of event, to specify whether to display acknowledged events, and to specify the types of event MWTM is to display in the Event tables, including the category and severity of event, whether the event is acknowledged, and other properties.

To display the Event settings, select **Events** in the left pane of the Preferences window.

The Event settings contain the following sections:

- Event Colors, page 11-11
- Categories, page 11-11
- Severities, page 11-13
- Other, page 11-14

Event Colors

The Event Colors section of the Event settings contains the following fields and buttons:

Field	Description
Informational	Indicates the background color for **Informational** events. The default color is white.
Normal	Indicates the background color for **Normal** events. The default color is light green.
Indeterminate	Indicates the background color for **Indeterminate** events. The default color is cyan.
Warning	Indicates the background color for **Warning** events. The default color is blue.
Critical	Indicates the background color for **Critical** events. The default color is red.
Major	Indicates the background color for **Major** events. The default color is orange.
Minor	Indicates the background color for **Minor** events. The default color is yellow.

Event Time Format

The Event Time Format section of the Event settings contains the following buttons:

Button	Description
12 hour format	Select this radio button to configure event time stamps using 12 hour format (for example, 07:10:09).
24 hour format	Select this radio button to configure event time stamps using 24 hour format (for example, 19:10:09).

Event Date Format

The Event Date Format section of the Event settings contains the following fields and buttons:

Button	Description
Month first	Select this radio button to configure event date stamps with the month appearing first (for example, 8/16/05).
Day first	Select this radio button to configure event date stamps with the day appearing first (for example, 16/8/05).

Categories

Use the Categories section of the Event settings to specify which event categories you want to display in the Event Window.

The Categories section contains the following default fields and buttons:

Field or Button	Description
Status	Checkbox used to indicate whether Status events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Trap	Checkbox used to indicate whether Trap events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Create	Checkbox used to indicate whether Create events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Delete	Checkbox used to indicate whether Delete events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Discover	Checkbox used to indicate whether Discover events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Edit	Checkbox used to indicate whether Edit events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Ignore	Checkbox used to indicate whether Ignore events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Login	Checkbox used to indicate whether Login events are to be displayed in the Event Window. The default setting for this checkbox is selected.
LoginDisable	Checkbox used to indicate whether LoginDisable events are to be displayed in the Event Window. The default setting for this checkbox is selected.
LoginFail	Checkbox used to indicate whether LoginFail events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Logout	Checkbox used to indicate whether Logout events are to be displayed in the Event Window. The default setting for this checkbox is selected.
OverWrite	Checkbox used to indicate whether OverWrite events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Poll	Checkbox used to indicate whether Poll events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Purge	Checkbox used to indicate whether Purge events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Select All	Selects all event category checkboxes.
Deselect All	Clears all event category checkboxes.

> **Note**   These are the default categories; there might be additional categories, as defined by the MWTM system administrator. For information about custom categories, see the "Changing Event Categories" section on page 5-23.

Severities

Use the Severities section of the Event settings to specify which event severities you want to display in the Event Window.

The Severities section contains the following default fields.

Field	Description
Informational	Checkbox used to indicate whether events of severity Informational are to be displayed in the Event Window. The default setting for this checkbox is selected.
Normal	Checkbox used to indicate whether events of severity Normal are to be displayed in the Event Window. The default setting for this checkbox is selected.
Indeterminate	Checkbox used to indicate whether events of severity Indeterminate are to be displayed in the Event Window. The default setting for this checkbox is selected.
Warning	Checkbox used to indicate whether events of severity Warning are to be displayed in the Event Window. The default setting for this checkbox is selected.
Critical	Checkbox used to indicate whether events of severity Critical are to be displayed in the Event Window. The default setting for this checkbox is selected.
Major	Checkbox used to indicate whether events of severity Major are to be displayed in the Event Window. The default setting for this checkbox is selected.
Minor	Checkbox used to indicate whether events of severity Minor are to be displayed in the Event Window. The default setting for this checkbox is selected.

Note   These are the default severities; there might be additional severities, as defined by the MWTM system administrator. For information about custom severities, see the "Changing Event Severities and Colors" section on page 5-24.

Other

Use the Other section of the Event settings to further define the event filter for the Event Window. These settings are applied to all event displays in the current view.

The Other section contains the following fields:

Field	Description
Acknowledged	Checkbox used to indicate whether only acknowledged events are to be displayed in the Event Window. The default setting for this checkbox is cleared.
Unacknowledged	Checkbox used to indicate whether only unacknowledged events are to be displayed in the Event Window. The default setting for this checkbox is selected.
Time Before	Checkbox used to indicate whether only events logged by MWTM prior to a specified date and time are to be displayed in the Event Window. The default setting for this checkbox is cleared.
Time Before Field	Specifies the date and time prior to which events logged by MWTM are to be displayed in the Event Window. This field is grayed-out unless the **Time Before** checkbox is selected.
Time After	Checkbox used to indicate whether only events logged by MWTM after a specified date and time are to be displayed in the Event Window. The default setting for this checkbox is cleared.
Time After Field	Specifies the date and time after which events logged by MWTM are to be displayed in the Event Window. This field is grayed-out unless the **Time After** checkbox is selected.
Message Contains	Checkbox used to indicate whether only events that contain the specified message text are to be displayed in the Event Window. The default setting for this checkbox is cleared.
Match Case	Checkbox used to indicate whether only events that match the case of the text in the **Message Contains** field are to be displayed in the Event Window. This field is grayed-out unless the **Message Contains** checkbox is selected. If the **Message Contains** checkbox is selected, the default setting for this checkbox is cleared.

Charts Settings

Use the Charts settings in the Preferences window to change default settings for the elements in real-time data charts.

To display the Charts settings, select **Charts** in the left pane of the Preferences window.

The Charts settings contain the following fields and button:

Field or Button	Description
Series	Indicates the time series being defined. A time series is a set of data collected sequentially at a fixed interval of time. The default values for series are: • **Series 0**: Dot, Solid, Red • **Series 1**: Box, Solid, Green • **Series 2**: Triangle, Solid, Blue • **Series 3**: Diamond, Solid, Black • **Series 4**: Star, Solid, Pink • **Series 5**: Cross, Solid, Orange • **Series 6**: Circle, Solid, Gray • **Series 7**: Square, Solid, Light Green • **Series 8**: Vertical Line, Solid, Red • **Series 9**: Horizontal Line, Solid, Green • **Series 10**: Dot, Solid, Blue • **Series 11**: Box, Solid, Black • **Series 12**: Triangle, Solid, Pink • **Series 13**: Diamond, Solid, Orange • **Series 14**: Star, Solid, Gray • **Series 15**: Cross, Solid, Light Green • **Series 16**: Circle, Solid, Red
Symbol Style	Drop-down list box used to define the symbol associated with a series. To change the symbol for a series, select a new value: Dot, Box, Triangle, Diamond, Star, Vertical Bar, Horizontal Line, Cross, or Circle.
Line Style	Drop-down list box used to define the style of line that connects data points in the chart. To change the line style for a series, select a new value: Solid, Long Dash, Long-Short-Long (LSL) Dash, Short Dash, Dash Dot, or None.
Color	Indicates the current color for the series.
Change Color	Opens the Select Series Color dialog, which enables you to select a color for a series. For more details, see the "Customizing the Color of Chart Data Series" section on page 11-19.

Status Settings

MWTM enables you to customize the order in which status settings are sorted, as well as the color of each status setting.

When you change the sort order or the color of a status setting, most MWTM client windows reflect the new sort order or color immediately. All other windows reflect the new sort order or color at the next poll.

When you change the color of a status, most MWTM client windows reflect the new color immediately. All other windows reflect the new color at the next poll.

To display the Status settings, select **Status** in the left pane of the Preferences window.

The Status settings contain the following fields and button:

Field or Button	Description
Status Sort Order	Indicates the status setting being defined. The default status sort order and colors are: • **None**: Black • **Unknown**: Red • **Unavailable**: Red • **Inactive**: Red • **Failed**: Red • **Down**: Red • **Blocked**: Red • **Pending**: Red • **Warning**: Yellow • **Shutdown**: Blue • **Discovering**: Cyan • **Polling**: Cyan • **Waiting**: Gray • **Unmanaged**: Gray • **Active**: Green
Move Up	Moves the selected status setting up in the **Status Sort Order** list.
Change Color	Opens the Select Status Color dialog, which enables you to select a color for a status. For more details, see the "Customizing the Color of Chart Data Series" section on page 11-19.
Move Down	Moves the selected status setting down in the **Status Sort Order** list.
Color	Indicates the current color for the Series.
Change Color	Opens the Select Series Color dialog, which enables you to select a color for a Series. For more details, see the "Customizing the Color of Status Settings" section on page 11-21.
Reset Order	Restores the status settings to the default sort order.
Reset Colors	Restores the status settings to the default colors.

Customizing the Color of Event Severities

MWTM enables you to customize the color of event severities.

To customize event severity colors, select **Events** in the left pane of the Preferences window, then click **Change Color** in the Event Colors section. MWTM displays the Select Event Color dialog.

The Select Event Color dialog is composed of the following sections:

- Swatches Panel (Recommended), page 11-18
- HSB Panel, page 11-18

- RGB Panel, page 11-18
- Select Event Color Field and Buttons, page 11-18

Related Topics:

- Event Settings, page 11-10

Swatches Panel (Recommended)

The Swatches panel of the Select Event Color dialog enables you to select an event severity color from a set of color swatches. This is the recommended method for selecting an event severity color.

To display the Swatches panel, click the **Swatches** tab in the Select Event Color dialog.

To select an event severity color, select a swatch. The selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

HSB Panel

The HSB panel of the Select Event Color dialog enables you to select an event severity color based on color hue, saturation, and brightness (HSB).

To display the HSB panel, click the **HSB** tab in the Select Event Color dialog.

To select an event severity color, use one of the following procedures:

- Select a color range on the vertical color bar, then select a specific color by moving the cursor around on the color square.
- Enter specific values in the hue (**H**), saturation (**S**), and brightness (**B**) fields.

The selected severity color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

RGB Panel

The RGB panel of the Select Event Color dialog enables you to select an event severity color based on the red, green, and blue (RGB) content of the color.

To display the RGB panel, click the **RGB** tab in the Select Event Color dialog.

To select an event severity color, select values for the **Red**, **Green**, and **Blue** fields. The selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

Select Event Color Field and Buttons

The Select Event Color dialog contains the following field and buttons:

Field or Button	Description
Preview	Displays a preview of the current selected event severity color. Whichever method you choose to select an event severity color, the selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.
OK	Sets the event severity color as shown in the **Preview** field, and closes the Select Event Color dialog.
Cancel	Closes the Select Event Color dialog without selecting an event severity color.
Reset	Resets the event severity color to its initial setting.

Customizing the Color of Chart Data Series

MWTM enables you to customize the color of series in real-time data charts.

To customize series colors, select **Charts** in the left pane of the Preferences window, then click **Change Color** in the Series Colors section. MWTM displays the Select Series Color dialog.

The Select Series Color dialog is composed of the following sections:

- Swatches Panel (Recommended), page 11-19
- HSB Panel, page 11-19
- RGB Panel, page 11-20
- Select Series Color Field and Buttons, page 11-20

Related Topics:

- Charts Settings, page 11-14

Swatches Panel (Recommended)

The Swatches panel of the Select Series Color dialog enables you to select a series color from a set of color swatches. This is the recommended method for selecting a series color.

To display the Swatches panel, click the **Swatches** tab in the Select Series Color dialog.

To select a series color, select a swatch. The selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

HSB Panel

The HSB panel of the Select Series Color dialog enables you to select a series color based on color hue, saturation, and brightness (HSB).

To display the HSB panel, click the **HSB** tab in the Select Series Color dialog.

To select a series color, use one of the following procedures:

- Select a color range on the vertical color bar, then select a specific color by moving the cursor around on the color square.

- Enter specific values in the hue (**H**), saturation (**S**), and brightness (**B**) fields.

The selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

RGB Panel

The RGB panel of the Select Series Color dialog enables you to select a series color based on the red, green, and blue (RGB) content of the color.

To display the RGB panel, click the **RGB** tab in the Select Series Color dialog.

To select a series color, select values for the **Red**, **Green**, and **Blue** fields. The selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

Select Series Color Field and Buttons

The Select Series Color dialog contains the following field and buttons:

Field or Button	Description
Preview	Displays a preview of the current selected series color.
	Whichever method you choose to select a series color, the selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.
OK	Sets the series color as shown in the **Preview** field, and closes the Select Series Color dialog.
Cancel	Closes the Select Series Color dialog without selecting a series color.
Reset	Resets the series color to its initial setting.

Customizing the Color of Status Settings

MWTM enables you to customize the color of status settings in the MWTM client.

To customize status setting colors, select **Status** in the left pane of the Preferences window, select a status setting, then click **Change Color**. MWTM displays the Select Status Color dialog.

The Select Status Color dialog is composed of the following sections:

- Swatches Panel (Recommended), page 11-21
- HSB Panel, page 11-21
- RGB Panel, page 11-22
- Select Status Color Field and Buttons, page 11-22

Related Topics:

- Status Settings, page 11-15

Swatches Panel (Recommended)

The Swatches panel of the Select Status Color dialog enables you to select a status color from a set of color swatches. This is the recommended method for selecting a status color.

To display the Swatches panel, click the **Swatches** tab in the Select Status Color dialog.

To select a status color, select a swatch. The selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

HSB Panel

The HSB panel of the Select Status Color dialog enables you to select a status color based on color hue, saturation, and brightness (HSB).

To display the HSB panel, click the **HSB** tab in the Select Status Color dialog.

To select a status color, use one of the following procedures:

- Select a color range on the vertical color bar, then select a specific color by moving the cursor around on the color square.

- Enter specific values in the hue (**H**), saturation (**S**), and brightness (**B**) fields.

The selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

RGB Panel

The RGB panel of the Select Status Color dialog enables you to select a status color based on the red, green, and blue (RGB) content of the color.

To display the RGB panel, click the **RGB** tab in the Select Status Color dialog.

To select a status color, select values for the **Red**, **Green**, and **Blue** fields. The selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.

Select Status Color Field and Buttons

The Select Status Color dialog contains the following field and buttons:

Field or Button	Description
Preview	Displays a preview of the current selected status color.
	Whichever method you choose to select a status color, the selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**.
OK	Sets the status color as shown in the **Preview** field, and closes the Select Status Color dialog.
Cancel	Closes the Select Status Color dialog without selecting a status color.
Reset	Resets the status color to its initial setting.

Restoring Default Preference Settings

If you decide you do not like your modified preference settings, MWTM enables you to restore all preference settings to the original system default settings. To do so, display the Preferences window, as described in "Displaying the Preferences Window" section on page 11-4, then select the **File > Load System Default Prefs** menu option. MWTM restores the default settings.

Loading an Existing Preference Settings File

MWTM enables you to load an existing preference settings file. To do so, display the Preferences window, as described in "Displaying the Preferences Window" section on page 11-4, then select the **File > Load** menu option. MWTM displays the Load File Dialog: Preferences File List dialog.

The Load File Dialog: Preferences File List enables you to load a specific preferences file, change the list of preferences files, and select one preferences file to be loaded automatically when the MWTM client is started.

The Load File Dialog: Preferences File List contains the following fields and buttons:

Field or Button	Description
Type	Icon indicating whether the item in the table is a file or a folder.
Name	Name of the preferences file or folder.
Last Modified	Date and time the preferences file or folder was last modified.
Size (bytes)	Size of the preferences file or folder, in bytes.
Number of Files (displayed in bottom left corner)	Total number of preferences files and folders.
OK	Loads the selected preferences file and closes the dialog. To load a preference settings 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**. MWTM loads the preference settings file, closes the Load File Dialog: Preferences File List dialog, and returns to the Preferences window. To save any changes you made to the list of files, click **OK**. MWTM saves the changes, closes the Load File Dialog: Preferences File List dialog, and returns to the Preferences window.
Delete	Deletes the selected file from the preferences file list. Select a file and click **Delete**. MWTM issues an informational message containing the name and location of the deleted file.
Cancel	Closes the dialog without loading a preference settings file or saving any changes to the preferences file list.
Help	Displays online help for the dialog.

Related Topics:

- Changing MWTM Client Preference Settings, page 11-2

Saving the Preference Settings File

MWTM enables you to save a specific preferences file, change the list of preferences files, and select one preferences file to be loaded automatically when the MWTM client is started.

When you are satisfied with any changes you have made to your preference settings, select **File > Save As** from the Preferences window. MWTM displays the Save File Dialog: Preferences File List dialog.

The Save File Dialog: Preferences File List contains the following fields and buttons:

Field or Button	Description
Type	Icon indicating whether the item in the table is a file or a folder.
Name	Name of the preferences file or folder.
Last Modified	Date and time the preferences file or folder was last modified.
Size (bytes)	Size of the preferences file or folder, in bytes.

Field or Button	Description
Filename	Name by which you want to save the preferences file.
	To save the preference settings file with a new name, use one of the following procedures:
	• To save the file with a completely new name, enter the new name and click **OK**.
	• To save the file with an existing name, overwriting an old preference settings file, select the name in the list and click **OK**.
	MWTM saves the preference settings file with the new name, closes the Save File Dialog: Preferences File List dialog, and returns to the Preferences window.
	If you create a new preferences file name, 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, MWTM converts those spaces to dashes. For example, MWTM saves file "a b c" as "a-b-c".
Number of Files (displayed in bottom left corner)	Total number of preferences files and folders.
OK	Saves any changes you made to your preferences, or to the list of preference files, and closes the dialog.
Delete	Deletes the selected file from the preferences file list. MWTM issues an informational message containing the name and location of the deleted file.
Cancel	Closes the dialog without saving the preference settings file or any changes to the preference settings file list.
Help	Displays online help for the dialog.

Related Topics:

-

Changing MWTM System Poller Settings

MWTM provides three pollers for use in the MWTM client GUI and Web pages: a fast poller, a slow poller, and a status refresh poller. Each poller has default minimum, maximum, and default settings, but MWTM also enables you to change those settings. To do so, use the following procedure:

Step 1   Edit the *System.properties* file:

- If you installed MWTM in the default directory, */opt*, then the location of the *System.properties* file is */opt/CSCOsgm/properties/System.properties*.

- If you installed MWTM in a different directory, then the *System.properties* file is located in that directory.

Step 2   To change fast poller settings, change one or more of the following lines in the file:

 # Fast poller default polling interval in seconds

FAST_POLLER_DEFAULT = 15

 # Fast poller minimum polling interval in seconds

FAST_POLLER_MIN = 15

 # Fast poller maximum polling interval in seconds

FAST_POLLER_MAX = 60

For example, to change the fast poller default to 30 seconds, change the **DEFAULT** line to:

FAST_POLLER_DEFAULT = 30

Step 3   To change slow poller settings, change one or more of the following lines in the file:

 # Slow poller default polling interval in seconds

SLOW_POLLER_DEFAULT = 60

 # Slow poller minimum polling interval in seconds

SLOW_POLLER_MIN = 60

 # Slow poller maximum polling interval in seconds

SLOW_POLLER_MAX = 300

For example, to change the slow poller default to 180 seconds, change the **DEFAULT** line to:

SLOW_POLLER_DEFAULT = 180

Step 4   To change status refresh poller settings, change one or more of the following lines in the file:

 # Status refresh default interval in seconds

STATE_REFRESH_DEFAULT = 180

 # Status refresh minimum interval in seconds

STATE_REFRESH_MIN = 180

 # Status refresh maximum interval in seconds

STATE_REFRESH_MAX = 900

For example, to change the status refresh poller default to 300 seconds, change the **DEFAULT** line to:

STATE_REFRESH_DEFAULT = 300

Step 5   Save your changes and restart the MWTM server.

Any changes you make take effect when you restart the MWTM server, and are reflected throughout the MWTM client GUI and Web pages at that time.

For each of these pollers, keep the following considerations in mind:

- If you set the minimum interval for a poller to less than 0 seconds, MWTM overrides that setting and resets the minimum interval to 0 seconds.
- If you set the maximum interval for a poller to less than the minimum interval, MWTM overrides that setting and resets the maximum interval to be equal to the minimum interval.
- If you set the default interval for a poller to less than the minimum interval, MWTM overrides that setting and resets the default interval to be equal to the minimum interval.
- If you set the default interval for a poller to more than the maximum interval, MWTM overrides that setting and resets the default interval to be equal to the maximum interval.

Changing the Message Display

The following sections provide information about changing the way MWTM displays and stores messages:

Changing the Location of MWTM Message Log Files

By default, all MWTM system message log files are located on the MWTM server at */opt/CSCOsgm/logs*. To change the location of the system message log directory, use the **mwtm msglogdir** command. See the "mwtm msglogdir" section on page C-32 for more information.

Changing the Size of the MWTM Message Log File

To change the size of the message log file, use the **mwtm msglogsize** command. See the "mwtm msglogsize" section on page C-32 for more information.

Changing the Time Mode for Dates in Log Files

To change the time mode for dates in log files, use the **mwtm logtimemode** command. See the "mwtm logtimemode" section on page C-27 for more information.

Changing the Age of the MWTM Message Log Files

To change the number of days MWTM archives system message log files before deleting them from the MWTM server, use the **mwtm msglogage** command. See the "mwtm msglogage" section on page C-31 for more information.

Enabling SNMP Traps (Server Only)

By default, MWTM cannot receive SNMP traps. To use SNMP traps with MWTM, you must first configure MWTM to receive traps.

Related Topics:

- Integrating MWTM with Other Products, page 3-35
- Viewing Network Status Information for MWTM, page 13-3

To view the current trap reception configuration for MWTM, use the following procedure:

Step 1   Log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, or as a super user, as described in the "Specifying a Super User (Server Only)" section on page 10-19.

Step 2   Enter the following commands:

> **# cd /opt/CSCOsgm/bin**
>
> **# ./mwtm trapstatus**

MWTM displays the current trap reception configuration for MWTM, including:

- SNMP trap integration type:
  - **native**—MWTM receives traps natively on a UDP port.
  - **hpov**—MWTM receives traps using HP OpenView.
- For **native**, MWTM also displays the UDP port number on which MWTM receives traps natively.
- For **hpov**, MWTM also displays the location of the HP OpenView home directory.
- Whether the trap listener is enabled or not.

To configure MWTM to receive traps, using the following procedure:

Step 1   Log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, or as a super user, as described in the "Specifying a Super User (Server Only)" section on page 10-19.

Step 2   Enter the following commands:

> **# cd /opt/CSCOsgm/bin**
>
> **# ./mwtm trapsetup**

MWTM displays the following message and prompt:

> **The MWTM server must also be stopped to perform this operation.**
>
> **Do you wish to continue? [n]**

Step 3   Type **y** and press **Enter**. MWTM stops the MWTM server and displays the following prompt:

> **Would you like to configure MWTM to receive SNMP traps? [yes]**

Step 4   Press **Enter**. MWTM displays the following message and prompt:

> **MWTM can receive traps natively on a UDP port or receive traps via integration with HP OpenView.**
>
> **Enter SNMP trap integration type: native or hpov? [native]**

- If you want MWTM to receive traps natively, press **Enter**. The MWTM installation program displays the following messages and prompt:

> **MWTM can receive traps natively on the standard UDP port number 162 or on any other UDP port chosen. If another application is already bound to the SNMP standard trap reception port of 162, an alternate port number for MWTM must be specified.**

UDP port number 44750 is the default alternate port.

Enter trap port number? [162]

By default, network elements send traps to port 162. To accept the default value, press **Enter**.

If your network elements have been configured to send traps to a different port, type that port number and press **Enter**.

By default, MWTM listens for traps from trap multiplexing devices and NMS applications on port 44750. If you want MWTM to monitor that port, and port 162 is not available on the MWTM server device, type **44750** and press **Enter**.

If trap multiplexing devices and NMS applications in your network have been configured to send traps to a different port, type that port number and press **Enter**.

If you are a super user, you must specify a port number that is greater than 1024, then press **Enter**.

Do not enter a non-numeric port number. If you do, you are prompted to enter a numeric port number.

When you select an SNMP trap port number for the MWTM server, make sure your routers use the same SNMP trap port number. See the description of the **snmp-server host** command in the "RAN-O Requirements" section of the *Cisco Mobile Wireless Transport Manager Installation Guide* for more information.

- If you want MWTM to receive traps using HP OpenView, type **hpov** and press **Enter**. The MWTM installation program displays the following prompt:

Please enter location of HP OpenView home directory: [/opt/OV]

To accept the default value, press **Enter**; or type a different location and press **Enter**.

Step 5   MWTM confirms your choices and restarts the MWTM server.

You can change all aspects of MWTM event processing, including the size of the MWTM event database, the maximum length of time MWTM is to retain events, and the default severity and color associated with each type of event. If a new trap becomes available that is of interest to MWTM, you can add it to the MWTM event database, enabling MWTM to recognize and process the new trap. For more information about changing MWTM event processing, see the "Changing the Way MWTM Processes Events" section on page 5-17.

Limiting Traps by IP Address (Server Only)

By default, when you first install MWTM, all IP addresses are allowed to send traps to the MWTM server. However, MWTM enables you to limit the IP addresses that can send traps to the server by creating and maintaining the *trapaccess.conf* file.

You can create the *trapaccess.conf* file and populate it with a list of IP addresses that can send traps to the MWTM server. MWTM receives traps from only those IP addresses, plus the local host. If the file exists but is empty, MWTM receives traps only from the local host. (MWTM always receives traps from the local host.)

When you first install MWTM, the *trapaccess.conf* file does not exist and MWTM allows all IP addresses to send traps to the MWTM server.

To create the *trapaccess.conf* file and work with the list of allowed IP addresses, use the following procedure:

Step 1   Log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, or as a super user, as described in the "Specifying a Super User (Server Only)" section on page 10-19.

Step 2   Enter the following command:

   # cd /opt/CSCOsgm/bin

Step 3   Create the *trapaccess.conf* file:

- To create the *trapaccess.conf* file and add a client IP address to the list, enter the following command:

   # ./mwtm trapaccess add

   ```
   Enter address to add: 1.2.3.4
   IP Address 1.2.3.4 added.
   MWTM server must be restarted for changes to take effect.
   Use the following command to restart the server:
      mwtm restart
   #
   ```

- To create the *trapaccess.conf* file and open the file to edit it directly, enter the following command:

   # ./mwtm trapaccess edit

The default directory for the file is located in the MWTM installation directory:

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

In the *trapaccess.conf* file, begin all comment lines with a pound sign (#).

All other lines in the file are MWTM client IP addresses, with one address per line.

Wildcards (*) are allowed, as are ranges (for example, 1-100). For example, the address *.*.*.* allows all clients to send traps to the MWTM server.

After you create the *trapaccess.conf* file, you can use the full set of **mwtm trapaccess** keywords to work with the file. See the "mwtm trapaccess" section on page C-68 for more details.

Any changes you make to the *trapaccess.conf* file take effect when you restart the MWTM server.

Setting the DISPLAY Variable (Client Only)

The DISPLAY variable is set as part of your login environment on Solaris/Linux. However, if you Telnet into a remote workstation, you must set the DISPLAY variable to local display. To do so, enter the following command:

   # setenv DISPLAY *local_ws***:0.0**

where *local_ws* is your local workstation.

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

 # export DISPLAY=*local_ws***:0.0**

Backing Up or Restoring MWTM Files (Server Only)

MWTM automatically backs up all MWTM data files to the MWTM installation directory at 1:30 AM each night.

To change the time at which MWTM automatically backs up files, log in as the root user and change the *root crontab* file.

To manually back up the MWTM data files at any time, log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, and enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./mwtm backup

MWTM backs up the data files in the installation directory.

If you installed MWTM in the default directory, */opt*, then the default backup directory is also */opt*. If you installed MWTM in a different directory, then the default backup directory is that directory.

To change the directory in which MWTM stores its nightly backup files, log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, or as a super user, as described in the "Specifying a Super User (Server Only)" section on page 10-19, then enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./mwtm backupdir *directory*

where *directory* is the new backup directory. If the new directory does not exist, MWTM does not change the directory, and issues an appropriate message.

To restore the MWTM data files from the previous night's backup, log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, and enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./mwtm restore

MWTM restores the data files.

Warning   **Do not interrupt this command. Doing so can corrupt your MWTM data files.**

The **mwtm restore** command provides optional keywords that enable you to restore only selected MWTM data files, such as log files, report files, or security files. For more information, see the "mwtm restore" section on page C-41.

Removing MWTM Data from the MWTM Server

There might be times when you want to remove all MWTM data from the MWTM server, without uninstalling the product. There are two ways to do this, both of which restore the MWTM server to a "clean" state, such as would exist after a new installation of MWTM.

To remove all MWTM data from the MWTM server, **excluding** message log files, backup files, and report files, log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, then enter the following commands:

> **# cd /opt/CSCOsgm/bin**

> **# ./mwtm clean**

Data removed includes all MWTM data, notes, preferences, security settings, seed files, event filters, report control files, and views, as well as any user-created files stored in MWTM directories.

To remove all MWTM data from the MWTM server, including all view files, notes associated with objects, and event filters and preferences, **excluding** message log files, backup files, report files, configuration settings, and security settings, log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, then enter the following commands:

> **# cd /opt/CSCOsgm/bin**

> **# ./mwtm cleandb**

This command restores the MWTM server to a "clean" state, such as would exist after a new installation of MWTM, except for the presence of the retained files. Data removed includes all MWTM data, notes, preferences, route files, and views, as well as any user-created files stored in MWTM directories.

To remove all MWTM data from the MWTM server, **including** message log files, backup files, and report files, log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, then enter the following commands:

> **# cd /opt/CSCOsgm/bin**

> **# ./mwtm cleanall**

Data removed includes all MWTM data, notes, preferences, security settings, seed files, event filters, report control files, views, message log files, backup files, and report files, as well as any user-created files stored in MWTM directories.

Configuring a Backup MWTM Server (Server Only)

MWTM enables you to configure a second MWTM server as a backup for the primary MWTM server. For best results, Cisco recommends that you configure the primary server and the backup server as backups for each other.

To configure a backup MWTM server, use the following procedure:

Step 1   Log in as the root user, as described in the "Becoming the Root User (Server Only)" section on page 3-3, or as a super user, as described in the "Specifying a Super User (Server Only)" section on page 10-19.

Step 2   Enter the following commands:

> **# cd /opt/CSCOsgm/bin**

> **# ./mwtm secondaryserver** *hostname naming-port*

where:

- *hostname* is the optional name of the host on which the backup MWTM server is installed.

- *naming-port* is the optional MWTM Naming Server port number for the backup MWTM server. The default port number is 44742.

Note   If you use the **mwtm secondaryserver** command to configure a backup MWTM server, but the primary MWTM server fails before you launch the MWTM client, then the MWTM client has no knowledge of the backup server.

Step 3   (Optional) To list the backup MWTM server that has been configured for this primary MWTM server, enter the following commands:

> **# cd /opt/CSCOsgm/bin**

> **# ./mwtm secondaryserver list**

Configuring MWTM with IOS Server Load Balancing

If a network failure causes MWTM to fail, you can no longer monitor your network. You can solve this potential problem by configuring a backup MWTM server, as detailed in the "Configuring a Backup MWTM Server (Server Only)" section on page 11-33. However, this solution requires a connection to the backup MWTM server, which might not mirror exactly the primary MWTM server.

A better solution is to use IOS Server Load Balancing (IOS SLB), which provides transparent failover of the MWTM client connection.

Use the following procedure to configure MWTM with IOS SLB:

Step 1   Make sure you have the following required hardware and software:

- Solaris/Linux server with at least two network interface cards (NICs)
- Cisco 7204VXR or 7206VXR series router
- IOS SLB release 12.1(11b)E or later
- MWTM release 5.0 or later

Step 2   Configure the Solaris/Linux server with at least two active NICs.

Step 3   Configure a routing protocol on the Solaris/Linux server, such that if one network interface fails, the other interfaces can still contact the monitored networks and the MWTM client:

- Run **in.routed** on the Solaris/Linux server, with two RIP-based routers on two separate networks providing routing tables for the server. Refer to the **in.routed** man page for more information on this configuration.

- Use the GateD routing software developed by NextHop Technologies. Refer to the following URL for more information:

  http://www.gated.org

Step 4   Configure the Cisco 7204VXR or 7206VXR series router, with the Solaris/Linux server network interfaces configured as real servers in the server farm. Refer to the IOS SLB feature module for more information on configuring the IOS SLB router.

Step 5   Configure a virtual interface, **lo0:1** with the Internet address that matches the virtual IP address configured on the IOS SLB router:

  ifconfig lo0:1 addif *ip-address*

Step 6   Install MWTM.

Step 7   Edit the */opt/CSCOsgm/properties/System.properties* file, and replace the **SERVER NAME** variable with the DNS entry that matches the virtual IP address configured on the IOS SLB router. Save your changes and restart the MWTM server.

Step 8   Configure your MWTM clients to match the same DNS entry.

Step 9   Your configuration is complete.

Keep in mind the following considerations:

- Failover of the MWTM client is transparent to the user. There are no additional changes needed at that end.

- A failure of either interface, or of the surrounding networks, might cause the MWTM client to hang for a short period, depending on the convergence of the routing protocol used by the MWTM server. For example, with RIP, the MWTM client might hang for up to two minutes while RIP converges after a network failure. Faster protocols might result in shorter MWTM client hang times.

Configuring an MWTM Client Connection Timer

MWTM enables you to specify how long an MWTM client is to wait for the MWTM server before exiting.

To configure an MWTM client connection timer, use the following procedure:

Step 1   Log in as the root user, as described in the , or as a super user, as described in the .

Step 2   Enter the following commands:

  # cd /opt/CSCOsgm/bin

  # ./mwtm cliconntimer *number-of-seconds*

where *number-of-seconds* is the time the MWTM client is to wait for a message from the MWTM server before exiting. The valid range is 10 seconds to an unlimited number of seconds. The default value is 60 seconds.

If the timer expires, the client pings the server and takes the following action:

- If the server responds to the ping, the client reconnects to the server.
- If the server does not respond to the ping, but there is a backup server configured, the client connects to the backup server.
- If the server does not respond to the ping, and there is no backup server configured, the client stops.

The timer takes effect when you restart the MWTM server.

Step 3   (Optional) To restore the default timeout of 60 seconds, enter the following command:

 # ./mwtm cliconntimer clear

The timer is reset to 60 seconds when you restart the MWTM server.

Telnetting to a Router

MWTM enables you to link to a router using Telnet.

To Telnet to a router, right-click a node in a window, then select **Router > Telnet to** from the right-click menu.

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

To specify the path to the Telnet application to use for Telnet sessions on the MWTM client, as well as any special parameters to pass to the Telnet application, use the **mwtm telnetpath** command.

To manage a Telnet proxy, use the **mwtm tnproxy** command.

See the "MWTM Command Reference" section on page C-1 for more information on the use of these commands.