Rational Integration Tester

Reference Guide for COBOL Copybook

Version 8.0.0

Note

Before using this information and the product it supports, read the information in “Notices” on page 9.

This edition applies to version 8.0.0 of Rational Integration Tester and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this Publication

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This guide describes how to use COBOL Copybooks in IBM® Rational® Integration Tester to help you test COBOL data files or the applications that produce and consume them.

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Intended Audience

This document intended to be read by those with a fair understanding and exposure to the concepts involved in both testing and development and in enterprise integration.

Scope

This document discusses the use of IBM Rational Integration Tester with COBOL Copybooks. Information about other features and functionality in Rational Integration Tester is beyond the scope of this document.

If you wish to familiarize yourself with Rational Integration Tester, please refer to the online help or any of the documentation that is provided with the product.

Typographical Conventions

The following typographical conventions are observed throughout this document:

Type	Usage
`Constant Width`	Program output, listings of code examples, file names, commands, options, configuration file parameters, and literal programming elements in running text.
Italic	Document title names in statements that refer you to other documents. Also used to highlight concepts when first introduced.
Bold	Menu items in graphical user interface windows (such as Microsoft Windows-based or UNIX X Window applications) from which you select options or execute macros and functions. Submenus and options of a menu item are indicated with a "greater than" sign, such as **Menu > Submenu** or **Menu > Option**.

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Testing with COBOL Copybook Schemas

Contents

Overview

Adding Copybook Schemas

Apply Copybook Schemas to Messages

This chapter provides information about how to reference COBOL Copybook schemas in Rational Integration Tester and apply them to messages for testing COBOL program data.

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1.1 Overview

COBOL Copybooks can be added to Rational Integration Tester and applied to messages, allowing you to construct messages in a format that is meaningful to the system under test.

Cobol data files are not self describing (that is, they do not contain information about their own organization and record structure). If you have a COBOL data file, but no program capable of writing or reading this file, you cannot correctly interpret the data that the file contains.

The information that describes the physical layout of program data (that is, how the records and fields relate to each other) is usually stored in a Copybook file that is included in all of the applications that will process the file.

COBOL copybook files are usually named with .cbl, .ccp, .cob and .cpy extensions, and are typically one or more level 01 structures. These structures can be made available within Rational Integration Tester as message schemas that can be used to create and parse the data in files or messages.

NOTE: A COBOL Copybook schema can be applied only to byte array fields (for example, messages using the Byte Array formatter) or to Bytes message types (set within the message body when using any of the JMS providers).

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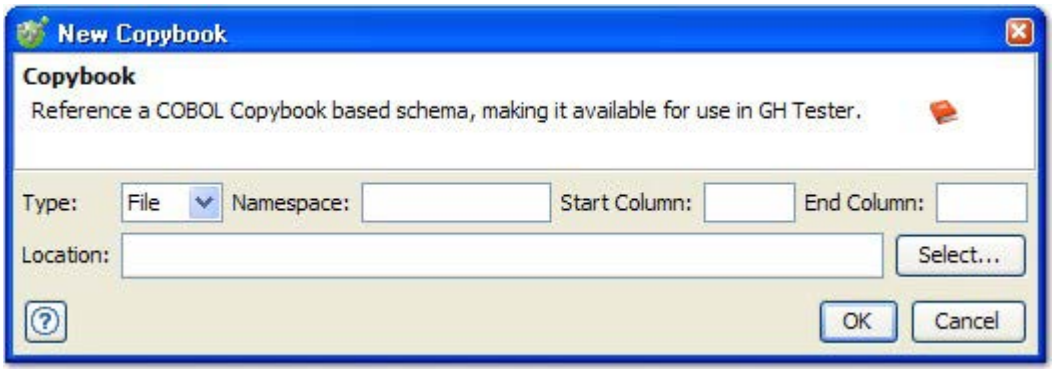
1.2 Adding Copybook Schemas

This section describes how to add a COBOL Copybook schema to the Schema Library in Rational Integration Tester's Architecture School perspective.

1. Open the Architecture School perspective (**F7**) and select the Schema Library view.
2. Click the **Copybook** icon in the Schema Library toolbar.

The **New Copybook** dialog is displayed.



3. Configure the options to use for the new schema, as follows:

Type	Usage
Type	Select whether the schema is file-based (specified in Location) or inline (the source of the copybook is in the **Source** tab and is editable by the user).
Namespace	Any suitable string, ideally a URL, that lets copybooks support rules and appear in a logical manner in the tree to the left of the editor.
Start and End Column	These fields provide the ability to restrict what is processed as part of the schema since it is common in copybooks to have information present before and after the main definitions (for example, comments). Typically, copybooks follow these rules: columns 1-6 Comment, 7=* for line comment, 8-72 colname and datatype details, 73-80 comment.
Location	For schemas of **File** type, denotes the full path (system or URL) to the file containing the copybook (click **Select** to enter path or URL, see next step).

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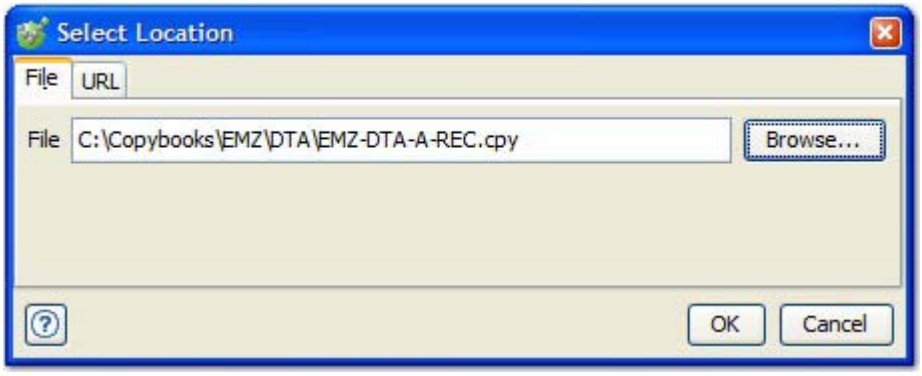
4. In the **Select Location** dialog, click **Browse** to locate and select a local schema file, or click the **URL** tab to enter the URL of a remote file.



5. Click **OK** when finished, and click **OK** in the **New Copybook** dialog.
6. The selected Copybook is now available to be applied to messages as a schema.

NOTE: If desired, you can drag and drop Copybooks into the Schema Library to import several files at once.

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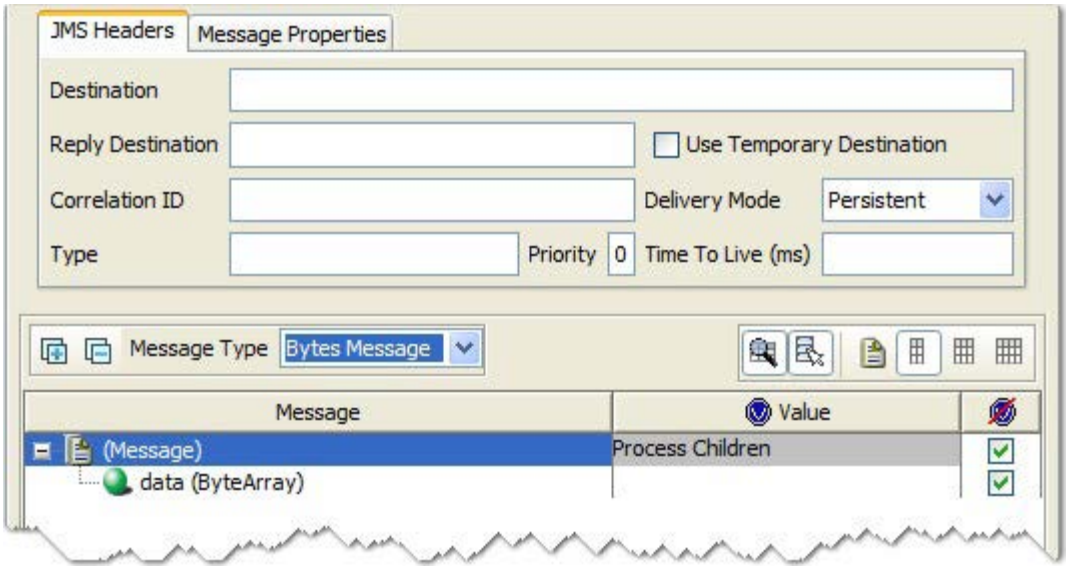
1.3 Apply Copybook Schemas to Messages

Once your Copybook schema has been added to Rational Integration Tester, it can be applied to messages in applicable test actions. The following example illustrates how to apply an existing Copybook schema to a message.

1. Create a new test in an operation that contains a reference to your JMS provider.
2. Add a **Send Request** action to the **Test Steps** phase of the test (a **Receive Reply** action will also be created).

3. Open the **Send Request** action for editing.
4. Select your JMS-based transport and formatter, and select **Bytes Message** in the Message Type field (above the message body).



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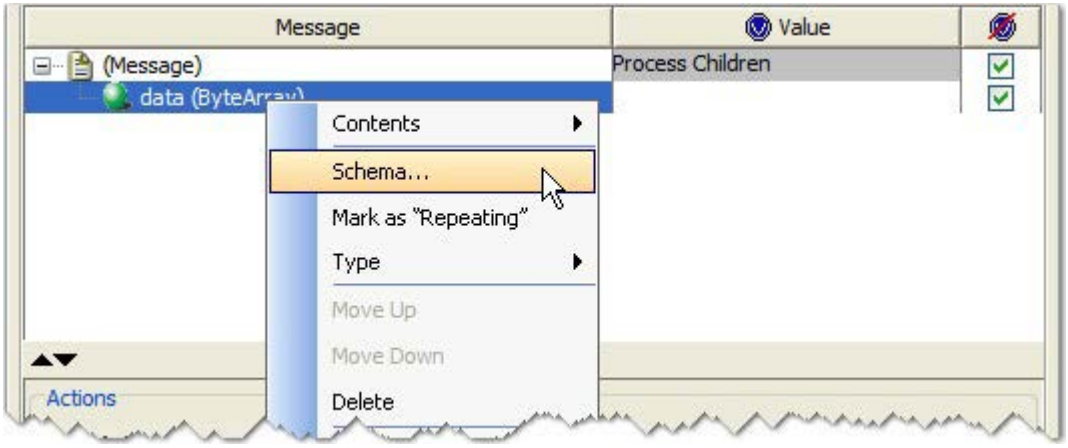
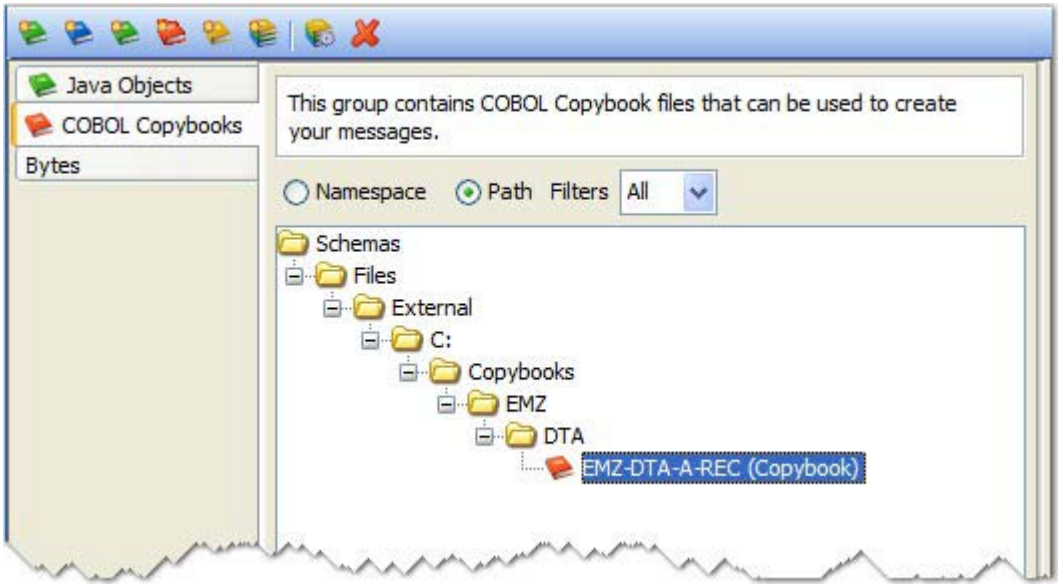
5. In the message area, right-click the **data (ByteArray)** element and select **Schema** from the context menu.



6. In the **Select Schema** wizard, select the **COBOL Copybooks** tab and select the schema that was imported into Rational Integration Tester's Schema Library.



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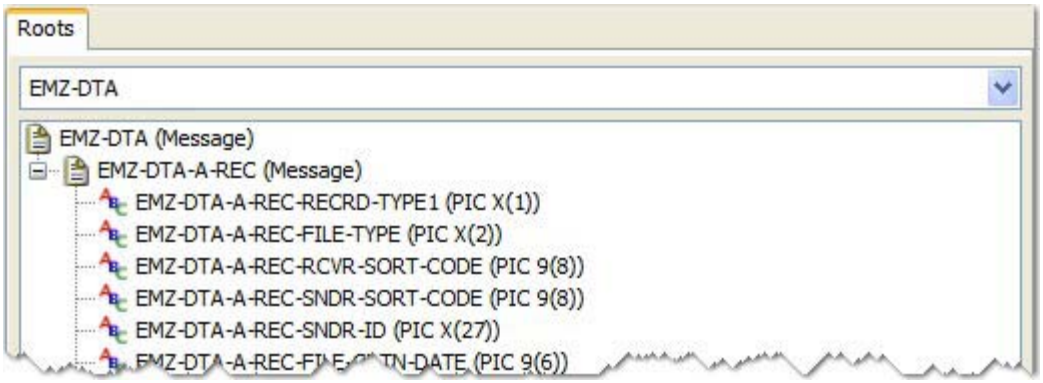
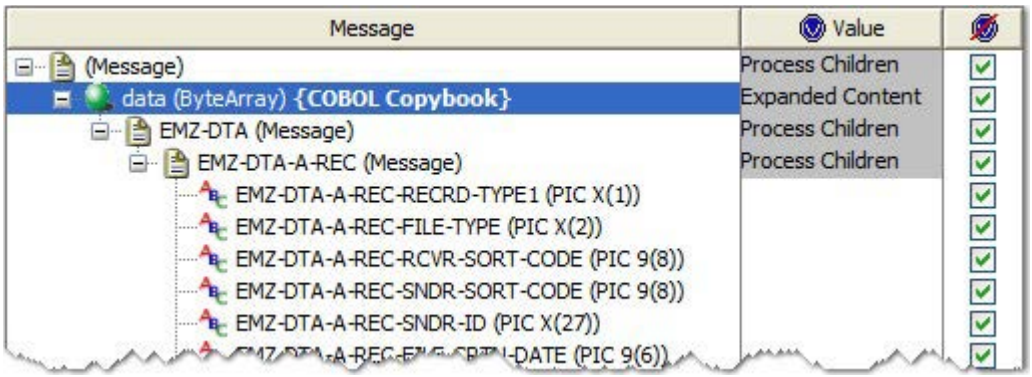
7. Under the **Roots** tab on the right side of the wizard, select the desired schema root.



8. Click **Next** to proceed and set the desired Content and Assert options in the next wizard dialog, then click **Finish**.

9. The schema will be applied to the original message, including the structure and content that is defined in the schema.



10. The same steps can be carried out in the **Receive Reply** action to apply validation options.

NOTE: For more information about messages, schemas, and validation, see the *IBM Rational Integration Tester Reference Guide*.

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Glossary

The following table below lists some of the key terms used in this document, and provides a description of each.

Term	Description
Field	A bit of data constituent to a message. Most fields are scalar and therefore unitary, equivalent to data attributes. Vector fields are an aggregation of fields both scalar and vector, and are usually referred to as Messages. See also Message.
Message	A unit of information made up of a header consisting of meta-information and a body consisting of the message data.
Host	The computer on which a software process runs.
Publisher-Subscriber	A messaging paradigm whereby a messaging network consists of Publishers and Subscribers.
Transport	Informally, the messaging software in use. For instance, TIBCO Rendezvous, TIBCO ActiveEnterprise, IBM WebSphere® MQ (JMS).
Publishing	Making a message (data) available on a message channel.
Subscribing	Receiving a stream of messages (data) on a given message channel.
Server	A host computer on a network shared by more than one user.

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