Rational® software

IBM

IBM Rational System Testing Family

The role of highly skilled professionals in software development has never been more difficult—or more crucial—as organizations try to complete application development faster and more cost-effectively than ever before. Test teams that use manual testing exclusively are struggling to keep up. Because they cannot test all the code, they risk missing significant defects. At the same time, they cannot stop testing long enough to learn new skills.

IBM Rational® automated testing tools help test teams adopt automation gradually, find more defects in less time and improve testing skills on the job. IBM Rational testing tools can:

- *Provide the means to introduce automation gradually*
- *Transform the test plan into the guide for all daily work*
- *Track requirements changes and communicate defects to developers automatically*
- *Enable testers to expand test coverage and depth without adding time to the schedule*
- *Build testers' skills on the job*

The IBM Rational system testing family
The IBM Rational system testing family includes:

- *IBM Rational Functional Tester for Java and Web*
- *IBM Rational Robot*
- *IBM Rational Performance Tester*
- *IBM Rational Functional Tester Extension for Terminal-based Applications*
- *IBM Rational Team Unifying Platform™*
- *IBM Rational TestManager (bundled with all but the Rational Functional Tester Extension)*

Ease into test automation
By using IBM Rational TestManager software for manual test administration and then adding IBM Rational Robot software for regression testing, a team can gradually move toward the benefits of test automation. With IBM Rational TestManager, you can:

- *Create a test plan that organizes the manual testing workflow*
- *Log the steps and results of manual scripts as they are performed*
- *Generate automated reports of manual test results and metrics*

When ready to automate their regression testing, testers can then adopt IBM Rational Robot. With IBM Rational Robot, you can:

- *Improve the scope and frequency of regression testing*
- *Plan, track and execute regression testing through IBM Rational TestManager*
- *Advance to functional testing using the same tool*
- *Extend test scripts to further improve test coverage and depth*

The IBM Rational system testing family includes the IBM Rational Team Unifying Platform, a set of integrated capabilities that automates defect tracking and requirements management and provides centralized management of all types of testing. IBM Rational Unified Process® features, which provide built-in guidance on the testing process itself, are also included.

Uncover more defects

When used with the team-unifying tools, each of the IBM Rational functional and performance testing tools make it possible to uncover more failures earlier in development, when problems are less expensive and less time-consuming to fix.

IBM Rational Functional Tester for Java and Web

IBM Rational Functional Tester for Java and Web is an advanced functional and regression testing tool used to test applications built with Java™ 2 Platform, Enterprise Edition (J2EE), Java 2 Platform, Standard Edition (J2SE™), HTML, Dynamic HTML

(DHTML), XML, JavaScript™ language, Java applets and—when combined with Rational Functional Tester Extension for Terminal-based Applications—3270 and 5250 terminal-based applications. To facilitate testing, the IBM Rational Functional Tester for Java and Web:

- *Includes IBM ScriptAssure™ software, which produces resilient, reusable test scripts and validates the interactive data an application generates, minimizing script maintenance*
- *Creates verification points for dynamically changing data by allowing testers to set the range of acceptable responses*
- *Creates test scripts in Java, bringing all the advantages and strengths of an industry-standard language to testing, including improved tester-developer collaboration.*
- *Can install into the same shell as IBM WebSphere® Studio and IBM Rational Rose® XDE Developer software, simplifying developer access to test scripts*
- *Plays back tests recorded on Microsoft® Windows® and Red Hat Linux® operating systems without modification, enabling testers to validate application functionality on multiple platforms easily*
- *Provides object mapping, which allows testers to use a central object repository to verify and modify any tested object, automatically transmits changes to all appropriate test scripts and eliminates the need to build new scripts each time the application is modified*
- *Enables the testing of 3270 (IBM @server® zSeries® server) and 5250 (IBM @server iSeries™ server) terminal-based applications when combined with the Rational Functional Tester Extension for Terminal-based Applications (sold separately)*

Chad Mason, manager of test automation for Choice Hotels International, reports:

"With IBM Rational Robot, it is much easier to get someone up and running than with other functional testing tools. The Basic-based language is much more intuitive—whether someone has programming language experience or not. That alone allowed us to jump-start and save time."

Choice Hotels International— which franchises more than 5,000 hotels, inns and resorts around the world—estimates that since it began using IBM Rational testing tools, it has saved close to US$1 million through increased application and Web availability as a result of higher quality releases.

IBM Rational Robot

IBM Rational Robot supports testing applications built in a wide range of environments and languages, including HTML and DHTML; Microsoft Visual Studio .NET, Visual Basic and Visual C++ development systems; Java; Oracle Developer/2000; PeopleSoft; and Sybase PowerBuilder. IBM Rational Robot provides full, native support for all .NET controls, including VB.NET, Microsoft Visual C#, Visual J# and Managed C++ development tools. The IBM Rational Robot is designed to simplify testing by:

- *Automating functional, distributed functional and regression tests for applications constructed with Microsoft Visual Studio .NET WinForms and WebForms and simplifies configuration testing of .NET applications*
- *Providing test cases for menus, lists, alphanumeric characters, bitmaps and many more objects, and tests custom controls and objects under varying conditions*

- *Helping to ensure testing depth by testing the hundreds of properties of an application's component objects, such as Microsoft ActiveX Controls, OLE Control Extensions (OCXs), Java applets and many others*

IBM Rational Performance Tester

IBM Rational Performance Tester can help facilitate every aspect of effective system performance testing: planning, test design, automated and manual creation of performance test suites, execution against various configurations, reporting and analysis. To help enable businesses to test system performance efficiently, the IBM Rational Performance Tester:

- *Helps to verify that an application meets or exceeds its response criteria when tested pre-deployment, in production operating environments and under heavy loads*
- *Has an advanced scheduler that enables testers to emulate complex user behavior without programming*

- *Points to the source of performance problems, such as a strained CPU or network issues, and reports them graphically*
- *Enables reuse of functional test scripts in load testing and in production monitoring with IBM Tivoli® Monitoring for Transaction Performance software (sold separately)*
- *Scales from a few to thousands of users, which are called Virtual Testers; ships with 50 Virtual Testers—additional Virtual Tester packs are available separately*
- *Offers as an added option IBM Rational Performance Tester Extension for SQL, which enables performance testing of relational databases*

IBM Rational Team Unifying Platform

For all your testing needs, regardless of the test product used, the IBM Rational Team Unifying Platform™ includes:

- *IBM Rational Unified Process (RUP®)—a knowledge base of proven software engineering best practices that guides testers through the test process itself; RUP methodology is fast becoming the industry-standard process for software development*
- *IBM Rational RequisitePro®—a requirements management tool with analytical capabilities that automatically flags test cases potentially affected by changes made by functional and performance testers*
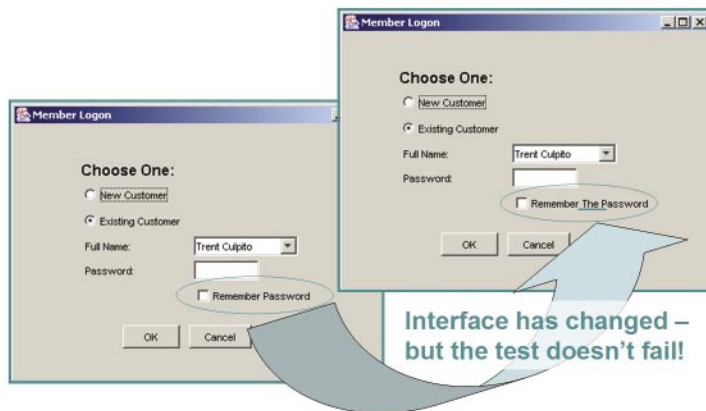

Figure 1. IBM ScriptAssure lets testers adjust the sensitivity of test scripts so that the scripts do not break when minor interface details are changed.

- *IBM Rational ClearQuest®—a customizable defect and change-tracking tool that automates and simplifies the sharing of defect information with developers*
- *IBM Rational ClearCase® LT—a version-control tool for all artifacts as they evolve over the course of testing*
- *IBM Rational TestManager—the tester's desktop, which provides control, management and reporting of all test activities from a single, central point*

Become a better tester

IBM provides a rich online resource for testing articles, plug-ins, code samples, white papers and other content written by testing-industry thought-leaders and available through the Rational Domain on the IBM developerWorks® Web site. The self-paced enrichment on testing automation, trends and test issues includes links to testing training and to Webinars on current topics of interest.

During testing, RUP can also provide extended assistance on the testing workflow itself, helping testers determine what to do next. RUP includes tool mentors that provide detailed guidance on how to effectively use the tools in the IBM Rational system testing family.

Specifications

Note: Each product in the family has its own specifications, which are available at **ibm.com**/rational.

These are general guidelines; additional host and target platforms are supported by some products.

Hardware:
- *Intel® Pentium® processor at 500MHz or higher*
- *CD-ROM drive*

Memory and disk space:
- *256MB or more RAM*
- *1.3GB or more disk space*

Host platforms for test creation and execution:
- *Microsoft Windows NT® 4.0 (Service Pack 6a), Windows XP or Windows 2000 operating system*

Target platforms for remote test execution:
- *Microsoft Windows NT, Windows 2000 or Windows XP; or Red Hat Linux*

Other prerequisites:
- *Internet connection recommended for support services*
- *Netscape Navigator or Microsoft Internet Explorer*

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