Rational Integration Tester

IBM

Integration Guide for IBM Rational Quality Manager

Version 8.0.1

Note

Before using this information and the product it supports, read the information in "Notices" on page 22.

Contents

About this Publication

Contents

This document provides details about how to configure and utilize the IBM® Rational® Integration Tester integration with IBM Rational Quality Manager.

Intended Audience

This document is 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 covers the integration of IBM Rational Integration Tester with IBM Rational Quality Manager, and it is assumed that you are already familiar with the concepts and use of both tools.

Users of this document are assumed to have some experience using Rational Integration Tester and some of its core functions such as Tagging, Data Validation, creating reports, and running tests. Please refer to *IBM Rational Integration Tester Getting Started Guide* and *IBM Rational Integration Tester Reference Guide* for more information.

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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Installation

Contents

This chapter describes the steps required to enable the integration of Rational Integration Tester and IBM Rational Quality Manager.

1.1 Overview

The integration of Rational Integration Tester with IBM Rational Quality Manager enables the execution of Rational Integration Tester tests and suites in IBM Rational Quality Manager's centralized test management environment.

To export Rational Integration Tester resources to IBM Rational Quality Manager versions 3.0 through 4.0, a plugin (provided with Rational Integration Tester) is deployed into an existing IBM Rational Quality Manager server. In IBM Rational Quality Manager version 4.0.1 and later, the required plug-in is included in the IBM Rational Quality Manager server. To execute Rational Integration Tester resources in IBM Rational Quality Manager, the Rational Integration Tester Agent is configured as an IBM Rational Quality Manager adapter that can execute the resources remotely.

The Rational Integration Tester-IBM Rational Quality Manager integration is supported by Rational Integration Tester 5.2.11 and later. The integration has been tested with IBM Rational Quality Manager version 3 and version 4.0.1.

1.2   Integration Steps

To enable the integration of Rational Integration Tester and IBM Rational Quality Manager version 4.0.1, you must configure the Rational Integration Tester Agent with the details of the IBM Rational Quality Manager installation. This enables the remote execution of Rational Integration Tester test resources from IBM Rational Quality Manager. After you configure the IBM Rational Tester Agent, you must configure one or more IBM Rational Quality Manager servers in Rational Integration Tester. To complete the integration, refer to Configure an IBM Rational Quality Manager Integration in Rational Integration Tester and Configure the Rational Integration Tester Agent.

To enable the integration of Rational Integration Tester and IBM Rational Quality Manager versions 3.0.1 or later, and 4.0, you must also configure a local update site in addition to configuring the IBM Rational Integration Tester Agent. The local update site is provided in a .zip archive file with the Rational Integration Tester installation. The site is extracted on the IBM Rational Quality Manager server, and IBM Rational Quality Manager is configured to use the site. To complete the integration, refer to Configure the Local Update Site, Configure an IBM Rational Quality Manager Integration in Rational Integration Tester, and Configure the Rational Integration Tester Agent.

1.2.1   Configure the Local Update Site

NOTE: This section is required only if you are using a version of IBM Rational Quality Manager earlier than 4.0.1.

Creating a local update site on the IBM Rational Quality Manager server provides the files required by the server to enable the export of Rational Integration Tester tests into IBM Rational Quality Manager. Follow the steps below to create the update site and configure IBM Rational Quality Manager to use it.

1. Locate the RQM directory in the root of your Rational Integration Tester installation (C:\Program Files\IBM\RationalIntegrationTester, by default).

    Inside the RQM directory is rqm.zip, the compressed local update site.

2. Extract the contents of the .zip file into a new or empty directory on the IBM Rational Quality Manager server (for example, C:\users\jsmith\rqm).

    NOTE: The update site should not be created within the Rational Quality Manager install directory.

Within the extracted directory you will find a `features` directory, a `plugins` directory, `com.ghc.ghTester.rqm-profile.ini`, and `site.xml`.

3. Open `com.ghc.ghTester.rqm-profile.ini` in a text editor and modify the `url` path to reflect the extracted directory (for example, `url=file:///C:/users/jsmith/rqm`).

4. Save and close the file when finished.

5. Copy `com.ghc.ghTester.rqm-profile.ini` to the IBM Rational Quality Manager install location on the IBM Rational Quality Manager server (for example, `C:\IBM\RQM3\server\conf\jazz\provision_profiles`).

6. Start or restart the IBM Rational Quality Manager server.

1.2.2 Configure an IBM Rational Quality Manager Integration in Rational Integration Tester
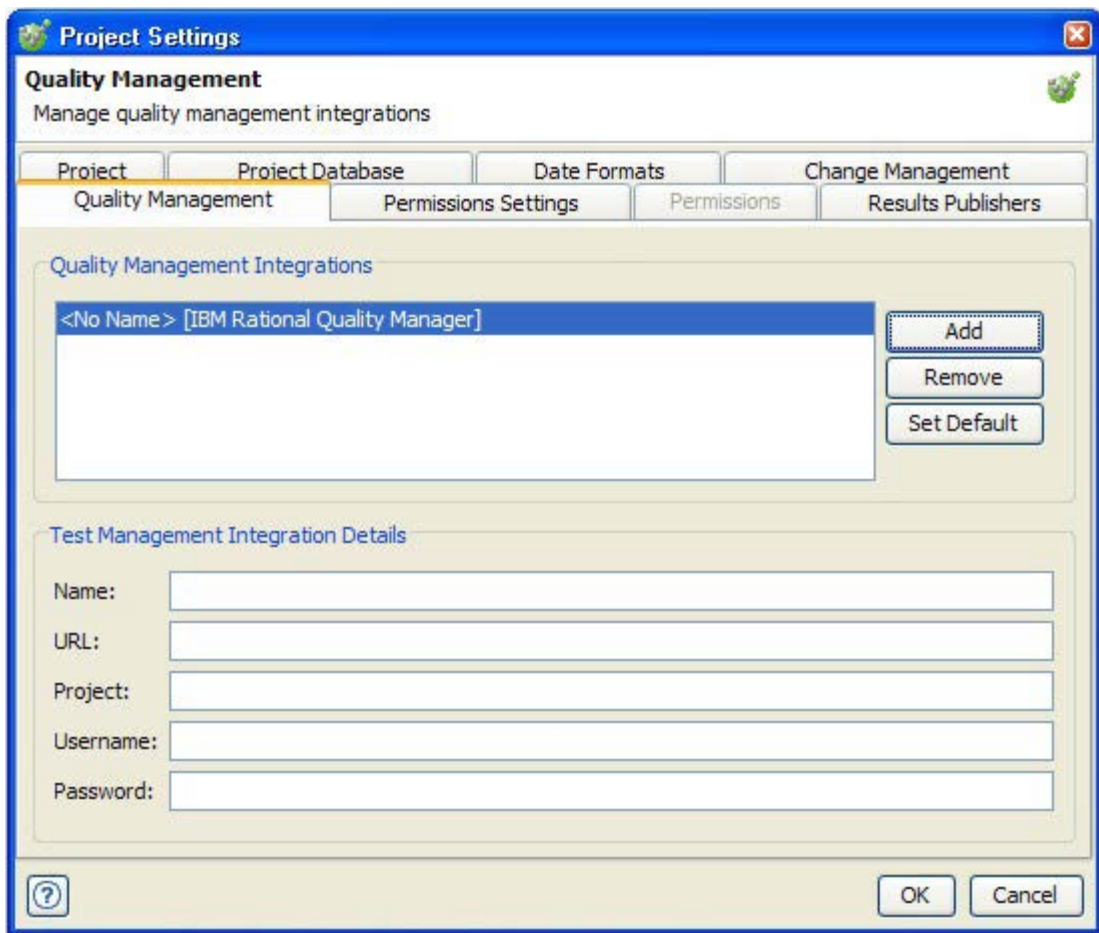
NOTE: This section is valid for all versions of IBM Rational Quality Manager.

One or more IBM Rational Quality Manager servers can be configured in Rational Integration Tester. Once configured, a server can be selected as the target when exporting tests or tests suites from the Test Factory. Follow the steps below to configure an IBM Rational Quality Manager server in Rational Integration Tester.

1. If not already running, launch Rational Integration Tester and select a new or existing project.

2. Select **Project Settings** from the **Project** menu.

   The **Project Settings** dialog is displayed.

3. Select the **Quality Management** tab.

4. In the **Quality Management Integrations** pane, click **Add**.

5. In the **Select Provider** dialog, click **IBM Rational Quality Manager**.

A new IBM Rational Quality Manager configuration is created.

6. Configure the details of the new integration using the available fields in the **Test Management Integration Details** pane, as follows:

Field	Description
Name	A user-defined name describing the integration – available integrations will be listed by name when exporting tests and test suites.
URL	The base URL of the IBM Rational Quality Manager server (for example, https://server.domain.com:9443/jazz).
Project	Enter the exact name of an existing project on the IBM Rational Quality Manager server. When exporting tests and test suites, this is the IBM Rational Quality Manager project where they will be created.
Username	Enter the user ID of an IBM Rational Quality Manager user who has sufficient privileges in the named project to create tests and test scripts.
Password	Enter the password for the user ID entered in **Username**.

7. When the IBM Rational Quality Manager server details are correct, click **OK** to save the changes and close the **Project Settings** dialog.

1.2.3   Configure the Rational Integration Tester Agent

NOTE: This section is valid for all versions of IBM Rational Quality Manager.

The Rational Integration Tester Agent can be configured as an IBM Rational Quality Manager Adapter to enable remote test execution. To do this, the Agent must be provided with the IBM Rational Quality Manager server configuration information, similar to the details provided in Rational Integration Tester.

The configuration can be modified in `Agent.conf`, found in the `config` directory of the Rational Integration Tester installation (`C:\Program Files\IBM\RationalIntegrationTester\config`, by default). The configuration file is an xml file containing an empty or default configuration that can be changed to match the Rational Integration Tester and IBM Rational Quality Manager installation environment.

NOTE: By default, the IBM Rational Quality Manager Adapter functionality is disabled and must be configured before it can be used.

The IBM Rational Quality Manager Adapter configuration is contained within the `<rqm>` element in the configuration file. The `<rqm>` element has an additional attribute of `enabled`, which can be set to "true" or "false" to enable or disable the Adapter functionality without having to change any other part of the configuration.

The default Adapter configuration is shown below:

```
<rqm enabled="false">
        <username value="" />
        <password value="" />
        <url value="https://localhost:9443/jazz" />
        <rqmproject value="" />
        <ghtprojectbaselocation value="" />
        <runtests value=".\RunTests.exe" />
        <rqmAdapterId value="MyFixedGHTesterId" />
    </rqm>
```

NOTE: To use an encrypted password in the `Agent.conf` file, you can apply the desired password to your database connection (in **Project Settings**). After applying the change, the encrypted password can be found in the **password** attribute of the database **connectionParams** element of the Rational Integration Tester project file (that is, `*.ghp`). Open the project file in a text editor, copy the entire value (including `#com.ghc.1!` but excluding the quotes), and paste it into the **value** attribute of the **password** element in `Agent.conf`. When finished, be

sure to change the database connection password back to its original value.

Once the agent configuration file has been modified and saved (see the next page for details), run the agent to connect it to IBM Rational Quality Manager as an Adapter.

The required configuration values should be modified as follows:

Parameter	Description
username	The ID of an IBM Rational Quality Manager user to be used by the agent/adapter when connecting. This user ID will require a Connector Client Access License, assigned within IBM Rational Quality Manager, to allow access.
password	The password for the user ID entered in **Username**.
url	The base URL of the IBM Rational Quality Manager server (for example, `https://server.domain.com:9443/jazz`).
rqmProject	The IBM Rational Quality Manager project to which the configured agent should connect.
ghtProjectBaseLocation	The base location of your Rational Integration Tester projects (that is, the directory that contains the Rational Integration Tester projects that will be used for running tests). For example, `C:\RationalIntegrationTesterProjects`.
runTests	The full path or relative location of the Rational Integration Tester **RunTests** executable (for example, `.\RunTests.exe` or `C:\Program Files\IBM\RationalIntegrationTester\RunTests.exe`).
rqmAdapterId	A unique identified for the current instance of the agent/adapter. Each running instance must supply a unique identifier.

In addition to the required configuration parameters (shown above), the following optional parameters can be specified:

Parameter	Description	Default Value (if not supplied)
rqmPollInterval	The polling interval in seconds. This is the wait interval between queries of the IBM Rational Quality Manager server.	5
rqmAdapterName	The name used when registering with the IBM Rational Quality Manager server.	Rational Integration Tester
rqmAdapterDescription	The description used when registering with the IBM Rational Quality Manager server.	Rational Integration Tester Adapter

All parameters take the form `<parameter value="">`, where the configuration value is specified in quotation marks and `parameter` is the configuration parameter being specified (for example, `<user name value="ghuser" />`).

1.3 Updating the IBM Rational Quality Manager Plugin

NOTE: This section is required only if you are using a version of IBM Rational Quality Manager earlier than 4.0.1.

If a new Rational Integration Tester plugin for IBM Rational Quality Manager is provided, the local update site needs to be replaced and the server needs to be configured to reload its contents.

Follow the steps below to backup and replace the update site that was configured previously:

1. Configure the server to reset the cache the next time it starts by submitting the **requestReset** command from your browser:

```
https://<Server URL>:<Port Number>/jazz/
admin?internal#action=com.ibm.team.repository.admin.serverReset
```

   NOTE: You must be logged in as a user with JazzAdmins permissions.

2. On the page that is displayed, click the **Request Server Reset** button.

   A message should be displayed indicating that the server has been flagged to reset and reload the configured update site when it is restarted.

3. Stop the IBM Rational Quality Manager Jazz server.

4. Make a backup of the update site location that was created during the installation steps.

5. Extract the new update site to replace the contents of the existing site.

6. Start the IBM Rational Quality Manager server.

Executing Rational Integration Tester Resources

Contents

This chapter describes how to export Rational Integration Tester tests and test suites to IBM Rational Quality Manager, and how to execute those resources remotely using the Rational Integration Tester Agent/IBM Rational Quality Manager Adapter.
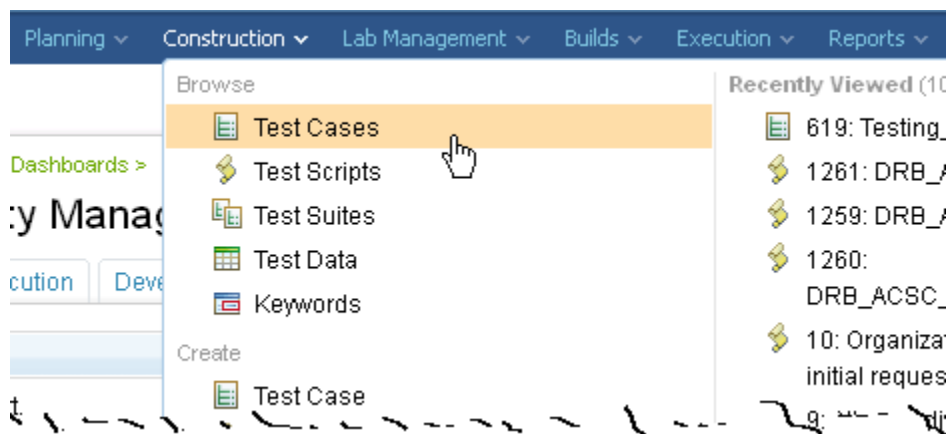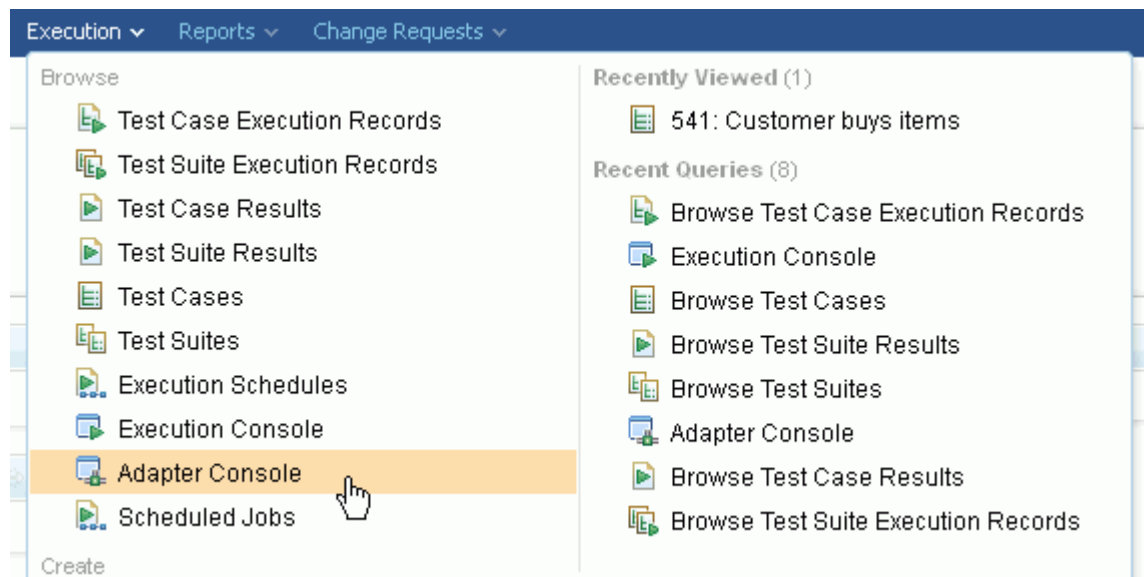
2.1 Overview

Once the Rational Integration Tester-IBM Rational Quality Manager integration is complete (see Installation), users can export tests and test suites from Rational Integration Tester into IBM Rational Quality Manager. Exported tests and test suites are created as test cases and test scripts in IBM Rational Quality Manager.

Rational Integration Tester resources can be viewed in the **Construction** menu of the IBM Rational Quality Manager console, as Test Cases and Test Scripts.

The Rational Integration Tester Agent, once running, can be seen as an IBM Rational Quality Manager Adapter by selecting Adapter Console from the Execution module.
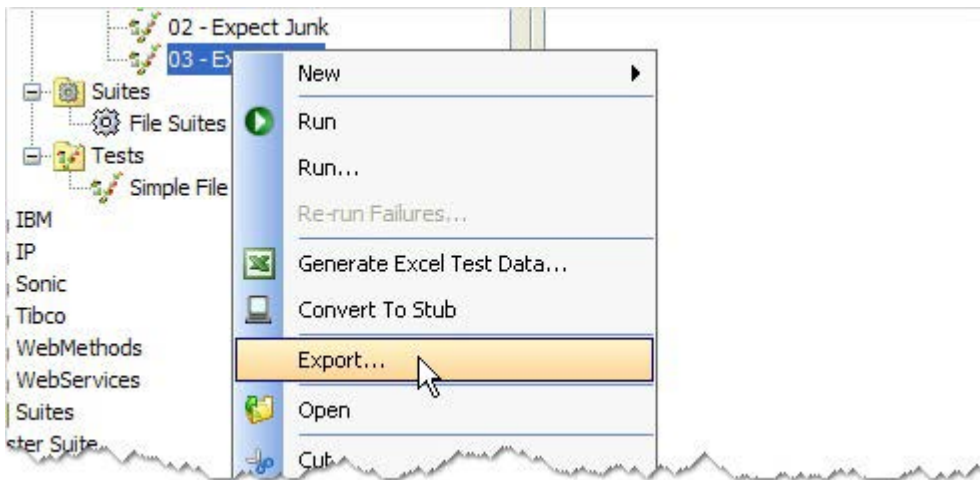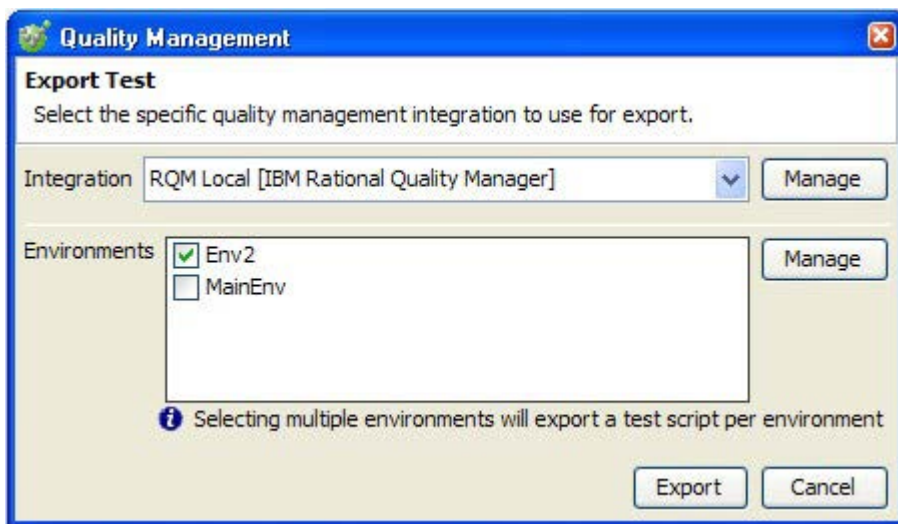
2.2   Exporting Resources from Rational Integration Tester

This section describes how to export Rational Integration Tester tests and test suites into IBM Rational Quality Manager.

1. Launch Rational Integration Tester and open the project containing the tests or test suites you want to export.

2. Open the Test Factory perspective (**F10**).

3. Right-click on the desired test or test suite and select **Export** from the context menu.
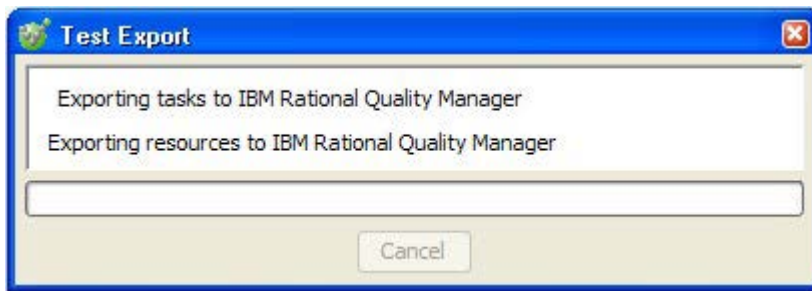

The **Quality Management** dialog is displayed.

The default IBM Rational Quality Manager integration is selected under **Integration**.

4. If more than one integration are configured in Rational Integration Tester, select the desired integration from the **Integration** field.

5. To manage the integrations in the Rational Integration Tester **Project Settings** dialog, click **Manage** next to the field.

6. In the **Environments** pane, place a check mark next to the environments to use for the selected test or test suite. By default, the assets current environment is selected.

7. To manage environments in Rational Integration Tester, click **Manage** next to the pane.

> **NOTE:** If you export multiple environments, Rational Integration Tester will create multiple test scripts (one per environment), but only one test case per test or test suite. The exported test case will contain all of the exported test scripts.

8. When the integration and environment options are correct, click **Export**.

    The progress is displayed in the **Test Export** dialog.

9. Once finished, select **View Test Cases** or **View Test Scripts** from the **Construction** module in the IBM Rational Quality Manager console.

10. The exported tests or test suites should be displayed.

2.3 Executing Tests and Suites in IBM Rational Quality Manager

This section describes how to execute Rational Integration Tester tests and test suites in IBM Rational Quality Manager.

- Verify the Rational Integration Tester Agent

- Executing Test Cases in IBM Rational Quality Manager

2.3.1 Verify the Rational Integration Tester Agent

Before you can execute Rational Integration Tester resources from IBM Rational Quality Manager, the Rational Integration Tester Agent must be configured, running (see Configure the Rational Integration Tester Agent) and available as an Adapter in IBM Rational Quality Manager.

To see available adapters, open the IBM Rational Quality Manager console and select **Adapter Console** from the **Execution** menu. All registered adapters are listed.

If the Rational Integration Tester Agent is not listed, then it has not been successfully registered with the server. In this case, ensure that `Agent.conf` has been modified properly and then launch the Agent to register it (see Configure the Rational Integration Tester Agent).

If the Agent is listed but unavailable, then it has been successfully registered but is probably not running. In this case, launch the agent, wait for it to connect to IBM Rational Quality Manager, then refresh the list of available adapters.

Once the Agent is listed as "Available" in the Adapter Console, you are ready to run Rational Integration Tester resources from IBM Rational Quality Manager.

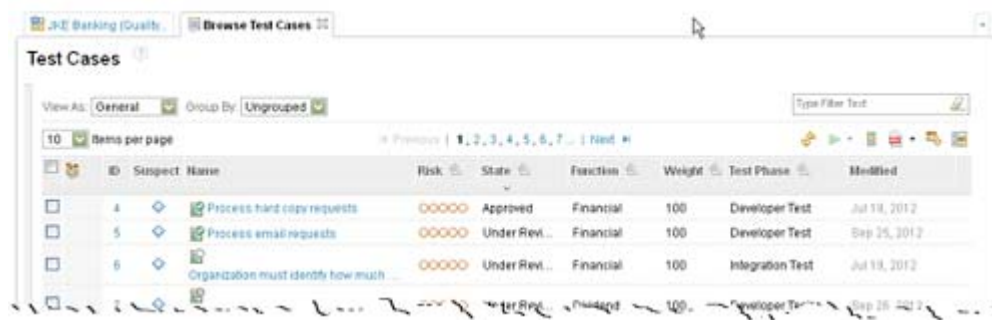## 2.3.2   Executing Test Cases in IBM Rational Quality Manager

Once you have exported at least one test or test suite into IBM Rational Quality Manager and the Rational Integration Tester Adapter is available, you can execute Rational Integration Tester resources remotely. Rational Integration Tester tests and test suites are created in IBM Rational Quality Manager as Test Cases and Test Scripts. You can also create IBM Rational Integration Tester scripts directly in IBM Rational Quality Manager. Refer to your IBM Rational Quality Manager documentation for more information about Test Cases and Test Scripts.

Test Cases in IBM Rational Quality Manager can be executed in many ways (for example, direct or fast path execution, as part of a test suite, and so on). This section illustrates the fast path execution method. Please refer to your IBM Rational Quality Manager documentation for more information about other ways to utilize the test resources exported from Rational Integration Tester.

Follow the steps below to execute Rational Integration Tester resources (that is, IBM Rational Quality Manager Test Cases) using the fast path method:

1. Export a test or test suite from Rational Integration Tester into IBM Rational Quality Manager (see Exporting Resources from Rational Integration Tester).

2. Ensure that the Rational Integration Tester agent is running and available as an Adapter in IBM Rational Quality Manager (see Verify the Rational Integration Tester Agent).

3. In the IBM Rational Quality Manager console, click **Browse Test Cases** on the **Construction** module.
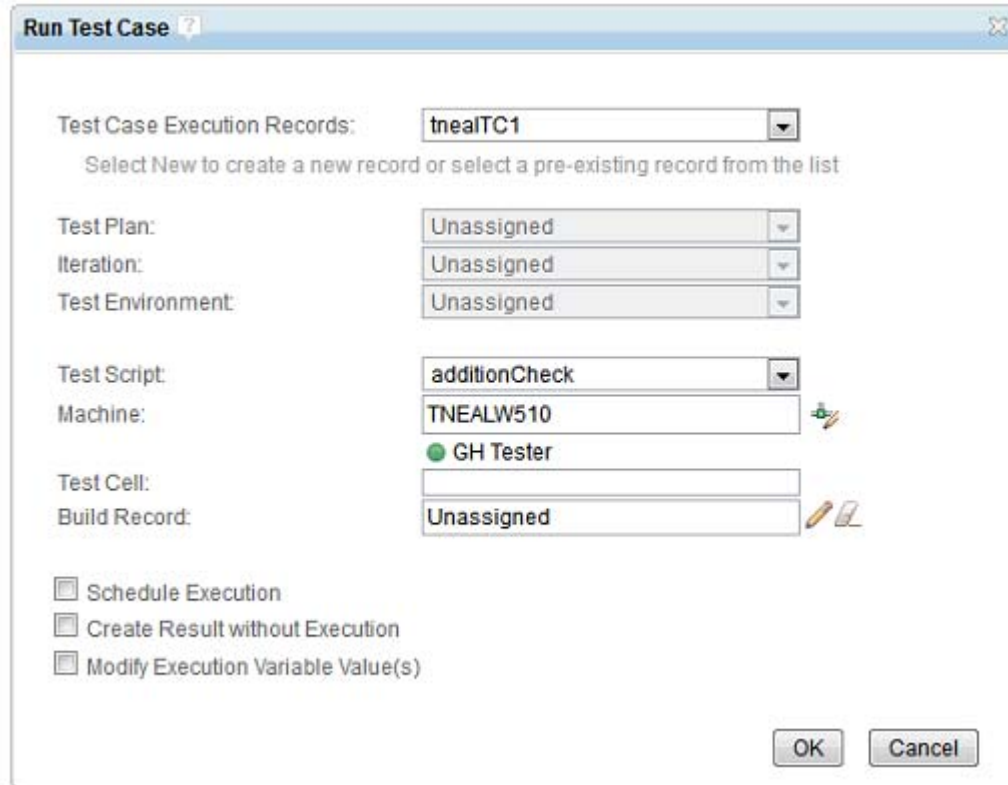
    All available IBM Rational Quality Manager test cases are displayed, including those exported from Rational Integration Tester.

4. Select one of the Rational Integration Tester test cases by checking the box to the left of its entry in the list.

5. Click the **Run Test Case** icon ▶ above the list of test cases.

   The **Run Test Case** dialog is displayed.

6. If desired, modify the available execution and results options, then click **OK** to execute the test case.

   NOTE: The **Test Script** option can be used to select which test script (that is, which environment) should be used when the test case is executed.

7. The test case will be executed in a new tab in the IBM Rational Quality Manager console, and the progress will be displayed in the console.

When the execution is finished, the status will be displayed in the console, and the "Execution completed" notification is displayed in the execution tab.

8. To view the detailed results of the execution, click **Show Result**.

The results are opened in a new tab in the IBM Rational Quality Manager console, showing the detailed execution results (the same as for any IBM Rational Quality Manager test case).

In the **Result Details** section, a link to the Rational Integration Tester log for the executed resources is available.

9. Click the log file name to view it.

NOTE: Results for Rational Integration Tester resources executed by means of IBM Rational Quality Manager can be viewed in the Results Gallery.

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, below).
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.
Publish-Subscribe	A messaging paradigm for efficient one-to-many communication in which one process (the publisher) sends information to zero or more other processes (subscribers).
Transport	Informally, the messaging software in use. For instance, TIBCO EMS, 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.
Subject	A user-defined, meaningful name for identifying messages on transports. For example, the subject EQ.IBM might identify all pricing data about IBM stocks, while EQ.IBM.N might identify price data from the New York Stock Exchange only.

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