

Rational Integration Tester



Reference Guide for Microsoft .Net

Version 8.0.0

Note

Before using this information and the product it supports, read the information in “Notices” on page 10.

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 IBM® Rational® Integration Tester to test Microsoft .Net objects.

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 to test .Net objects. 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.
<i>Italic</i>	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 .Net Objects

Contents

Overview

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This chapter provides information about how to test .Net objects using Rational Integration Tester.

1.1 Overview

.Net assembly files (.exe or .dll) can be added to Rational Integration Tester and applied to messages like a schema to test the classes that the assembly contains by sending .Net objects (publish) and performing validation against received objects (subscribe).

The objects to be tested must be part of the assembly that is added to Rational Integration Tester's Schema Library in the Architecture School perspective.

For messages that use a .Net schema, the following are supported:

- public fields (primitive data types, single dimensional arrays, ArrayList, and List<>)
- public properties

Any classes in the assembly that are public and can be serialized will be made available as roots in the schema. The classes can then be selected in the normal way from the schema wizard (for example, when applying the schema to a selected message).

NOTE: A .Net object schema can be applied to byte array or string fields. Byte array fields will serialize to binary format, and string fields will serialize to XML format.

1.2 Requirements

.Net Framework 3.5 is required on the Rational Integration Tester client machine to enable the use of .Net objects.

The .Net interface in Rational Integration Tester depends on the following DLLs:

- msvcr90.dll
- msvc90.dll

These DLLs may be installed already. If so, they might be found in the side-by-side assembly cache on Windows systems. The specific DLLs might be found in C:\WINDOWS\WinSxS\x86_Microsoft.VC90.CRT_xxx or a similarly named directory.

If necessary, the DLLs can be installed with the Microsoft Visual C++ 2008 distribution, which can be downloaded here:

<http://www.microsoft.com/downloads/details.aspx?familyid=9b2da534-3e03-4391-8a4d-074b9f2bc1bf&displaylang=en>

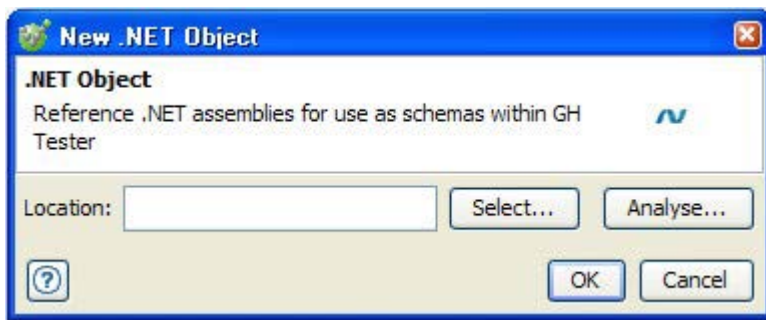
1.3 Adding .Net Object Schemas

This section describes how to add a .Net assembly (.exe or .dll) to the Schema Library in Rational Integration Tester's Architecture School perspective.

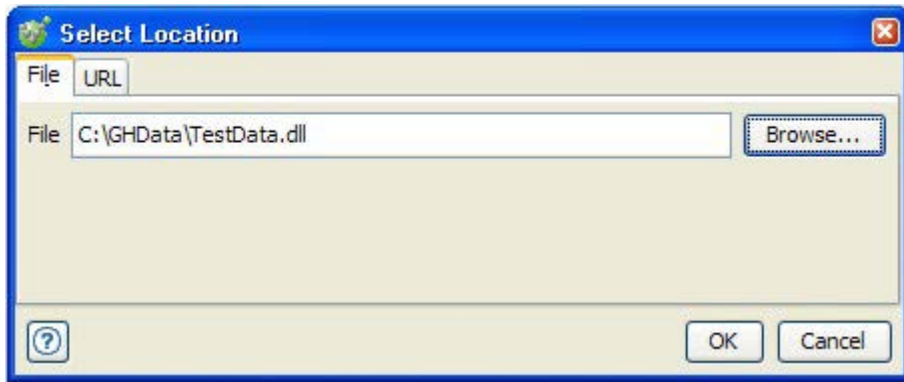
1. Open the Architecture School perspective (**F7**) and select the Schema Library view.
2. Click the **.Net Object** icon in the Schema Library toolbar.



3. In the **New .Net Object** dialog, click **Select** to select the executable or DLL that contains the classes you want to test.



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

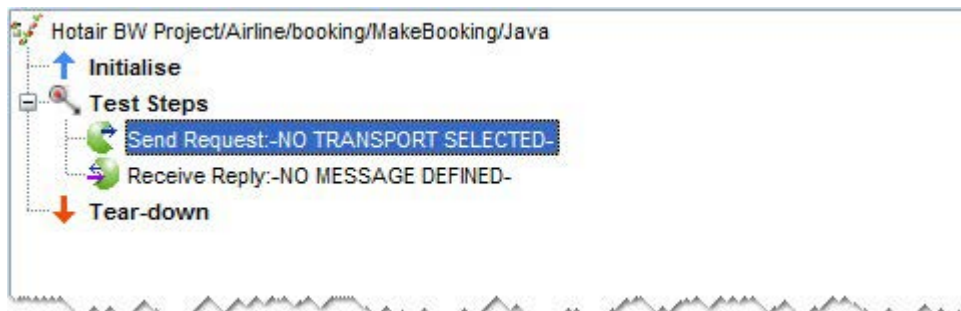


5. Click **OK** when finished, and click **OK** in the **New .Net Object** dialog.
6. The .exe or .dll file is now available to be applied to messages as a schema, and the objects and classes it contains can be viewed in the Schema Library.

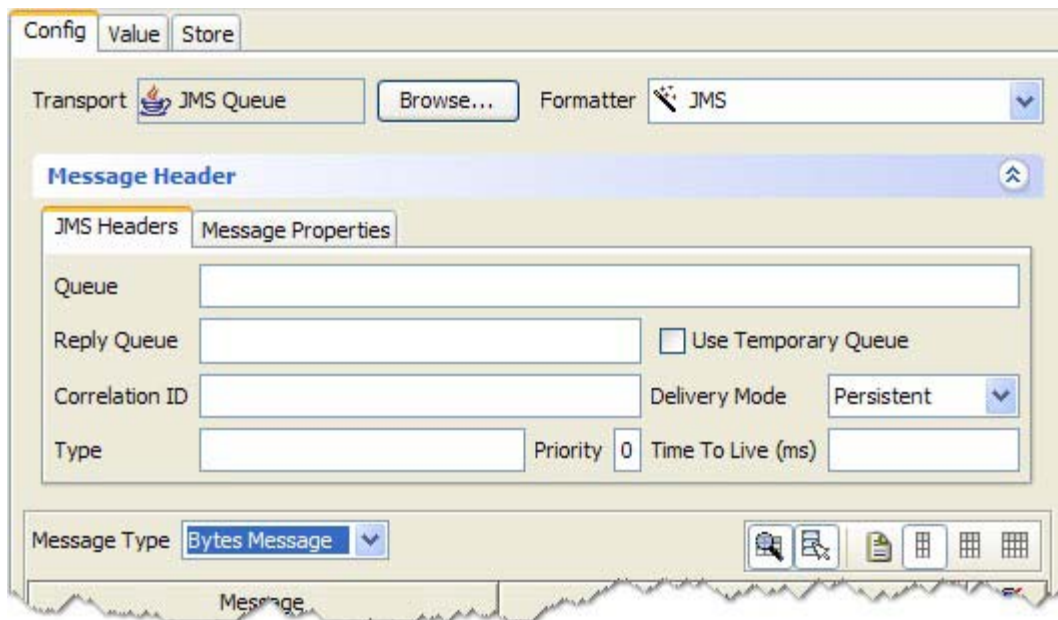
1.4 .Net Objects in Messages

Once your .exe or .dll file has been added to Rational Integration Tester, it can be applied as a schema to messages in applicable test actions. The following example illustrates how to apply an existing .Net object schema to a message.

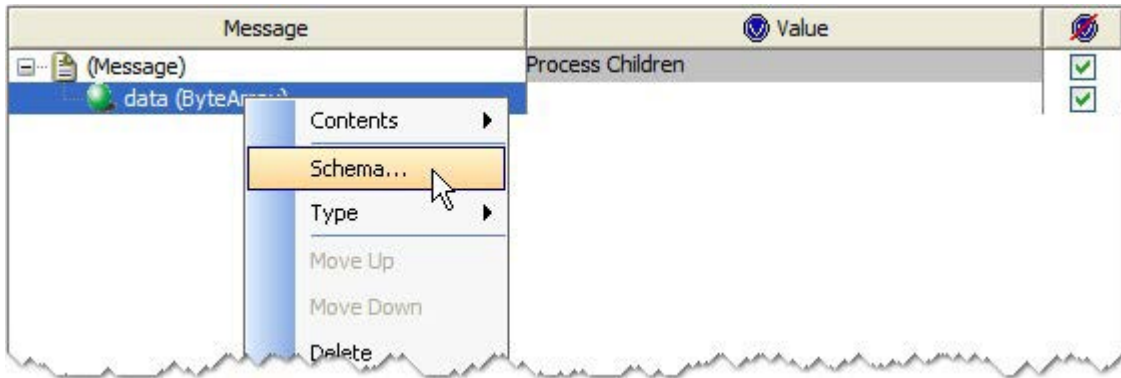
1. Create a new test in an operation that contains a reference to your JMS provider.
2. Add a Send Request action to the Test Steps phase of the test (a Receive Reply action will also be created).



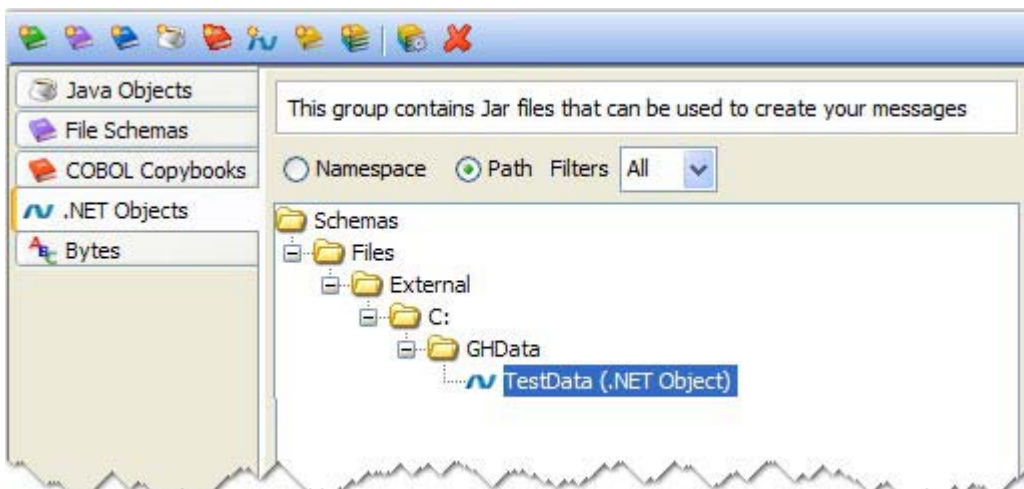
3. Double-click the Send Request action to open it for editing.
4. Select your JMS-based transport and formatter, and select **Bytes Message** from the **Message Type** dropdown (above the message body).



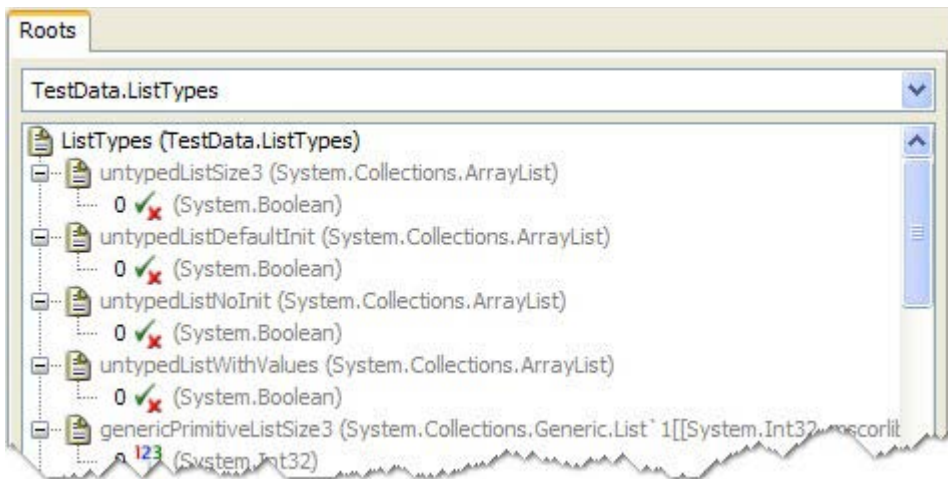
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5. In the message area, right-click the **data (ByteArray)** element and select **Schema** from the context menu.



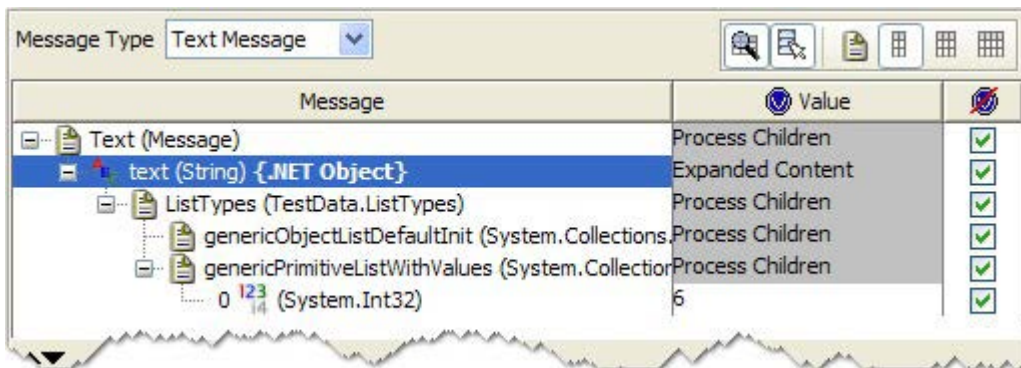
6. In the **Select Schema** wizard, select the **.Net Objects** tab and select the executable or DLL that was imported into Rational Integration Tester's Schema Library.



- Under the **Roots** tab on the right side of the wizard, select the desired object.



- Click **Next** to proceed and set the desired Content and Assert options in the next wizard dialog, then click **Finish**.
- The schema will be applied to the original message, and the serializable classes defined in the assembly file will be message fields.



- 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*.

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 MQ WebSphere® (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.
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.

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