



Polycom[®] XML Tracer User Guide

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Overview

The Polycom XML Tracer application enables programmers and testers to view the XML communication between a client application and an MCU. The Tracer lists XML transactions as they occur, and enables you to display the contents of the XML request and corresponding response. Multiple MCUs can be traced simultaneously, each in its own window. The Tracer can be used with MCUs of both the MGC and RMX families.

The Tracer provides a multitude of useful features, such as enabling you to save the contents of the Tracer window to a file for future use, to search for a specified string, and to copy element names, paths, and values to the Clipboard.

The Tracer has a filtering mechanism which enables you to specify which schemas and which actions you want to trace.

The XML Tracer operates as a stand-alone executable file, enabling you to trace multiple MCUs simultaneously. Additionally, the XML tracer is included as a support tool in the RMX MCU to trace the XML transactions for that specific MCU.

Using the XML Tracer Executable

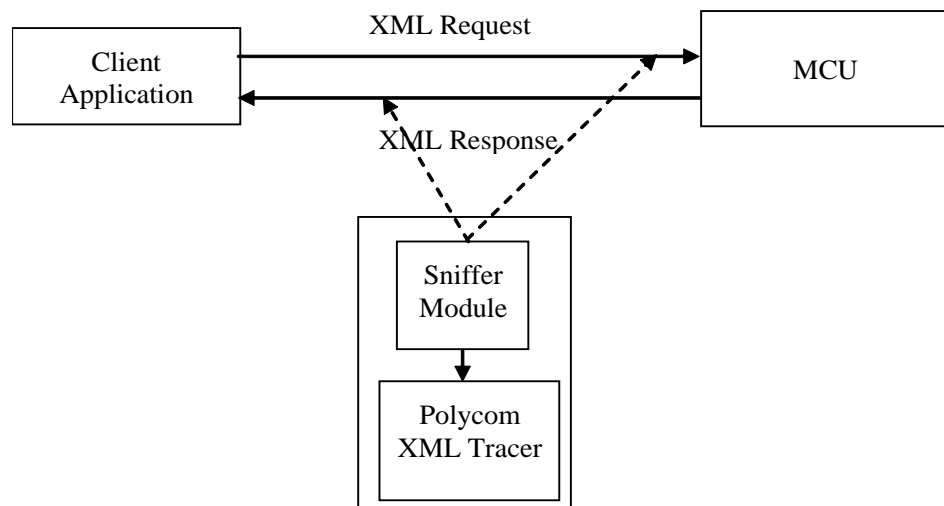
This section describes how to use the XML Tracer using the executable file to view XML transactions in multiple MCUs.

Tracing Methods

The Polycom XML Tracer can operate in two modes: Sniffer mode and Proxy mode. The two modes present identical user interfaces and can be used simultaneously. The usual operating mode is Sniffer mode. However, for MGC applications, if the client and server applications are running on the same machine, such as when using the MGC simulator, Proxy mode must be used.

Sniffer Mode

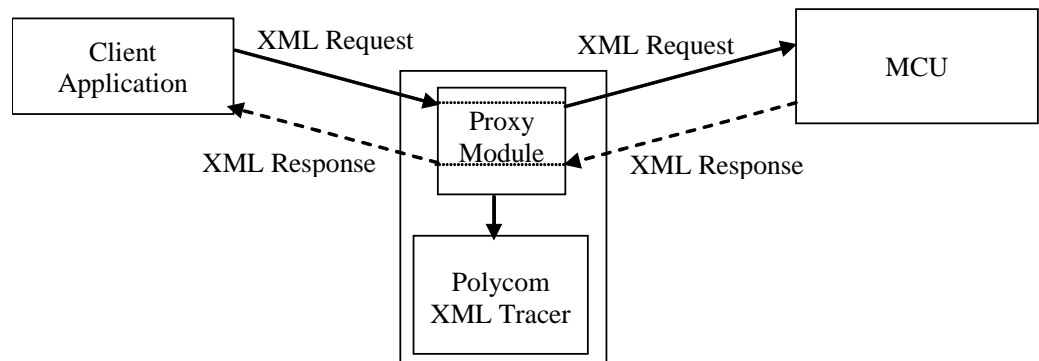
The Tracer has a sniffing module that sniffs the network package which is transported through the network card.



Proxy Mode

Note Proxy mode is only applicable when using the MGC simulator.

The client application uses the Tracer as a proxy. The XML request flows through the Tracer to the MCU, and the response flows through the Tracer to the client application.



Starting the XML Tracer

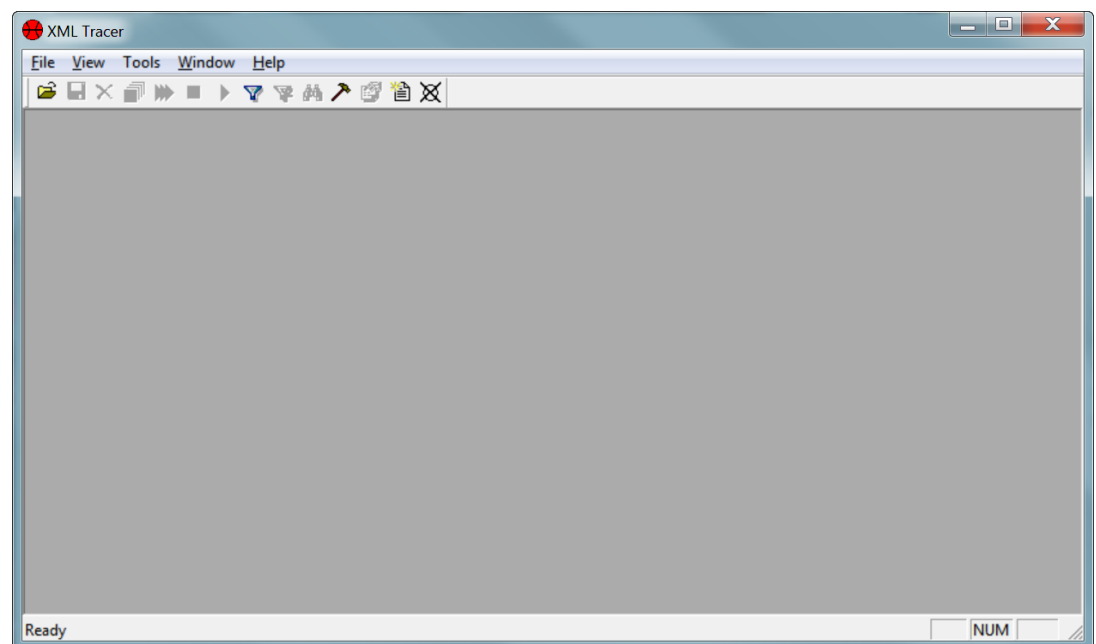
The Tracer application (**XmlTracer.exe**) is placed in the MGC Manager root directory, as part of the MGC Manager installation, and is also supplied in the RMX API kit.

Note Before running the Tracer for the first time, you must run the WinPcap_4_1_2.exe application, which is supplied in the MGC Manager root directory and in the RMX API kit.

To start the XML Tracer using the executable file:

>> From the **Tracer** folder in the API SDK kit, double-click the **XmlTracer** application.

The XML Tracer window appears.



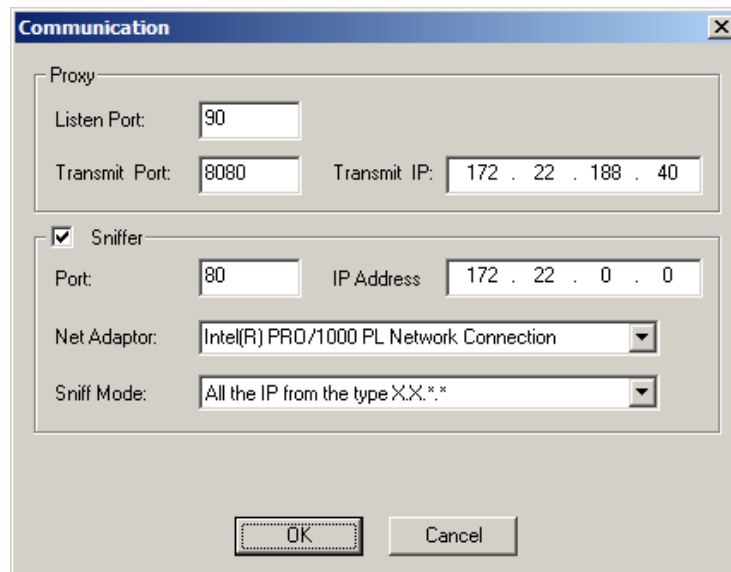
Setting up Communication Between the Tracer and the MCU

Configuring the Tracer

To configure the Tracer:

1. On the Tools menu, click **Communication**.

The *Communication* dialog box opens.



2. To configure the Tracer to work in Proxy mode, enter the following parameters:

Note: Proxy mode is always used when working with MCUs of the MGC family, with the exception of the MGC Simulator. Proxy mode can also be used when working with MCUs of the RMX family.

Option	Description
<i>Listen Port</i>	The listen port number, that is, the MCU proxy port.
<i>Transmit Port</i>	The port the MCU is listening to.
<i>Transmit IP</i>	The IP of the MCU.

3. To configure the Tracer to work in Sniffer mode, select the **Sniffer** check box and enter the following parameters:

Option	Description
Port	The port number.
<i>IP Address</i>	The IP address to be sniffed.
<i>Net Adaptor</i>	The network adapter according to your network hardware configuration.

Option	Description
<i>Sniff Mode</i>	<p>Select one of the following values to indicate whether one or multiple IP addresses are to be sniffed and traced:</p> <ul style="list-style-type: none"> • All the IP from the type X.X.*.* – to sniff all IP addresses with the same two initial components as the IP address specified in the IP Address field • Sniff a specific IP address – to sniff only the IP address specified in the IP Address field

Note When you only want to work in Sniffer mode, type zeros in each of the Proxy mode fields.

4. Click **OK**.

Configuring the MGC Manager to Work with the Tracer in Proxy Mode

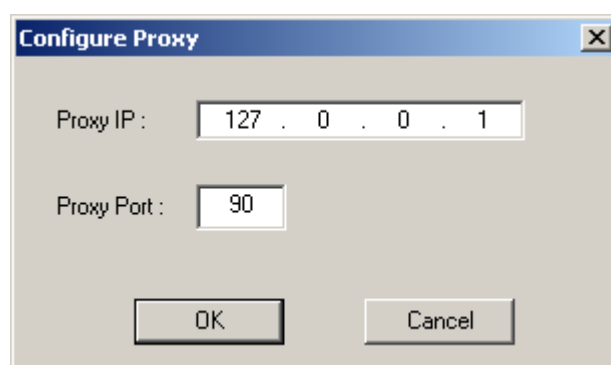
If you want to trace the MGC Manager in Proxy mode, you must configure the MGC Manager as described in this section. If you want to trace in Sniffer mode, no configuration of the MGC Manager is necessary.

Note You can only trace the MGC Manager in Proxy mode when the MGC Manager is running in simulation mode. To run the MGC Manager in simulation mode, add "-s" to the target field in the MGC Manager application shortcut.
(For example, "C:\Program Files\ MGC Manager Ver 8.0\OperWS.exe" -s)

To configure the MGC Manager to work with the Tracer in Proxy mode:

1. In the main MGC Manager window, select the **Configure Proxy Settings** option from the *Options* menu.

The *Configure Proxy* dialog box opens.

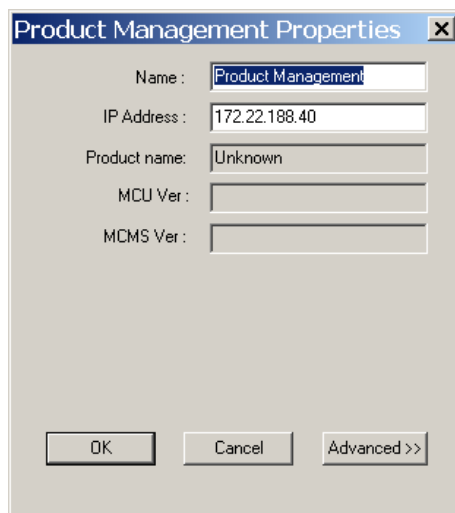


2. Enter the following parameters:

Option	Description
<i>Proxy IP</i>	The Proxy IP.
<i>Proxy Port</i>	The Proxy port.

3. Click **OK**.
4. Right-click on the MCU to be traced. (If the MCU is currently connected, disconnect before right-clicking).
5. Click **Properties**.

The *Properties* dialog box opens.

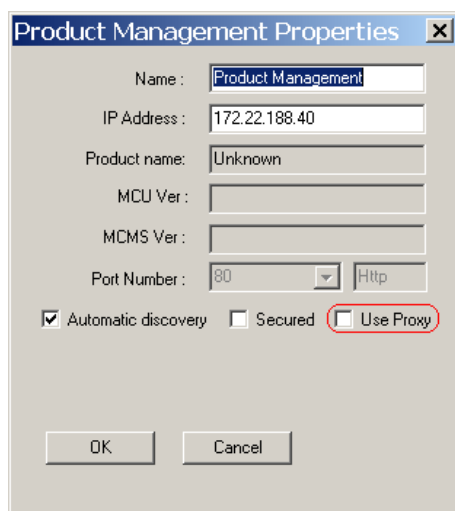


The dialog box titled "Product Management Properties" contains the following fields and buttons:

- Name:
- IP Address:
- Product name:
- MCU Ver:
- MCMS Ver:
- Buttons: OK, Cancel, Advanced >>

6. Click the **Advanced** button.

Additional fields appear in the *Properties* dialog box.

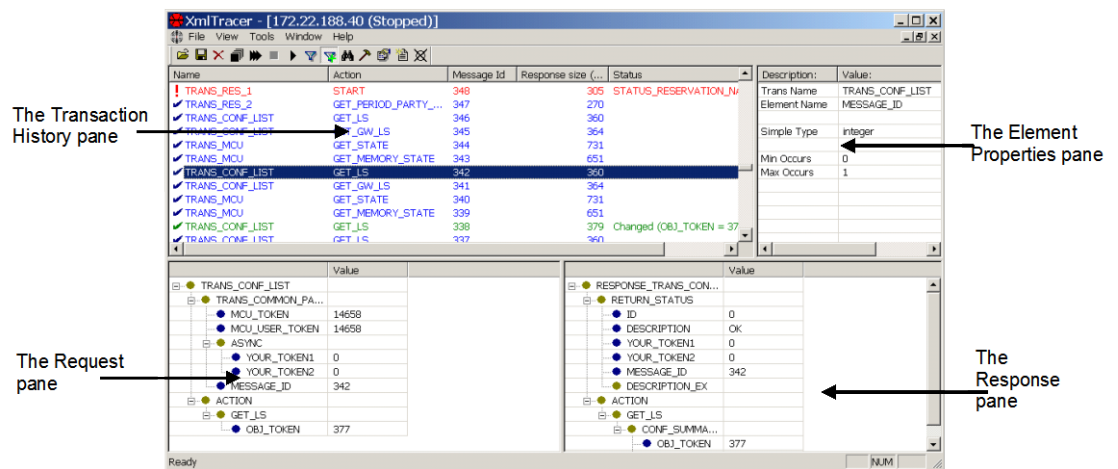


The dialog box titled "Product Management Properties" now includes additional fields and options:

- Name:
- IP Address:
- Product name:
- MCU Ver:
- MCMS Ver:
- Port Number:
- Checkboxes: ☒ Automatic discovery, ☐ Secured, ☐ Use Proxy (highlighted with a red circle)
- Buttons: OK, Cancel

7. Select the **Use Proxy** check box and then click **OK**.

The Tracer Window



The Tracer window is divided into the following panes:

- The Transaction History pane
- The Element Properties pane (this pane may be hidden depending on the configuration options chosen)
- The Request pane
- The Response pane

When you start the Tracer application, the *Transaction History* pane lists the transactions that have occurred, and the other panes are empty.

The Transaction History Pane

The records in the *Transaction History* pane are color coded as follows:

Color	Description
Blue	A request for which the response includes a non-error status.
Red	A request for which the response includes an error status.
Green	A Get request in which the response includes changed data.

The following information is displayed in the *Transaction History* pane:

Note The order of the columns can be changed using drag and drop.

Field	Description
Name	The name of the schema to which the transaction belongs.
Action	The action that was requested.
Message ID	The transaction ID. This value is used to identify the request to which a response belongs.

Field	Description
Response Size	The size of the response in bytes.
	Note If the response is transferred in zipped format, then the original size of the response will be displayed in brackets after the zipped size.
Status	If the transaction failed, this column contains the error status. If a Get transaction contains changed data, this column contains the OBJECT_ID.

The Request and Response Panes

When you select a transaction in the Transaction History pane, the request XML is displayed in the Request pane (the lower left pane) and the response XML is displayed in the Response pane (the lower right pane). For recent transactions for which the response has not yet been received, the Request pane will be empty.

The Request and Response panes can display the XML either in tree format or in HTML format, as shown below. The format of the display depends on the setting of the Use HTML Viewer as XML Viewer option in the Options dialog box. For instructions refer to "

Displaying the Request and Response XML for a Transaction" on page 17.

Tree Format

	Value
TRANS_MCU	
TRANS_COMMON_PARAMS	
MCU_TOKEN	1620
MCU_USER_TOKEN	1620
ASYNC	
YOUR_TOKEN1	0
YOUR_TOKEN2	0
MESSAGE_ID	1211
ACTION	
GET_STATE	

HTML Format

```
- <TRANS_MCU>
- <TRANS_COMMON_PARAMS>
  <MCU_TOKEN>1616</MCU_TOKEN>
  <MCU_USER_TOKEN>1616</MCU_USER_TOKEN>
- <ASYNC>
  <YOUR_TOKEN1>0</YOUR_TOKEN1>
  <YOUR_TOKEN2>0</YOUR_TOKEN2>
</ASYNC>
<MESSAGE_ID>419</MESSAGE_ID>
</TRANS_COMMON_PARAMS>
- <ACTION>
  <GET_STATE />
</ACTION>
</TRANS_MCU>
```

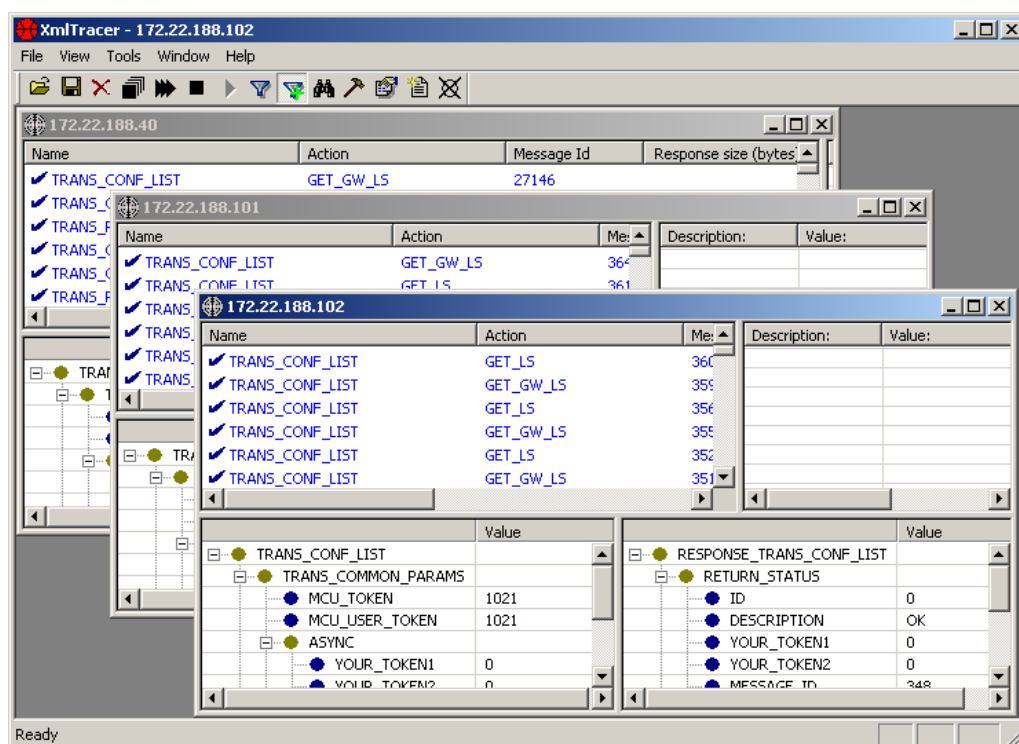
The Element Properties Pane

The *Element Properties* pane is only displayed if the **View Schemas Description** option in the *Options* dialog box is selected. For instructions refer to "Displaying and Hiding Element Properties" on page 18.

The *Element Properties* pane displays the properties of the element selected in the *Request* or *Response* pane, for example, the element type and the minimum and maximum occurrences of the element.















Tracing Multiple API Sessions Simultaneously

You can trace multiple API sessions at the same time. Each session is traced in a separate window, as shown below. When the Tracer is running it automatically opens a window whenever you connect to an MCU that it is configured to trace. The title bar of each window contains the IP address of the MCU which is being traced in the window. Most operations that you can perform are applied to the connection whose window is selected at the time.



The Tracer Toolbar

The toolbar provides quick access to the following operations:

Button	Description
	Opens a saved Transaction History file.
	Saves the contents of the selected <i>Transaction History</i> pane in a file.
	Clears the <i>Transaction History</i> pane for the selected connection.
	Stops tracing all connections.
	Starts tracing all connections.
	Stops tracing the selected connection.
	Starts tracing the selected connection.
	Configures the filter.
	Applies or removes the filter.
	Finds specified text.
	Opens the <i>Options</i> dialog box.
	Opens the <i>Statistics</i> dialog box.
	Allows you to enter an XML command and send it to an MCU.
	For internal use only.

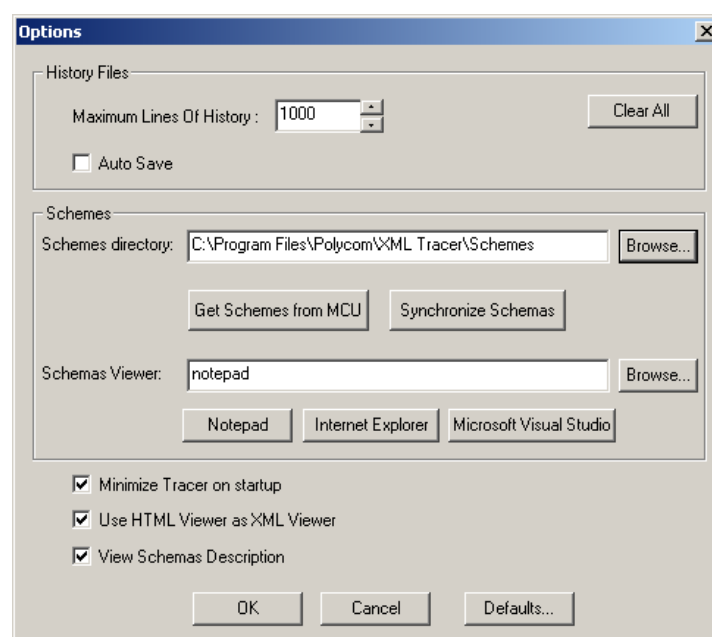
The Options Dialog Box

The *Options* dialog box enables you to configure the Tracer, as well as to retrieve schema copies from MCUs of the MGC family, in order to initialize the filter.

To open the *Options* dialog box:

- Click the **Options**  button.

The *Options* dialog box opens.



The *Options* dialog box contains the following options and functions:

Option	Description
<i>Maximum Lines of History</i>	The maximum number of lines that can be displayed in the <i>Transaction History</i> pane before it starts to overwrite entries.
<i>Clear All</i>	Clears the contents of the <i>Transaction History</i> pane in all open Tracer windows.
<i>Auto Save</i>	Saves the contents of the <i>Transaction History</i> pane to a file before entries are overwritten. The files will be created in the history sub-directory of the Tracer home directory.
<i>Schemas Directory</i>	The schemas directory to be used for tracer operations such as initializing the filter and viewing the schema to which a transaction belongs. To change the directory, either enter the full path to the directory, or use the Browse button to locate the required directory.

Option	Description
<i>Get Schemas</i>	<p>Copies the schemas from the MCU you specify to the schemas directory.</p> <hr/> <p>Note This function can only be used with MCUs of the MGC family. When working with MCUs of the RMX family, you must copy the schemas manually from the RMX API kit to the schemas directory.</p> <hr/>
<i>Synchronize Schemas</i>	Initializes the filter based on the contents of the schemas in the schemas directory.
<i>Schemas Viewer</i>	<p>The application to be used to view the schemas on which a transaction is based. The default is notepad.</p> <p>To specify a different application either select the Notepad, Internet Explorer, or Microsoft Visual Studio buttons, or use the Browse button to locate the required application.</p>
<i>Minimize Tracer on startup</i>	Select this check box to minimize the Tracer window at startup.
<i>Use HTML Viewer as XML Viewer</i>	<p>Select this check box to display XML requests and responses in HTML format.</p> <p>Clear this check box to display XML requests and responses in tree format.</p>
<i>View Schemas Description</i>	Select this check box to display a fourth pane in the Tracer window, containing the properties of the element selected in the <i>Request</i> or <i>Response</i> panes.

Setting up and Initializing a Schemas Directory

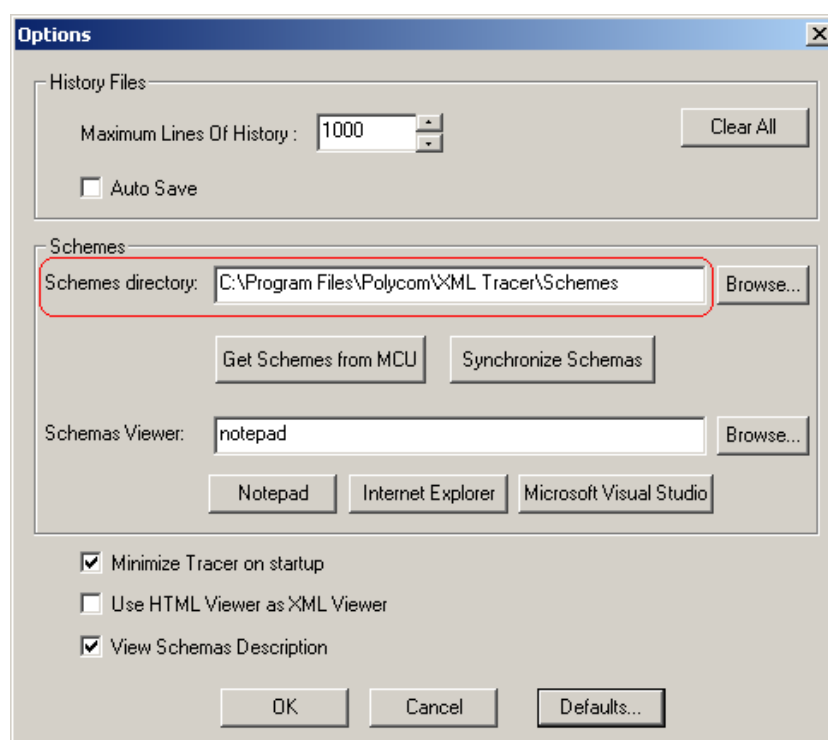
Various tracer operations require the use of a schemas directory.

The Tracer provides a function to copy the schemas from an MCU of the MGC family to the schemas directory. When working with MCUs of the RMX family, you must copy the schemas manually from the RMX API kit to the schemas directory.

To assign a schemas directory and optionally copy the schemas from an MCU to the schemas directory:

1. Click the **Options**  button.

The Options dialog box opens.



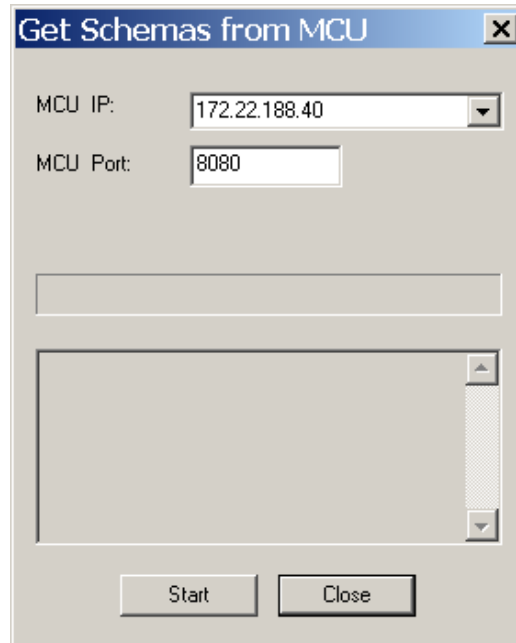
2. In the *Schemas Directory* field, enter the path to the directory to be used as the schemas directory.

3. To copy the schemas from an MCU to the schemas directory:

Note This step is only applicable to MCUs of the MGC family.

- a. Click **Get Schemas from MCU**.

The *Get Schemas from MCU* dialog box opens:



- b. Specify the MCU IP and port, and then click **Start**.

The schemas are copied from the MCU to the schemas directory you specified.

4. Click **OK** to exit from the *Options* dialog box.

Working with the Tracer Application

You can perform the following operations when working with the Tracer:

- Start, stop, or resume tracing a specific connection, or all connections.
- Display the request and response XML of a transaction.
- Display or hide element properties.
- Search for text in a selected pane.
- Copy element names, paths, or values to the Clipboard.
- Copy the complete XML request or response to the Clipboard.
- Display element values in hexadecimal format.
- View the schemas that a transaction is based on.
- Save the contents of the Transaction History pane in a file.
- View the contents of a saved Transaction History file, including the request and response XML.
- Clear the contents of the Transaction History pane.
- Trace all XML streams without analyzing requests and responses.
- Send an XML command to an MCU.
- View statistics about transactions.
- View the Tracer log.

Note You can set up a filter to specify the transactions you want to trace. For instructions see "Filtering Messages" on page 28.

Starting and Stopping Tracing

To start or stop tracing a specific connection:

1. Select the window displaying the required connection.
2. Click the **Start Tracing**  or **Stop Tracing**  button.

To start or stop tracing all connections:

- Click the **Start All Tracing**  or **Stop All Tracing**  button.

Displaying the Request and Response XML for a Transaction

The *Request* and *Response* panes can display the XML in one of two ways; in tree format or in HTML format, as shown below.

Tree Format

	Value
TRANS_MCU	
TRANS_COMMON_PARAMS	
MCU_TOKEN	1620
MCU_USER_TOKEN	1620
ASYNC	
YOUR_TOKEN1	0
YOUR_TOKEN2	0
MESSAGE_ID	1211
ACTION	
GET_STATE	

HTML Format

```
- <TRANS_MCU>
- <TRANS_COMMON_PARAMS>
  <MCU_TOKEN>1616</MCU_TOKEN>
  <MCU_USER_TOKEN>1616</MCU_USER_TOKEN>
- <ASYNC>
  <YOUR_TOKEN1>0</YOUR_TOKEN1>
  <YOUR_TOKEN2>0</YOUR_TOKEN2>
</ASYNC>
<MESSAGE_ID>419</MESSAGE_ID>
</TRANS_COMMON_PARAMS>
- <ACTION>
  <GET_STATE />
</ACTION>
</TRANS_MCU>
```

To display the request and response XML for a transaction:

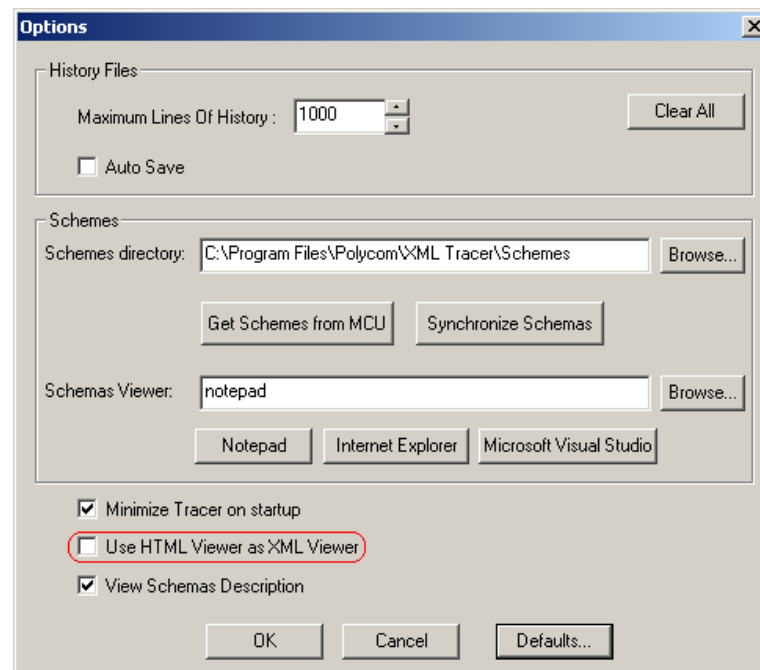
- Select the transaction in the *Transaction History* pane.

The request XML will be displayed in the *Request* pane and the response XML (if it has arrived) will be displayed in the *Response* pane.

To change the format in which the request and response XML is displayed:

- Click the **Options**  button.

The *Options* dialog box opens.



- Specify the required format as follows:

To ...	Action
View the XML in HTML format	Select the Use HTML Viewer as XML Viewer check box.
View the XML in tree format	Clear the Use HTML Viewer as XML Viewer check box.

- Click **OK**.

The request and response XML will be displayed in the requested format in all new Tracer windows that are opened.

Note The format of the request and response XML will not be changed in windows that are already open. To change the format for an open window, you must close the window and it will re-open with the requested format.

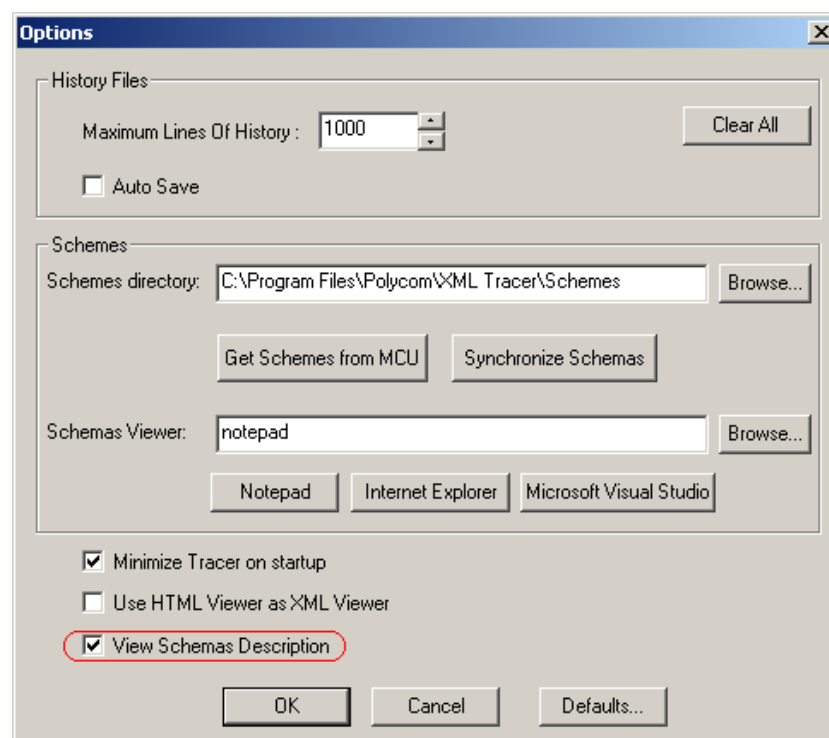
Displaying and Hiding Element Properties

The Tracer can optionally display the properties of an element selected in the *Request* or *Response* panes. The element properties, such as the element type and the minimum and maximum occurrences of the element, will be displayed in the *Element Properties* pane (the top right pane).

To display or hide the Element Properties pane:

- Click the **Options**  button.

The *Options* dialog box opens.



- Specify whether to display or hide the *Element Properties* pane as follows:

To ...	Action
Display the Element Properties pane	Select the View Schema Description check box.
Hide the Element Properties pane	Clear the View Schema Description check box.

- Click **OK**.


The *Element Properties* pane will be shown or hidden, as specified, in all new Tracer windows that are opened.

Note The change will not be applied to windows that are already open. To apply the change to an open window, you must close the window and it will re-open with the change applied.

Searching for Text

The Tracer enables you to search for a message ID in the *Transaction History* pane, and to search for any string in the *Request* and *Response* panes.

To locate the Transaction with a specified Message ID:

- Click anywhere in the *Transaction History* pane, and then press <Ctrl> + <F> or click .


The *Find* dialog box opens.



- Enter the Message ID to be located and then click **OK**.

The *Transaction History* pane scrolls to display the transaction with the specified Message ID.

To locate text in the Request or Response panes:

- Click anywhere in the *Request* or *Response* pane, and then press <Ctrl> + <F> or click .

The *Find* dialog box opens.



- Enter the string to be located and then click **OK**.

The *Request* or *Response* pane scrolls to display the specified string.

Copying Element Names, Paths or Values, or the Complete XML Request or Response to the Clipboard

When viewing XML requests and responses in tree format, you can copy the complete XML request or response, or individual element names, paths, or values to the Clipboard.

The following copy options are available from the shortcut menu displayed when you right-click an element in the *Request* or *Response* panes:

Menu Option	Description
<i>Copy Element Name</i>	Copies the element name to the Clipboard.
<i>Copy Element Value</i>	Copies the element value to the Clipboard.
<i>Copy Full Path</i>	Copies the full path of the element to the Clipboard.
<i>Copy all XML to Clipboard</i>	Copies the complete request or response XML to the Clipboard.

Displaying Element Values in Hexadecimal Format

When viewing XML requests and responses in tree format, you can choose to view numeric element values in hexadecimal format. The numeric element values are displayed by default in decimal format.

To display numeric element values in hexadecimal format:

- Right-click in the *Request* or *Response* pane, and then click **Hexadecimal Display**.

The values in the *Request* or *Response* pane will be displayed in hexadecimal format and a check mark is placed next to **Hexadecimal Display** in the right-click menu.

Note If you close the window, then when the window re-opens, the display of numeric element values will revert to decimal format.

To display numeric element values in decimal format:

- Right-click in the *Request* or *Response* pane, and then click **Hexadecimal Display**.

The values in the *Request* or *Response* pane will be displayed in decimal format and the check mark next to **Hexadecimal Display** in the right-click menu is removed.

Viewing the Schemas on which a Transaction is Based

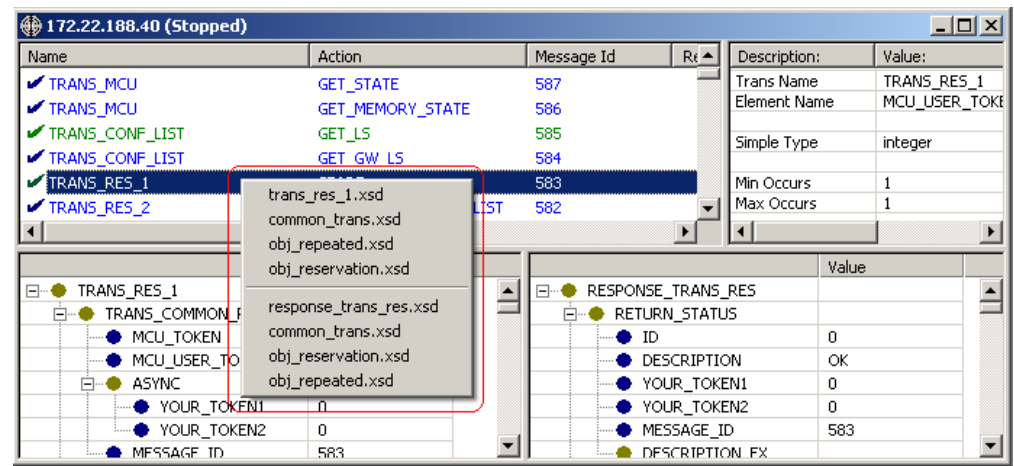
Note Before you can view the schemas, you must set up and initialize a schemas directory. For instructions see "Setting up and Initializing a Schemas Directory" on page 14.

The Tracer enables you to view a list of the schemas on which a transaction is based, (the schema the transaction belongs to, and all schemas included in this schema) and to view the contents of these schemas. By default, schemas are displayed using Notepad. You can use a different application to view the schemas by changing the value of the **Schemas Viewer** field in the *Options* dialog box. For instructions, see "The Options Dialog Box" on page 12.

To list the schemas on which a transaction is based, and display the contents of a schema:

1. In the *Transaction History* pane, right-click on the transaction for which you want to view a schema.

A shortcut menu appears listing the schemas on which the transaction is based. The request schemas are listed above the separator, and the response schemas are listed below the separator.



2. Click on the schema you want to view.

The schema will be displayed Notepad or in which ever application was specified in the **Schemas Viewer** field in the *Options* dialog box.

Saving and Retrieving the Contents of the Transaction History Pane

The number of records that can be contained in the *Transaction History* pane is determined by the value specified for the **Maximum Lines of History** option in the *Options* dialog box. Once this number of lines is reached, records will start to be overwritten.

The contents of the *Transaction History* pane can be saved to a file in one of the following ways:

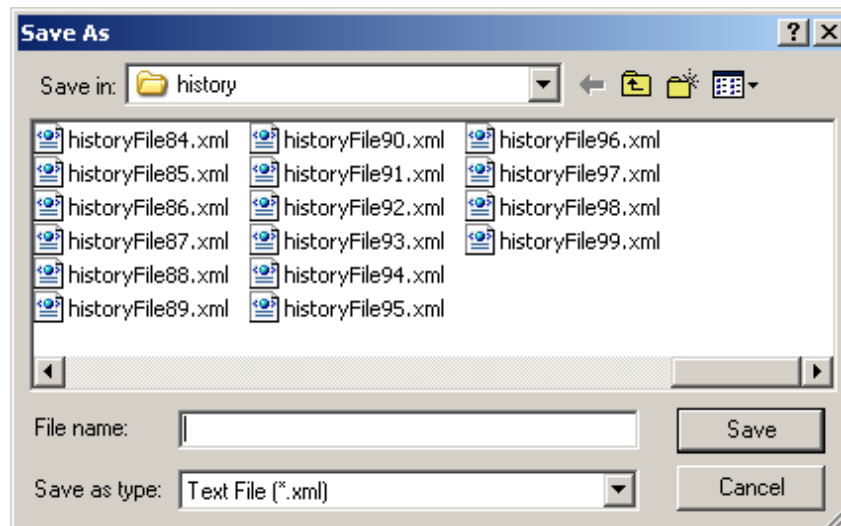
- At any time request to save the current contents of the *Transaction History* pane in a file.
- Configure the Tracer to write the contents of the *Transaction History* pane to a file automatically before they are overwritten.

If a saved file is opened using the Tracer application it will display all the information in the *Transaction History*, *Request*, and *Response* panes.

To save the current contents of the Transaction History pane:

1. Click the **Save**  button.

The *Save As* dialog box opens.



2. Navigate to the directory in which you want to save the Transaction file and enter a name for the file.
3. Click **Save**.

The contents of the *Transaction History* pane will be saved in the specified file.

To automatically save the contents of the Transaction History pane before they are overwritten:

1. Click the **Options**  button.

The *Options* dialog box opens.

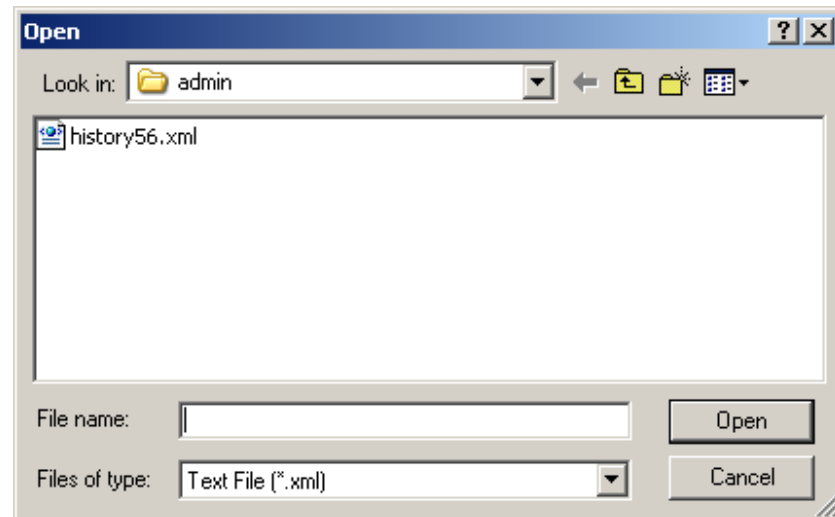
2. Select the **Auto Save** check box.

The contents of the *Transaction History* pane will be automatically saved to files before any overwriting occurs. The file names will be generated by the system, for example **historyFile12**. The files will be saved in the **history** sub-directory of the Tracer home directory.

To display the contents of a saved Transaction History file:

1. Click the Open  button.

The *Open* dialog box opens.



2. Navigate to the directory containing the file you want to open.
3. Select the file and then click **Open**.

A new window will open in the Tracer containing the contents of the Transaction History file.

Clearing the Contents of the Transaction History Pane

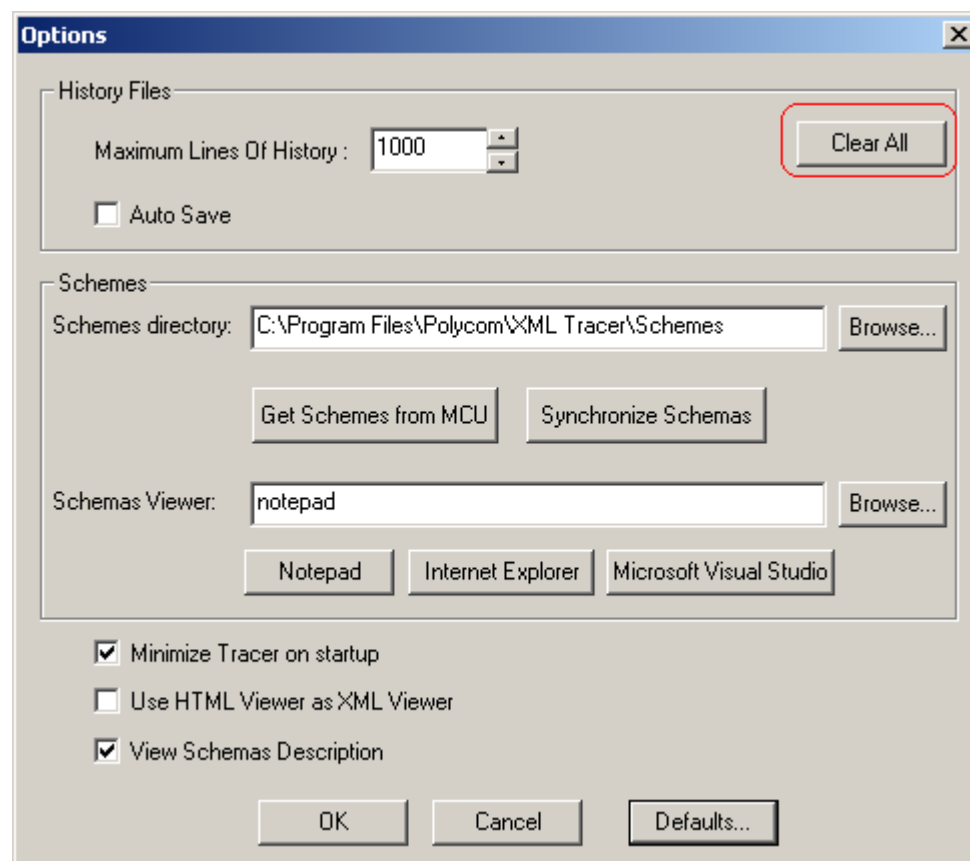
To clear the contents of the currently selected Transaction History pane:

- Click the **Clear History**  button.

To clear the contents of the Transaction History pane in all open tracer windows:

1. Click the **Options**  button.

The *Options* dialog box opens.



2. Click the **Clear All** button.
3. Click **OK** to exit from the *Options* dialog box.

Tracing All XML Streams Without Analyzing Requests and Responses

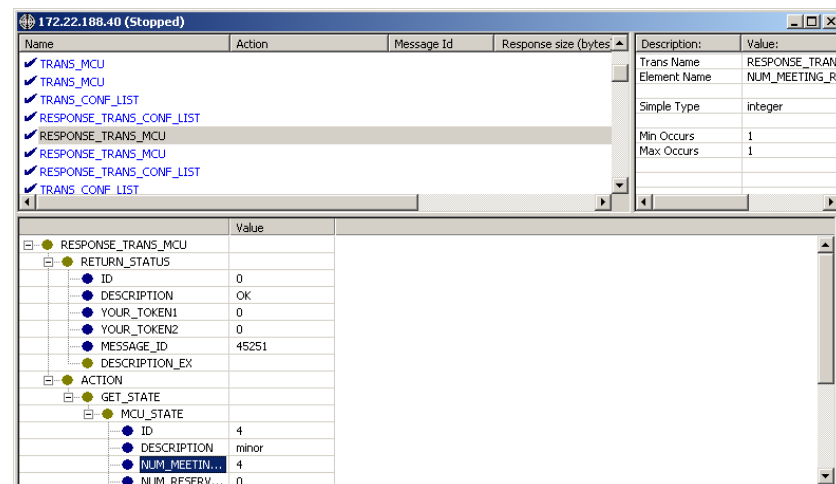
You can request that the Tracer trace all XML streams without the Tracer analyzing the transactions to identify requests and responses. By default the Tracer analyzes the transactions to identify requests and responses.

To trace all XML streams:

- On the *Tools* menu, click **Trace All XMLs**.

The *Transaction History* pane will display a list of transactions without details such as the Message ID. There will only be one lower pane and this will display the contents of the selected transaction. You can identify the response that belongs to a specific request by searching for the same Message ID.

A check mark is placed next to **Trace All XMLs** in the *Tools* menu.



To revert to displaying XML requests and responses

- On the *Tools* menu, click **Trace All XMLs**.

The *Transaction History* pane will display a list of transactions with details such as the Message ID, and the window will contain *Request* and *Response* panes. The check mark next to **Trace All XMLs** in the *Tools* menu is removed.

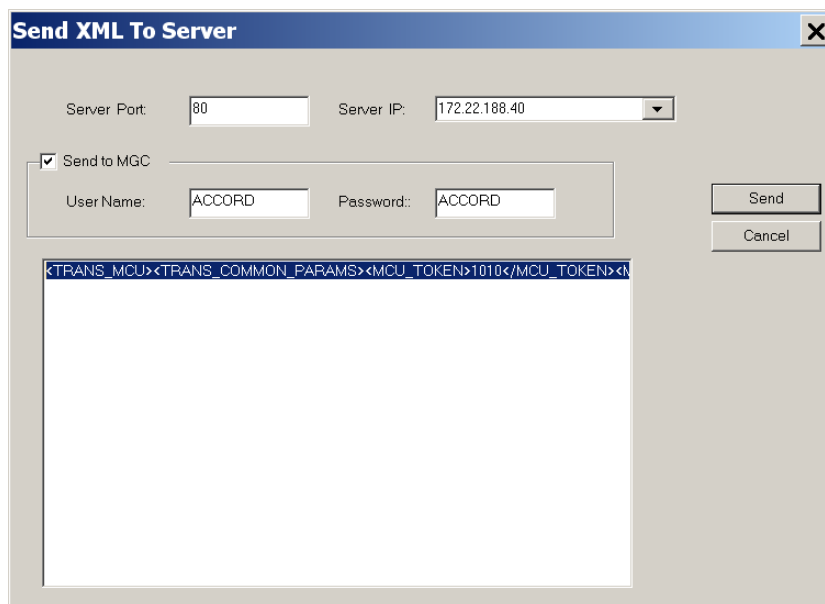
Sending an XML Command to an MCU

The Tracer application allows you to enter an XML command and send it to a specified MCU.

To send an XML command to an MCU:

1. Click the **Send an XML to server**  button.

The *Send XML to Server* dialog box opens.



The **Send XML To Server** dialog box contains the following fields and controls:

- Server Port:** A text box containing the value `80`.
- Server IP:** A dropdown menu showing the value `172.22.188.40`.
- Send to MGC:** A checked checkbox.
- User Name:** A text box containing the value `ACCORD`.
- Password:** A text box containing the value `ACCORD`.
- Send:** A button to submit the command.
- Cancel:** A button to close the dialog.
- XML Command:** A large text area containing the XML command: `<TRANS_MCU><TRANS_COMMON_PARAMS><MCU_TOKEN>1010</MCU_TOKEN></`

2. Fill in the Server Port, the Server ID and the XML command to be sent to the MCU.
3. If you want to log in to the MCU automatically before sending the command, and log out again automatically afterwards, then select the **Send to MGC** check box and specify the User Name and Password to log in with.
4. Click **Send**.


If a tracer window is already open for the connection, the sent transaction will be listed in this window, and the request and response details can be viewed in the lower panes.

If no window is open for the connection, a new tracer window will be opened, and the sent transaction will be listed in this window, together with the login and logout transactions.

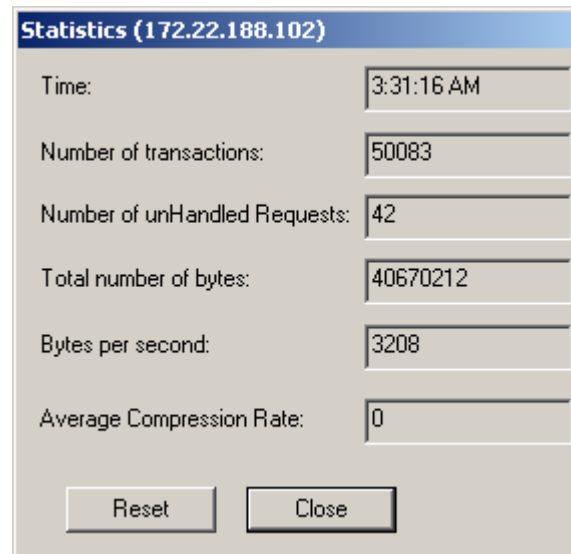
Viewing Transaction Statistics

You can display statistics for a connection, such as the number of transactions that have passed since the connection was opened.

To view the statistics for a connection:

- Select the window displaying the required connection, and then click the **Statistics**  button.

The *Statistics* dialog box opens.



The *Statistics* dialog box displays the following information for the connection 172.22.188.102:

Field	Value
Time:	3:31:16 AM
Number of transactions:	50083
Number of unHandled Requests:	42
Total number of bytes:	40670212
Bytes per second:	3208
Average Compression Rate:	0

Buttons: Reset, Close

Viewing the Tracer Log

The Tracer log file logs errors that occur during the tracing.

To display the Tracer log file:

- On the *Tools* menu, click **Open Log File**.

The Tracer log file is opened using the Notepad application.

Filtering Messages

The Tracer provides a filtering mechanism that enables you to specify which transactions you want to trace. You can specify that all transactions from specific schemas should be traced, or specify the individual actions that should be traced.

Once you have set up the filter, you can specify whether to apply the filter, or to remove it and view all transactions.

When you set up a filter, it is associated with the currently selected window. You can select another window and set up a different filter for it.

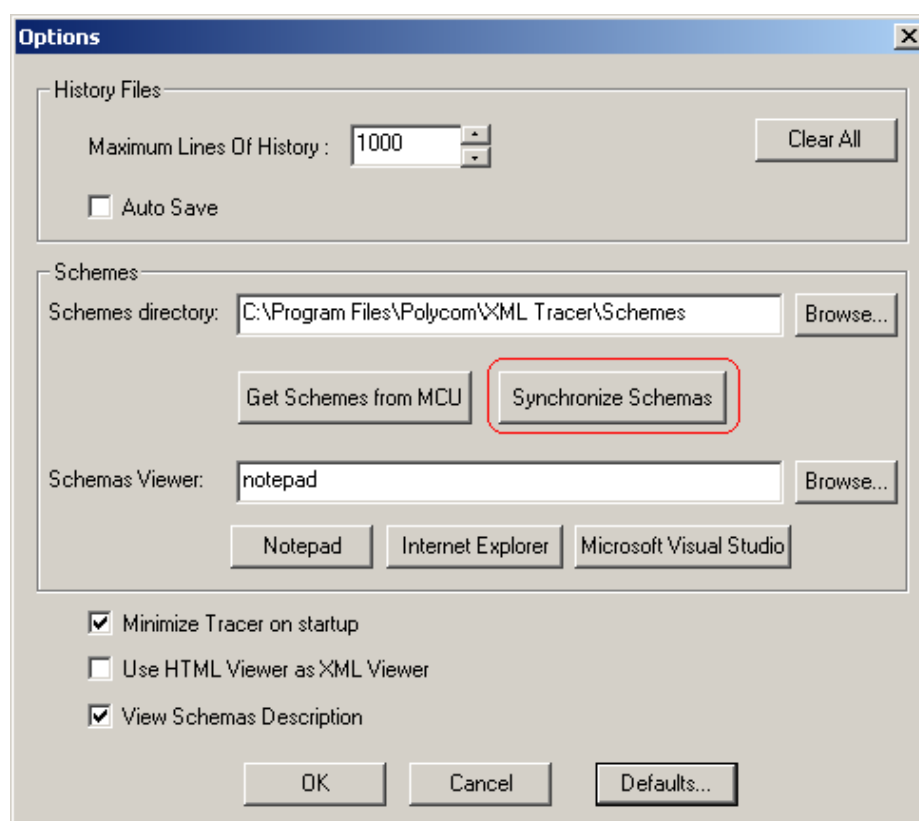
When you close the Tracer it will save the filter associated with last window to be closed. When you next run the Tracer it will open with the saved filter.

Before you can configure the filter for the first time, you must set up a schemas directory, and initialize the filter with a list of schemas. For instructions on setting up a schemas directory, see "Setting up and Initializing a Schemas Directory" on page 14.

To initialize the filter:

1. Click the **Options**  button.

The *Options* dialog box opens.




2. Click the **Synchronize Schemas** button.

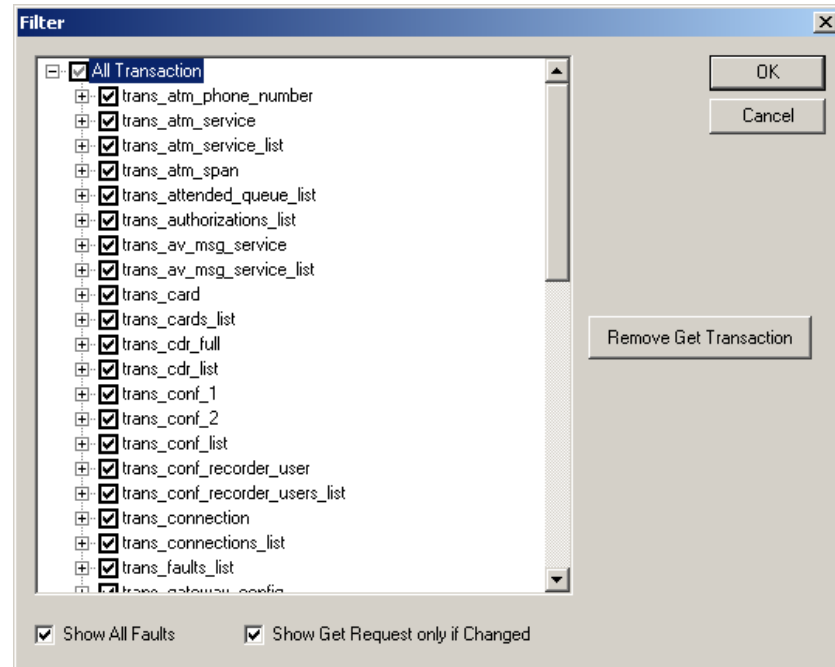
When the synchronization process is complete, a confirmation message is displayed.

3. Click **OK**.
4. Click **OK** to exit from the *Options* dialog box.

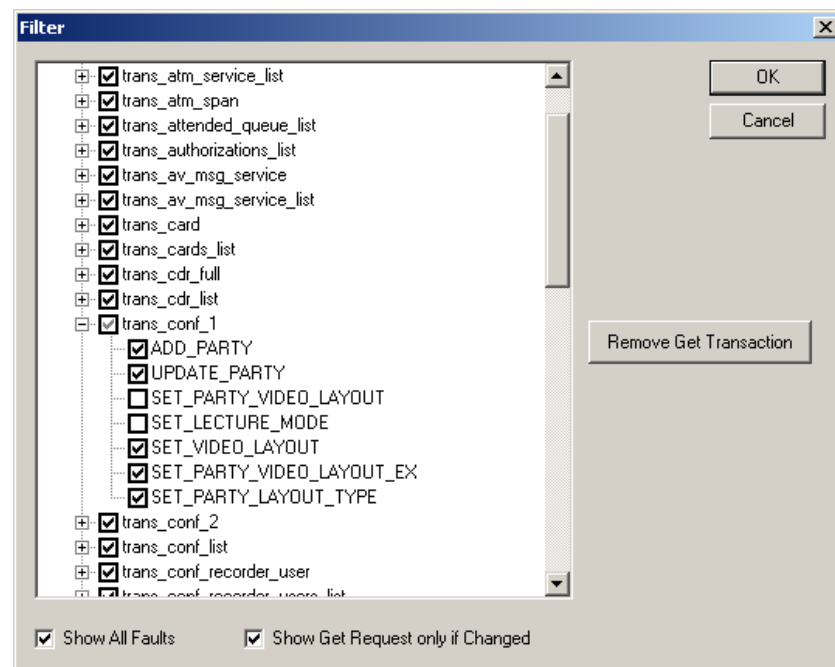
To configure the filter:

1. Click the **Config the Filter**  button.

The *Filter* dialog box opens, displaying a list of schemas.



2. To list the actions in a schema, click the [+] icon next to the schema name. Initially there is a check box next to each schema and each action.




3. Select the check boxes next to the schemas and actions you want to log, and clear the check boxes next to the schemas and actions you want to exclude.

Selecting the check box next to a schema results in all the actions in that schema being selected. Clearing the check box next to a schema results in all the actions in that schema being excluded from the log.

4. To request that all faults should be logged, irrespective of which schema or action they occur in, select the **Show All Faults** check box.
5. To log Get requests only if data has changed since the last Get request, select the **Show Get Request only if Changed** check box.
6. To exclude all Get transactions, click the **Remove Get Transaction** button.
7. Click **OK** to set the filter.

To turn the filter on or off:

- Click the **Apply/Remove the Filter**  button, or on the *Tools* menu, click **Apply Filter** or **Remove Filter** as required.

Using the MCU XML Tracer

This section describes how to use the XML Tracer that is included in the RMX MCU support tools.

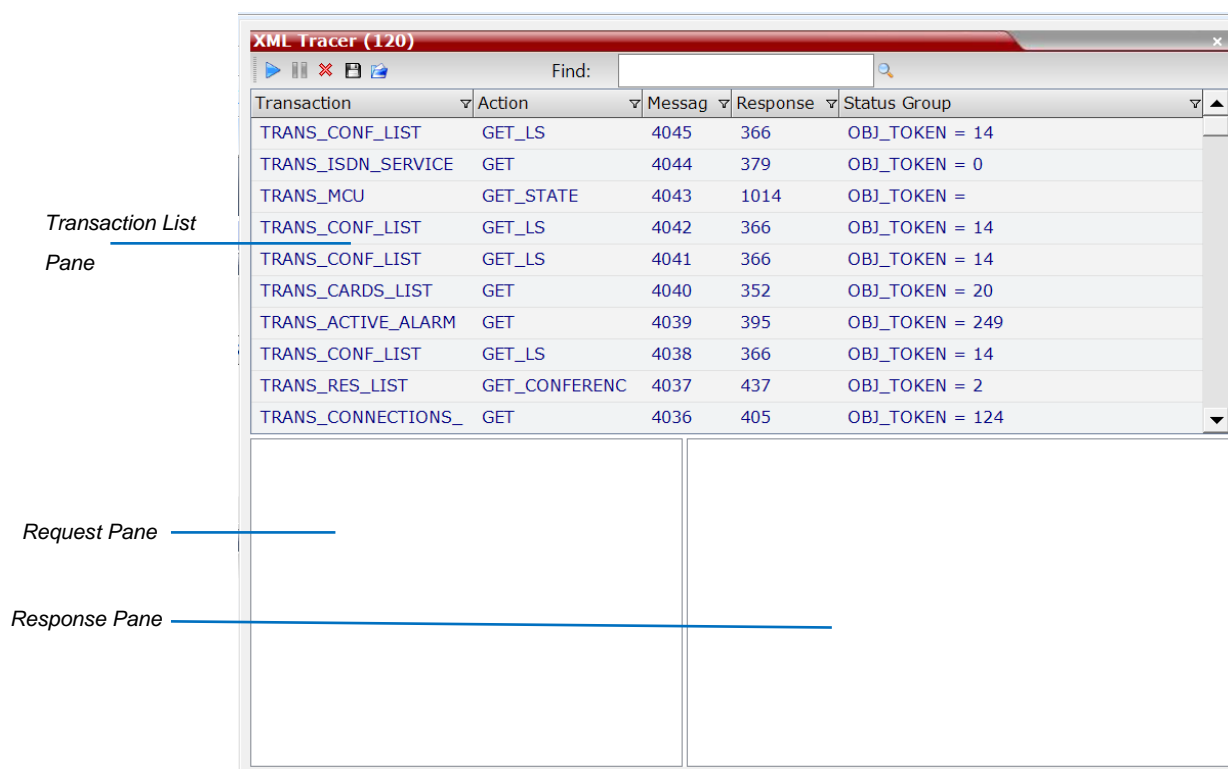
Note This option is only available for SUPPORT users. To use the XML Tracer, you must create a user in the RMX with the user name SUPPORT and connect to the RMX using the SUPPORT user. The XML Tracer option is displayed in the Tools menu.

Starting the XML Tracer

To start the XML Tracer through the MCU:

>> Click **Administration > Tools > XML Tracer**.

The XML Tracer window appears.



When you start the XML Tracer, the *Transaction List* pane lists the transactions that have occurred, and the other panes are empty.

The records in the *Transaction List* pane are color coded as follows:

Color	Description
Blue	A request for which the response includes a non-error status.
Red	A request for which the response includes an error status.
Green	A Get request in which the response includes changed data.

The following information is displayed in the *Transaction List* pane:

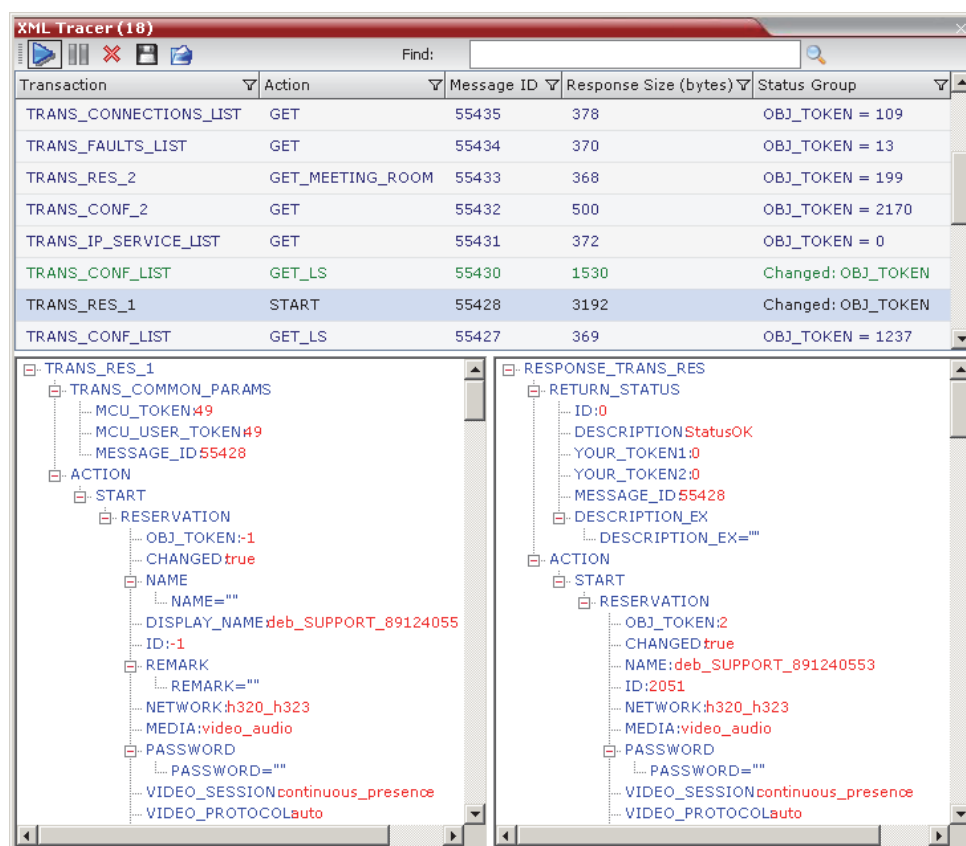
Field	Description
<i>Transaction</i>	The name of the transaction.
<i>Action</i>	The action that was requested.
<i>Message ID</i>	The transaction ID. This value is used to identify the request to which a response belongs.
<i>Response Size</i>	The size of the response in bytes.
<i>Status Group</i>	This column contains the OBJ_TOKEN.

Displaying the Request and Response XML for a Transaction

To display the request and response XML for a transaction:

>> Select the transaction in the *Transaction List* pane.

The request XML will be displayed in the *Request* pane (the lower left pane), and the response XML will be displayed in the *Response* pane (the lower right pane).



The screenshot shows the XML Tracer (18) application window. At the top is a toolbar with icons for file operations and a search bar. Below the toolbar is a table with columns: Transaction, Action, Message ID, Response Size (bytes), and Status Group. The table lists several transactions, with 'TRANS_RES_1' selected. Below the table are two panes: 'Request' (left) and 'Response' (right). The 'Request' pane shows the XML structure for the selected transaction, including 'TRANS_COMMON_PARAMS', 'ACTION', 'RESERVATION', and 'VIDEO_SESSION'. The 'Response' pane shows the XML structure for the response, including 'RETURN_STATUS', 'ACTION', 'RESERVATION', and 'VIDEO_SESSION'.


Note For recent transactions for which the response has not yet been received, the Request pane will be empty.

Pausing and Resuming Tracing, and Clearing the Contents of the Transaction List Pane

To pause tracing:

>> Click the **Pause Tracing**  button.

To resume tracing:

>> Click the **Resume Tracing**  button.

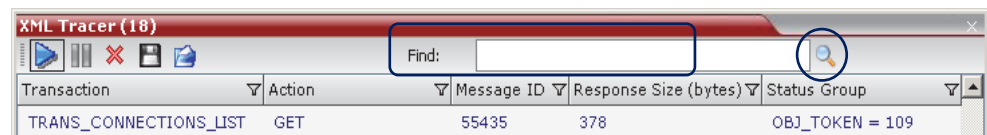
To clear the contents of the Transaction List pane:

>> Click the **Clear History**  button.

Searching for Text in the Request or Response Panes

To locate text in the Request or Response panes:

1. Select the pane in which you want to search.
2. In the Find field, enter the string to be located.



3. Click the **Find**  button.

Copying the Complete Request or Response XML or Individual Element Names or Values to the Clipboard

To copy the complete XML request or response to the Clipboard:

1. Right-click in the Request or Response pane as applicable.
2. Click *Copy All XML To Clipboard*.

The XML request or response is copied to the Clipboard.

To copy an element name or value to the Clipboard:

1. In the Request or Response pane, select the row containing the element whose name or value is to be copied
2. Right-click, and then click *Copy Element Name To Clipboard* or *Copy Element Value To Clipboard*, as applicable.

The element name or value is copied to the clipboard.

Note The name or value of the element that is highlighted when you right-click will be copied to the clipboard, not the name or value of the element that the cursor is pointing to when you right-click. Therefore, you must left-click to select the required element row before right-clicking.

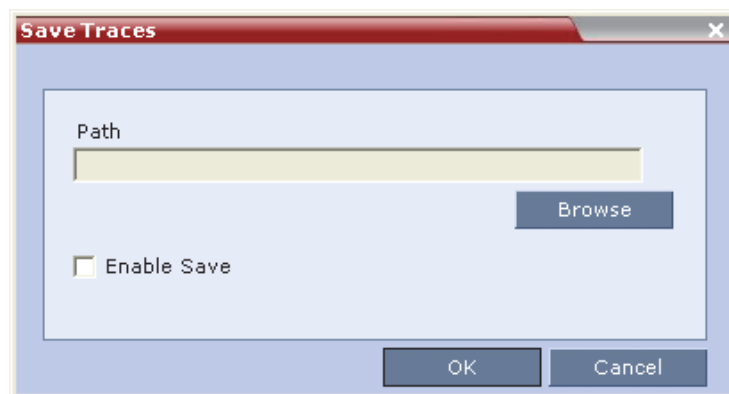
Saving Transaction Data to a File

You can instruct the XML Tracer to automatically save the data of all traced transactions as they occur.

To start saving transaction data:

1. Click the **Save Traces**  button.

The *Save Traces* dialog box opens.



2. Select the **Enable Save** check box, and then click **Browse**.
3. The *Save As* dialog box opens.

Navigate to the directory in which you want to save the data, and then either select the file in which the data is to be saved, or enter the name of the file in the *File Name* box.

4. Click **Save**.

You will return to the *Save Traces* dialog box.

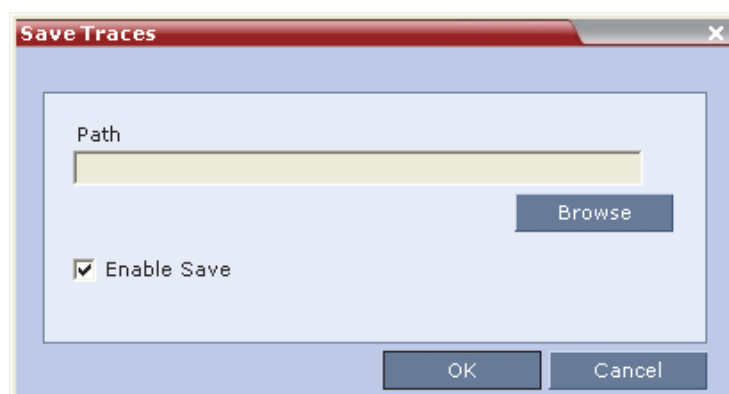
5. Click **OK**.

The data of all transactions currently listed in the *Transaction List* pane will be saved to the specified file. In addition, the data of all transactions that are traced from now on, will be appended to the file, until you instruct the Tracer to stop saving transaction data.

To stop saving transaction data:

1. Click the **Save Traces**  button.

The *Save Traces* dialog box opens.




2. Clear the **Enable Save** check box and then click **OK**.

No more transaction data will be saved to the file in which transaction data was being saved.

Displaying the Contents of a Saved Transaction Data File

To open a transaction data file:

1. Click the **Open Traces**  button.
The Open dialog box opens.
2. Navigate to the directory containing the file you want to open.
3. Select the file, and then click **Open**.

The contents of the transaction data file are displayed in the *XML Tracer* window.

