OPTIMIZE

MERCURY BUSINESS AVAILABILITY CENTER™
Using Client Monitor Recorder

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Mercury Business Availability Center

Using Client Monitor Recorder

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If you have any comments or suggestions regarding this document, please send them by e-mail to documentation@mercury.com.

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Welcome to Using Client Monitor Recorder

This guide provides detailed instructions on how to create and run scripts with the Client Monitor Recorder.

How This Guide Is Organized

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Explains the procedure for creating scripts with the Client Monitor Recorder.

Chapter 3   Recording Scripts

Explains how to record user actions and add them to transactions that are saved in a script and uploaded to the Script Repository.

Chapter 4   Post Data and Wildcard Expressions

Explains about post data and wildcard expressions.

Who Should Read This Guide

This guide is intended for the following users of Mercury Business Availability Center:

➤ Mercury Business Availability Center administrators

➤ Mercury Business Availability Center data collector administrators

➤ Script developers

Readers of this guide should be knowledgeable about enterprise system administration, scripting, and enterprise applications.

Getting More Information

For information on using and updating the Mercury Business Availability Center Documentation Library, reference information on additional documentation resources, typographical conventions used in the Documentation Library, and quick reference information on deploying, administering, and using Mercury Business Availability Center, refer to *Getting Started with Mercury Business Availability Center*.

1

Client Monitor Recorder Introduction

This chapter introduces you to the Client Monitor Recorder which you use to create scripts that monitor Web pages.

Client Monitor Script Overview

Client Monitor runs scripts on end-user machines that monitor predefined Web pages and any application activity (for example, JavaScript). You can create scripts that run specifically on Siebel and PeopleSoft applications, and you can create scripts that monitor any Web application activity.

Scripts are uploaded to Mercury Business Availability Center and included in Client Monitor profiles (note that the profile's status must be set to **Running**).

For example, if you wanted to monitor the time it takes for a user to retrieve information from a knowledge base, you could define a script that would measure the time taken to access the search page, enter the search criteria, and select the applicable document from the returned list. You can define scripts to include specific pages on the site, and you can add post data to a URL so that Client Monitor monitors a page, for example, for a certain user.

By combining several user actions, you can build a transaction to provide you with information about an activity. For example, if you need to know how long it takes for a user to buy a product online, including making a credit card payment, you could define user actions that measure the time taken for the user to retrieve the payment page, the time taken to send the request to the credit card company's site, the time taken to receive the approval, and so forth.

You could also set an alert that would notify you if the reply from the credit card company took longer than was stated in the agreement between you.

For details on creating Client Monitor profiles, see "Creating Client Monitor Profiles and Editing Business Process Profiles" in *End User Management Data Collector Configuration*.

For details on maintaining Client Monitor (upgrading, updating, removing and uninstalling), see "Data Collector Maintenance" in *Platform Administration*.

Displaying the Client Monitor Recorder Page

When you access the Client Monitor Recorder page (**Admin** > **Platform** > **Data Collection** > **Client Monitor Recorder**), and before you begin recording scripts, Mercury Business Availability Center verifies that the correct Java version is installed on the administrator's machine. This section explains the process.

Mercury Business Availability Center displays the Client Monitor Recorder by means of a signed applet (Java version: 1.4.2 or later).

Mercury Business Availability Center checks:

➤ **which Java version is installed on the machine**

If the wrong version is installed, you are asked to install the correct version. You can install the Java version from the Sun Web site: **http://www.java.com/en/download/windows_automatic.jsp**. After installing a new version, close all browser windows and log in again to Mercury Business Availability Center. Access the Client Monitor Recorder page.

If the page still cannot be displayed, verify that there is not more than one Java plug-in version installed on the administrator's machine. If there is, remove all Java plug-ins and download the latest version as described here.

➤ **whether a signed applet distributed by Mercury has been accepted previously**

If a signed applet exists, the Client Monitor Recorder page is displayed. If a signed applet does not exist, a Security dialog box is displayed. (To verify the status, open the Java Plug-in Control Panel, and select the Certificates tab.)

- Click **Yes** to accept the applet for this Web session only. The Client Monitor Recorder page is displayed.

- Click **No** to refuse the applet. A message is displayed informing you that the Client Monitor Recorder cannot run. You must close all browser windows and log in again to Mercury Business Availability Center to display the Security dialog box. This time, click **Yes** or **Always**.

- Click **Always** to accept this applet for this Web session and every subsequent Web session.

➤ **whether the Client Monitor Administration Kit is installed on the machine**

Note: From version 5.0 Feature Pack 1 onwards, you no longer use the Client Monitor Administration Kit to create Client Monitor scripts or to administer Client Monitor. (You now administer Client Monitor through Mercury Business Availability Center.) However, you must still select the Admin Kit when installing Client Monitor on the client machine from which you will administer Client Monitor. The kit now serves as a back-end component and, in the future, will aid in the addition of administrator operations.

If the Client Monitor Administration Kit is not installed on the machine, a message is displayed. Install the kit from the Downloads page. For details, see "Installing Client Monitor Components" on page 12.

Recording Custom Scripts

You embed start and end user actions in the application code where you want Client Monitor to monitor the application. For help with embedding transactions, consult Mercury Customer Support.

You then record activity with the Client Monitor Recorder and save the file as a regular Client Monitor script.

Notes and Limitations

➤ The Client Monitor Recorder functions with Java 1.4.2 or later. If any earlier versions of Java are running on the machine, the Recorder does not function.

➤ When working with the Client Monitor Recorder, do not have more than one Recorder open at the same time. If two Recorders are open, the Java applet does not function correctly: transactions appear randomly in either of the Recorders.

➤ Client Monitor Administration Kit must be running on the machine on which you are creating scripts. For installation details, see "Installing Client Monitor Components" on page 12.

Note: From version 5.0 Feature Pack 1 onwards, you no longer use the Client Monitor Administration Kit to create Client Monitor scripts or to administer Client Monitor. (You now administer Client Monitor through Mercury Business Availability Center.) However, you must still select the Admin Kit when installing Client Monitor on the client machine from which you will administer Client Monitor. The kit now serves as a back-end component and, in the future, will aid in the addition of administrator operations.

➤ You can include up to 500 user actions in a script.

➤ You can save the script on the local machine. During profile definition you upload the script to Mercury Business Availability Center.

➤ By default Client Monitor ignores Web browser dialog boxes. This means that the time between the dialog box being displayed and being dismissed is not included in the current user action's time.

➤ The name of each user action and transaction must be unique within a specific Mercury Business Availability Center installation. Note, too, that Client Monitor does not consider case when differentiating between names. That is, the word LogIn is considered the same as login.

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Script Creation Workflow

The following steps describe the procedure for creating a Client Monitor script.

1 Access the Client Monitor Recorder page (**Admin** > **Platform** > **Data Collection** > **Client Monitor Recorder**).

Make sure that Client Monitor and Client Monitor Administration Kit are running on the machine on which you are creating scripts.

2 Start recording user actions, access the application and work with it, performing the actions you want to monitor. Stop recording.

For details, see "Recording User Actions" on page 10.

3 Define transactions to which you will add the user actions.

For details, see "Defining Transactions" on page 12.

4 Add the user actions to a transaction.

For details, see "Adding User Actions to a Transaction" on page 15.

5 Set the order of the user actions in the transaction.

For details, see "Setting the Order of Actions in a Transaction" on page 17.

6 Save the script and upload it to the script repository.

For details, see "Saving Transactions in a Script File" on page 17.

7 Add the script to a Client Monitor profile.

For details, see "Adding and Editing Transaction Monitors" in *End User Management Data Collector Configuration*.

8 Check that Client Monitor is reporting data to Mercury Business Availability Center, by accessing End User Management reports and verifying that they include data from Client Monitor.

For details on selecting Client Monitor profiles, see "Selecting Profiles" in *Working with Applications*. For details on viewing Client Monitor data in reports, see *Using End User Management.*

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Recording Scripts

This chapter explains how to record scripts.

Recording User Actions

You record user actions and add them to a transaction in the Client Monitor Recorder page.

To create a Client Monitor user action:

1 Select **Admin > Platform > Data Collection > Client Monitor Recorder** to open the Client Monitor Recorder page.

The Client Monitor Recorder consists of two panes, the user action pane and the monitor pane. The user action pane includes actions performed by the user and/or by the recorded application, and the monitor pane displays the user actions and transactions in the script tree. The status bar displays information about the number of user actions in total and the number selected.
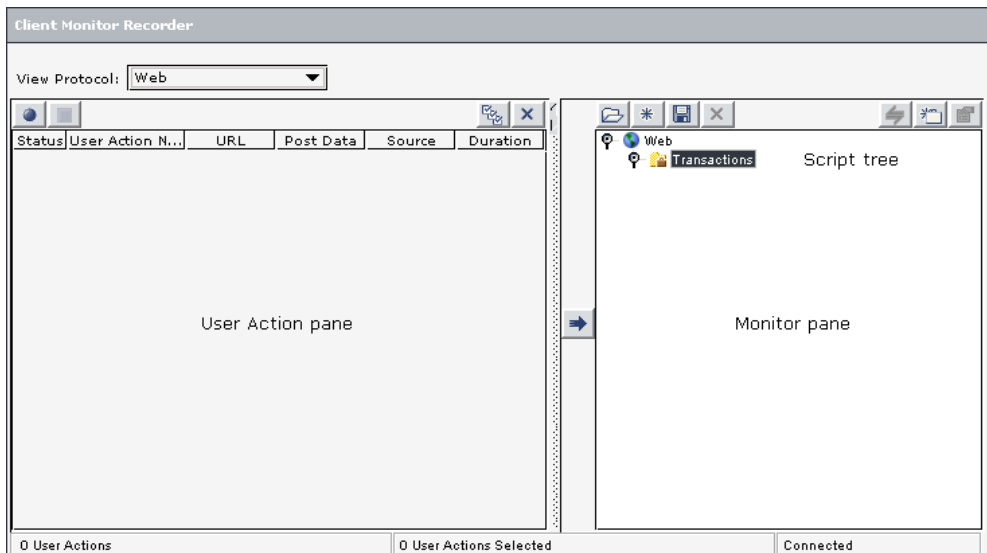
2 Choose the protocol for which you want to create a script:

➤ **Siebel.** To create scripts for the Siebel 7.5 application (note that Siebel 7.7 is not supported)

➤ **PeopleSoft.** To create scripts for the PeopleSoft 8.0 application

➤ **Web.** To create scripts for Web applications

Note: Siebel or PeopleSoft must be opened after Client Monitor is running on the machine on which you are creating scripts, for Client Monitor to monitor application activity.

Users with an advanced knowledge of Mercury Business Availability Center can record applications to which a special interface usage has been added. For details about the WebCustom protocol, contact Mercury Customer Support.

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3 Click the **Start** button.

4 Access the application or Web site for which you are creating a script and perform the actions that you want to monitor. Client Monitor records each mouse click, browse, and refresh action, and adds the action to the action pane.

The following information is displayed for each action:

➤ **Status.** Shows whether the recorded action expired, stopped, started, succeeded, or failed.

➤ **User Action Name.** The name of the recorded action.

➤ **URL** (Web scripts only)**.** The address of the page.

➤ **Post Data** (Web scripts only)**.** The extension of the HTTP request. For an explanation, see "Post Data" on page 24.

➤ **Source.** The source of the current action, that is, thread, process, and application.

➤ **Duration.**The time taken from the time the action first begins, until it is completed.

You can sort by any column: An arrow next to a title shows by which column the actions are sorted, and also the direction in which the column has been sorted (that is, ascending or descending). The first click sorts the list in ascending order. The second click sorts the list in descending order. The third click returns the sorting to the order of arrival of the user actions.

5 You can stop recording actions but continue to work: click the **Stop** button. Subsequent mouse clicks are not recorded. To resume recording, click the **Start** button.

You can clear the Recorder console if you decide that the recorded actions are not useful to you: click the **Select All** button to select all user actions and then the **Delete Selected** button.

6 When you have recorded all the actions you want to monitor, click the **Stop** button and set up transactions. For details, see the next section.

Note: While recording a user action, if you perform an activity which is already included in a script, the new action is displayed in the user action pane with the name you gave the action previously.

Defining Transactions

You can define more than one transaction for a script and you can nest transactions. You would probably want to nest transactions if you wanted to run separate versions of the same transaction, but with different properties.

To define a transaction:

1 Select **Transactions** in the monitor pane and click the **New Transaction** button to open the Transaction Properties dialog box.

To nest a transaction, select the transaction under which you want to nest the new transaction, and click the **New Transaction** button.

2 Enter a descriptive, unique name for the new transaction. The name should not exceed 150 characters, and should not include the following symbols: / \ : * ? " < . > | = [ ].

The name you give here appears in the Client Monitor profile in Monitor Administration and in Mercury Business Availability Center reports.
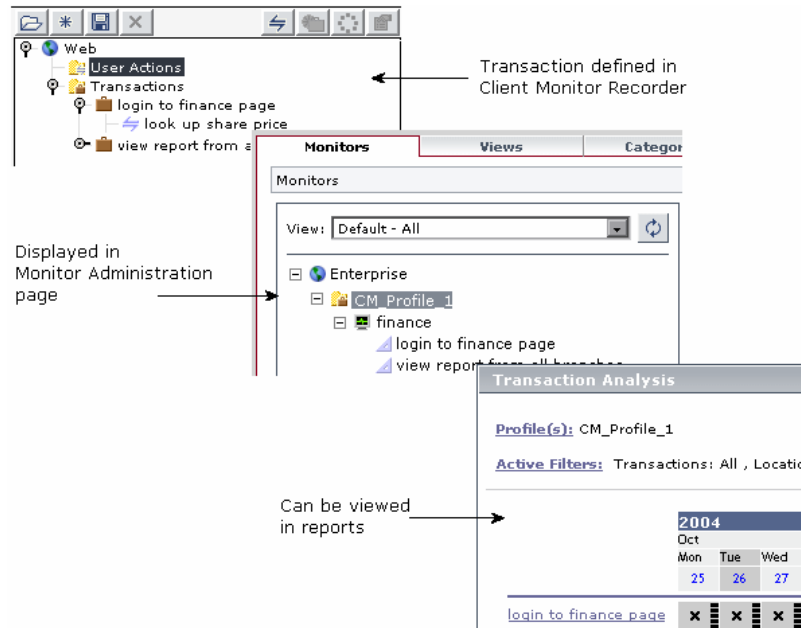
3 You can set the scope of the transaction, by including or excluding time spent away from a specific transaction, as follows:

➤ **Include user think time.** To include time spent by users on activities not defined in the transaction, select this check box. You can also use this option when there is automatic browser activity between pages that you cannot predict, for example, when a user fills in an online form.

Note that if you define a transaction that includes other transactions, Client Monitor uses the setting of the **Include user think time** option of the parent transaction. This is on condition that you did not change the properties of the child transaction.

➤ **Monitor one application window only.** To monitor the user action of a transaction in one browser window only, select this check box. Client Monitor begins monitoring the first user action of a transaction, and continues to monitor user actions in that window only.

Activity in other windows is not monitored for that transaction, even if the windows have been opened in the same browser session. (However, activity in other windows is monitored for other transactions.)

Note: A browser session includes any windows invoked when the user clicks a link in a page, or chooses **File** > **New** > **Window**.

To monitor a transaction that runs in several windows, clear this check box.

You would select this option, for example, when defining a transaction that monitors a wizard type of procedure. On the other hand, to monitor a wizard that operates in several windows, clear this check box.

➤ **Ignore non-transaction activities.** To monitor browser activity even if the user performs actions that are not included in a transaction, select this check box.

Check box selected. Client Monitor monitors the actions included in the transaction as if the non-transaction activities did not exist.

Check box cleared. Client Monitor relates to all actions, whether they are part of the transaction or not. However, when the user performs an action that is not included in a transaction, Client Monitor stops monitoring the transaction.

For examples of the results of selecting or clearing this option, see "Examples of 'Ignore non-transaction activities'" on page 20.

➤ **Consider only if download has finished.** (For Web transactions only) To monitor a transaction only when a page has downloaded all components, select this check box. (The check box is selected by default.)

If a user clicks a link in the page to move to a new page before all components of the previous page have finished downloading, Client Monitor considers the transaction to have failed. In cases where a page serves only as a springboard to another page, clear this check box.

4 Click **OK**. The transaction is added to the monitor pane. The next stage in the procedure is to add the user actions to the transactions. For details, see the next section.

Adding User Actions to a Transaction

You choose which user actions you want to add to the transaction from the list of recorded actions.

To add a user action to a transaction:

1 Select the user action(s) you want to add to the transaction. You can use Windows conventions—SHIFT+arrow key, CTRL+arrow key—to select adjacent or nonadjacent actions.

2 Select the transaction to which you want to add the user actions.

3 Click the arrow to add the user actions to the script. Client Monitor opens the User Action Information dialog box. Client Monitor opens a dialog box for each user action.

The User Action Information dialog box includes the following fields:

> ➤ **Include user think time.** For details, see above, page 13.

> ➤ **Ignore non-transaction activities.** For details, see above, page 14.

> ➤ **URL.** The address of the accessed page.

> ➤ **Post Data.** The extension of the HTTP request. For an explanation, see "Post Data" on page 24.

> ➤ **Is wild card expression.** Enables you to limit or expand the number of accessed URLs that trigger Client Monitor. You can use a wildcard to monitor more than one page. For example, to monitor the performance of your home page, enter **http://www.yoursite.com/** in the **URL** box. To monitor the performance of your entire site, enter **http://www.yoursite.com/*** and select the **Is wild card expression** check box.

4 Give a name to the action.

The Siebel and PeopleSoft actions include a default name. Client Monitor names all Web pages "Generic Web Transaction." When adding the user action to the transaction, you must give a name to the user action. Enter a unique name for the action and click **OK**.

5 Make any changes to the entries in the dialog box, and click **OK** or press ENTER to add the action to the transaction list. If you do not want to add the action, click **Cancel**.

The user action is added to the monitor pane.

6 The next stage in the procedure is to set the order of the user actions in a transaction. For details, see the next section.

Setting the Order of Actions in a Transaction

The user actions in a script are performed in the order in which they appear in the transaction. You can change the order of the user actions in a transaction, but you cannot change the order of the transactions at the top level.

Note: The order of the actions in the transaction determines whether Client Monitor monitors a transaction. For example, if the transaction includes Action 1, Action 2, Action 3, and Action 4 in that order, Client Monitor does not monitor the following sequence: **Action 4** > **Action 3** > **Action 2** > **Action 1**.

To change the order of the user actions and transactions in a transaction:

1 In the monitor pane, right-click a user action (or a transaction if it is nested in another transaction), and select **Move Up** or **Move Down** to move the action up or down.

2 The next stage in the procedure is to save the script file. For details, see the next section.

Saving Transactions in a Script File

You can save the script file anywhere on the network or on the local computer. You then upload the script to the Script Repository.

To save user actions and transaction in a script:

1 Verify that the list of user actions and transactions in the monitor pane includes all the actions needed for the script. Delete a non-required action or transaction by selecting it and clicking the **Delete** button.

2 To save the script, click the **Save** button, use the dialog box to navigate to the folder in which you want to save the script, enter a name for the file, and save the file.

Note: You must save the file with a .zip extension. Mercury Managed Services users: you must save the file with an .obs extension, as previously (for details, see "Mercury Managed Services Script Repository" in *Platform Administration*).

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3 Upload the script to the Script Repository. For details on saving files in the script repository, see "Script Repository" in *Platform Administration*.

4 Add the script in the Script Repository to a Client Monitor profile. For details, see "Adding and Editing Transaction Monitors" in *End User Management Data Collector Configuration*.

This is the end of the procedure for creating Client Monitor scripts with the Client Monitor Recorder. For details on the complete procedure, see Chapter 2, "Script Creation Workflow."

Modifying a User Action or Transaction

You may need to make changes to user actions or transactions, if they are not monitoring pages correctly.

Note: If you modify a user action, you must save the script and upload it to Mercury Business Availability Center so that the script is updated throughout the system. That is, the user action is updated in all profiles with which it is linked.

To modify a user action or transaction:

1 In the monitor pane, click the **Open file** button to open the script whose user actions you want to modify. Navigate to the file's location and open the file.

Client Monitor displays the script tree in the monitor pane.

2 Right-click the user action or transaction you want to modify, and select **Properties** or select the user action or transaction and click the **Properties** button.

3 Modify the user action or transaction, as described in "Defining Transactions" on page 12.

4 Save the script and upload it to the script repository.

You can clear the script tree in the monitor pane if you decide that the recorded user actions and transactions are not useful to you: click the **Create new sheet** button and confirm deletion by clicking **Yes** to the message.

Defining a Non-Recorded User Action

When defining a script, you can define a user action without recording it.

To define a user action without recording it:

1 In the monitor pane, select a transaction to which you want to add a user action.

2 Click the **New user action** button to open the User Action Information dialog box. The dialog box is empty.

3 Enter a name, the complete URL, and any post data.

For details of this dialog box, see "Adding User Actions to a Transaction" on page 15.

4 Click **OK** to save the user action.

Duplicating a Transaction

You can create a new transaction by copying an existing one.

To duplicate a transaction:

1 In the monitor pane, right-click the transaction you want to copy, and select **Copy**.

2 Right-click the transaction under which you want to add the new transaction (or right-click **Transactions**, if you want to add a transaction at the top level), and select **Paste**.

3 Right-click the new transaction and select **Properties**. Change the name of the transaction and make any other necessary changes.

Nesting Transactions

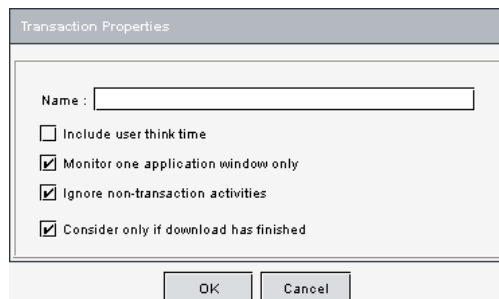You nest transactions by creating a transaction inside a parent transaction.

To nest transactions:

In the monitor pane, select a transaction and click the **New transaction** button. Enter the details in the Transaction Properties dialog box, and click **OK**. Repeat the procedure for other transactions that are to be part of the parent transaction.

Examples of 'Ignore non-transaction activities'

This section includes examples of **Ignore non-transaction activities**.

You set transaction activities in the Transaction Properties dialog box (for details, see "Defining Transactions" on page 12):

Example 1: A transaction includes the following user actions: log on, log off.

➤ The user performs the tasks **log on** > **log off**.

➤ The user performs the tasks **log on** > **compose e-mail** > **send e-mail** > **log off**.

Check box selected:

In both cases, Client Monitor monitors the browser activity and reports the data to Mercury Business Availability Center.

Check box cleared:

Client Monitor monitors both cases and reports the first case only (**log on** > **log off**) to Mercury Business Availability Center.

Example 2: A transaction includes the following user actions: display scheduler page, search for engineer, dispatch engineer.

Check box selected:

➤ The user performs the tasks **display scheduler page** > **search for engineer**.

Client Monitor starts monitoring the transaction.

➤ The user performs the task **display scheduler page** again.

Client Monitor starts monitoring the transaction again and saves the information about the previous transaction.

➤ The user performs the task **dispatch engineer**.

Client Monitor finishes monitoring the first transaction and reports the data to Mercury Business Availability Center.

Check box cleared:

➤ The user performs the tasks **display scheduler page** > **search for engineer**.

Client Monitor starts monitoring the transaction.

➤ The user performs the task **display scheduler page** again.

Client Monitor stops monitoring the transaction and begins to monitor the transaction anew.

4

Post Data and Wildcard Expressions

This chapter explains about post data and wildcard expressions.

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Post Data

Post data is the extension of the HTTP request, and contains user-specific information, such as a name or password. Although this is not always displayed by the browser, Client Monitor can detect it. If you enter post data, the monitoring trigger is the URL and the post data.

You enter post data in the User Action Information window, while defining a script. For details on this window, see "Adding User Actions to a Transaction" on page 15.

The following code is an example of post data: **user=naomi**.

Important: If there is no post data, leave this box empty. If you enter anything in this box, when there is no post data, Client Monitor does not identify the URL as one that must be reported.

By default, the maximum length of the post data string is set at 250 characters. You can increase the maximum length but note that performance may be affected. For a script that enables you to change the maximum length, contact Mercury Customer Support.

You can use wildcard expressions in the post data information. For example, if a user name is required to access a certain page, and you want to monitor all users who are accessing this page, you could build the post data and replace the user name with an asterisk, as follows: **user=***

To replace part of the post data, place asterisks before and after the parameter to be changed. ***user=naomi*** means that Client Monitor should accept any post data, but should only accept **naomi** as the user name.

If you are replacing a parameter's value with a wildcard, there is no need to add a second asterisk at the end of the post data. For example, enter ***user=***, and not ***user=****.

For a summary of wildcard expressions, see the next section.

Wildcard Expressions

You can use the following wildcard expressions when defining a Web page. (Characters are not case sensitive.)

➤ **?** represents the single repetition of any character, including zero repetitions:

qwe? matches **qweQ** and **qwe** but not **qweQQ**

➤ ***** represents the repetition of a character any number of times, including zero repetitions:

qwe* matches **qweQ**, and **qwerty**, but not **qw123**

Note: To escape a wildcard expression, enter a backslash (\) before the expression. For example, **12*34** finds **12abc34**. **12*34** finds **12*45** but not **12abc34**.

To enter a literal backslash, enter \. For example, **12\34** finds **12\34** but not **124**.

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