

Points of Integration Between Rational TestManager and Rational ClearQuest

Brenda Cammarano
Senior Technical Evangelist
Rational Software

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Introduction

This paper focuses on integrations between Rational TestManager® and Rational ClearQuest® in Rational Suite v2002.

Rational TestManager improves productivity for testing teams by providing centralized control of all test assets and activities, from test planning through design, execution, and analysis and by integrating legacy and proprietary testing into an open, extensible framework. Rational ClearQuest is a powerful, flexible, and scalable defect and change tracking system that efficiently captures, tracks, and manages all types of project change requests in any development environment.

For testers, the integration between these two products provides significant team unifying capabilities. It allows every team member to create ClearQuest defect records directly from the testing environment. And for each of these records, TestManager provides critical supplemental data that enables any developer to duplicate the problem and all team members to track defects more effectively and ensure their resolution.

Establishing the Integration

Establishing the integration between Rational TestManager and Rational ClearQuest is simple, using Rational Administrator:

- Start Rational Administrator: Click **Start**, then click **Programs > Rational Suite > Rational Administrator**.
- To create a new project, click **File > New Project** on the Administrator menu. A wizard will then lead you through a series of prompts to create a project. You will have the option to fully configure your project at this time (see Figure 1).
 - Create a new test datastore or associate an existing datastore with the Rational Project under the Test Assets section.
 - Create a new ClearQuest database or associate an existing database with the Rational Project under the Change Requests section. You can apply any ClearQuest schema to your ClearQuest database for the integration, but the TestManager packages must be applied to the Schema prior to upgrading your database. For additional information on updating the ClearQuest schema, consult Appendix B "Adding ClearQuest Integrations" in the *Rational ClearQuest Administrator's Guide*.

For additional information on configuring new and existing Rational Projects, consult Chapter 3, "Creating and Configuring a Rational Project," in the *Rational Suite Administrator's Guide*.

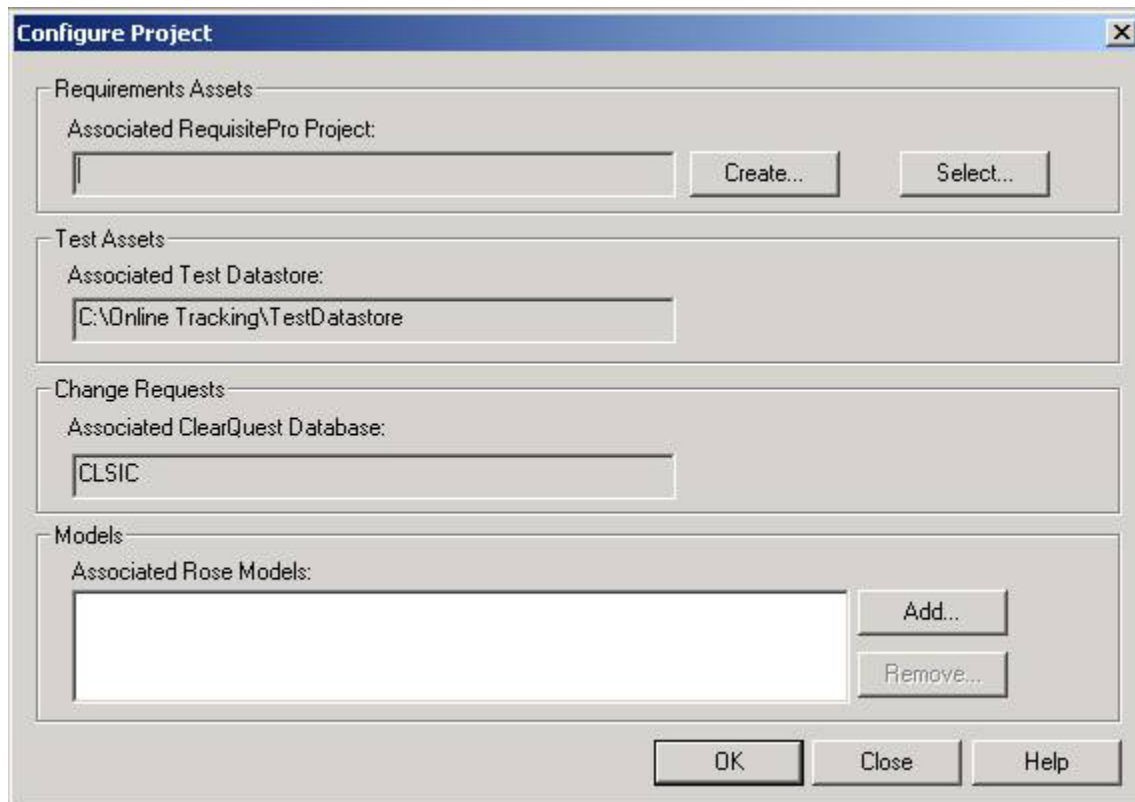


Figure 1: Screen for Configuring a Project in Rational Administrator

Now you can create a defect record through TestManager's Log Viewer. Note that when you do this, TestManager will attempt to connect to ClearQuest with the same userID and password that you used for logging into TestManager. Should the silent ClearQuest login fail, which can happen if the same userID already exists in ClearQuest with a different password, then TestManager will display the ClearQuest login dialog box, pre-populated with your userID, and ask you to supply the correct ClearQuest password.

Creating a Defect Record

Let's take a closer look at the specific capability you get when you implement the integration between Rational TestManager and Rational ClearQuest. Suppose you are a tester viewing in TestManager's Log Viewer the results of a test that you've just applied to a newly created feature function. You see a failure in one of the events, so you want to create a new defect record. This will communicate to development all the pertinent information on where and how to reproduce the bug, so that it can be fixed in a quick and efficient manner. Later on, you (or someone else on your team) can conduct further testing, applying the same testscript, to see whether the defect has been corrected. Without leaving Log Viewer, you can create a defect record in Rational ClearQuest:

- Open the test log in TestManager and click the **Details** tab.
- Expand the log to show all events (Figure 2).

The screenshot shows a table with two columns: 'Event Type' and 'Result'. The 'Event Type' column contains a tree view of test events, and the 'Result' column shows the outcome of each event. A context menu is open over the 'Verification Point (Verify Order - Object Data)' event, which has a 'Fail' result. The menu options include 'Open Script', 'View Verification Point', 'Expand All', 'Collapse All', 'Find...', 'Find Next...', 'Submit Defect...', and 'Properties'. The 'Submit Defect...' option is highlighted by the mouse cursor.

Event Type	Result
Suite Start (Temporary Suite 1)	Fail
Computer Start (Temporary Suite 1 [1])	Fail
Script Start (HTML-Order Item)	Fail
Verification Point (Verify Comp - Object Data)	Pass
Verification Point (Verify Checkout - Object Data)	Fail
Verification Point (Verify Order - Object Data)	Fail
Script End (HT)	Fail
Computer End	Fail
Suite End (Temporary S	Fail

Figure 2: Expanded Rational TestManager Test Log Showing All Events

Right click on the event (line) in the log that indicates a problem, and then select **Submit Defect**. Rational ClearQuest will create the defect record, and Rational TestManager will automatically populate the record with information appropriate for the event you selected, as indicated in the following list:

- Suite Project
 - Always populated.
- Build
 - Always populated.
 - Based on the build label selected when the test was executed.
- Log Folder
 - Always populated.
 - Based on the folder selected when the test was executed.
- Log
 - Always populated.
 - Based on the log selected when the test was executed.
- Test Case
 - Populated only if a test case was executed and the defect was generated from an event in the log resulting from the execution of a test case.
- Test Script
 - Always populated if the defect was generated from an event in the log resulting from the execution of a test script.
- Verification Point
 - Only populated if the tester submitted the defect from a verification point event in the log.
- Test Input
 - Only populated if a test case was executed and the test case has an associated test input(s).

Once the defect is saved in ClearQuest and you are returned to the TestManager log, you will see the defect ID displayed in the "Defects" field. And from ClearQuest, you can now generate reports showing related testing and defect details.

It's important to note that:

- You may submit a defect from any line in the log, regardless of whether the results are listed as a pass or a fail.
- The information that is transferred from the log to the defect is hard coded. You cannot alter the information in this integration.
- If you attempt to generate a second defect from exactly the same event line in the log, TestManager will ask whether you would like to open the existing defect or generate a new one.

Greater Convenience and Accuracy Throughout the Development Lifecycle

What does this capability do for a testing team? Here are the big benefits:

- The biggest benefit is convenience: Everyone on the team gets a real-time window to create defect records directly from Rational TestManager. If you see a problem on a test log that you want to track, you don't have to switch applications to launch the process. It's much more convenient throughout the project, too. Every tester on the team has the ability to view accurate and timely information directly from TestManager and update the defect record as needed.
- Another big benefit is greater testing accuracy. With detailed information that shows you where the problem occurs and how to recreate the bug, you can save time, ensure that you're testing the right defect, and maintain effective communication about the problem across your entire team.
- With the integration between TestManager and ClearQuest, Rational Suite users can complete a full-circle product integration that spans the entire project lifecycle: They can track a project requirement with RequisitePro and associate the requirement with a test case through test inputs in TestManager; if they see a test failure in a TestManager log, they can create a defect record directly from that log in ClearQuest, and TestManager will automatically record all related data in the record to enable accurate testing and problem resolution later in the lifecycle.

Want to Know More?

For more detailed information on this integration, see the following:

- Online Help in Rational TestManager (search on "Defects")
- Online Help in Rational Administrator (search on "Integrations," "Test Datastores," and "Defects")
- Online Help in Rational ClearQuest (search on "Defects" and "Reports")

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Rational Software
Dual Headquarters:
Rational Software
18880 Homestead Road
Cupertino, CA 95014
Tel: (408) 863-9900

Rational Software
20 Maguire Road
Lexington, MA 02421
Tel: (781) 676-2400

Toll-free: (800) 728-1212
E-mail: info@rational.com
Web: www.rational.com
International Locations: www.rational.com/worldwide

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