

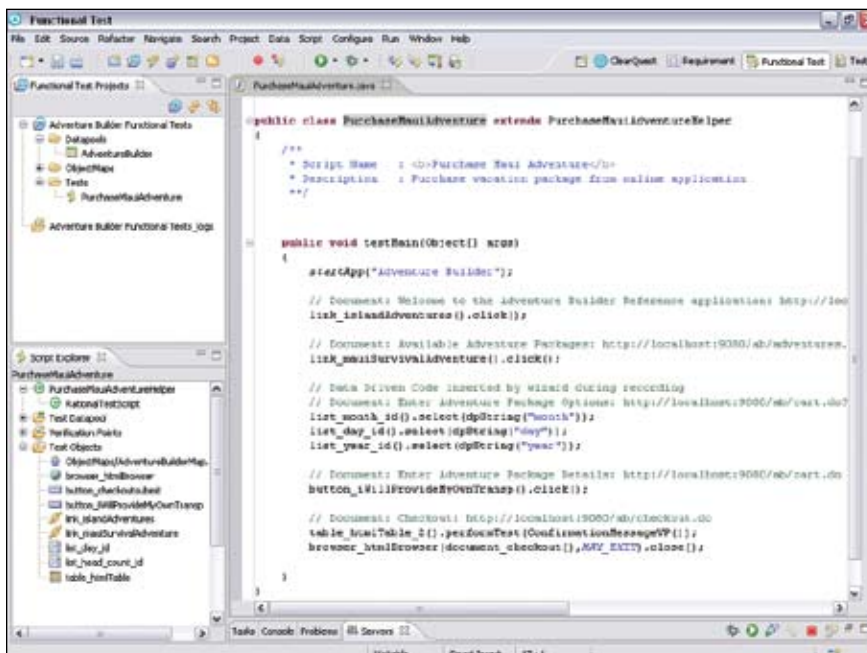
IBM Rational Functional Tester

Highlights

- **Provides robust testing support for Java, Web, SAP, Siebel and Microsoft Visual Studio .NET Windows Forms software-based applications**
- **Enables you to choose your scripting language—Java or Microsoft Visual Basic .NET—for test script customization, editing and debugging**
- **Helps validate dynamic data with multiple verification points and support for regular expression pattern matching**
- **Helps eliminate rework; minimize the re-recording of scripts; and reduce script maintenance (by ensuring playback even when underlying applications change) through the IBM ScriptAssure technology**
- **Helps improve productivity by supporting version control to enable parallel development of test scripts and concurrent usage by geographically distributed teams**

IBM Rational® Functional Tester software enables the automation of functional and regression testing. Designed with a deep understanding of Java™, Web, SAP, Siebel and Microsoft® Visual Studio .NET Windows® Forms software-based user interface (UI) technologies, Rational Functional Tester software combines a robust recorder of user actions with multiple customization options and intelligent script maintenance capabilities to ensure a test creation and execution process that's resilient in the face of application change.

Rational Functional Tester software—accessible to novices and experts alike—is suitable for testers, GUI developers and anyone else on the project team responsible for ensuring effective software development.



Testing an application with IBM Rational Functional Tester software

Though functional testing can be performed using a purely manual approach, automation brings great benefits to the software development organization:

- *It makes it possible to perform regression testing—testing for feature regression from one build to the next—without tying up tester resources.*
- *It frees QA departments from maintaining and executing basic tests, encouraging the creation of additional, thorough tests.*
- *It automates non-testing activities such as test-lab machine preparation and database configuration.*
- *It reduces human error that can occur during activities such as test-step execution and test-result recording.*

Any organization that relies on its own application development to serve the needs of its business or its customers recognizes that application quality is a prerequisite for success, not a luxury. However, ensuring that these applications work in a manner that meets or exceeds project expectations requires a level of project discipline and efficiency that can be hard to achieve. Typically the domain of quality assurance (QA) departments, functional testing concerns itself with verifying the successful implementation of requirements in categories such as functionality, usability, appearance and many others.

Lower the cost of functional testing

The benefits of automated testing are quickly lost when teams must expend a lot of manual effort to keep test scripts up to date throughout the project. Rational Functional Tester

software uses the IBM ScriptAssure™ advanced technology to learn UI control characteristics, thereby identifying the same controls in newer builds despite underlying changes. These characteristics are stored in an object map that can be shared across scripts and projects. With this map, changes to object recognition characteristics affect all test scripts, simplifying maintenance. And new, advanced object-map search and filter capabilities in the Rational Functional Tester application have made maintenance even easier.

Used to compare actual data with expected data, verification points inserted within test code support the usage of regular expressions to validate dynamic content such as an ever-changing and ever-increasing order number, or time and date stamps. This capability further reduces the need for test maintenance activities to accommodate changes in the application(s) under test.

Unlimited customization potential

Teams quickly learn that test script modification and enhancement are inevitable. Everything from simple looping constructs to advanced file manipulation or operating system interaction may be necessary to get the most out of an automated testing tool. Rational Functional Tester software offers an unprecedented choice to its users in recognition of this need—the choice of mainstream, industrial-strength languages hosted within equivalently robust test editors and debuggers.

Rational Functional Tester software can produce test scripts using either 100 percent Java code hosted within the Eclipse Java Developer Toolkit editor, or using 100 percent Microsoft Visual Basic .NET code hosted within the Microsoft Visual Studio .NET editor. Anyone familiar with these programming languages can quickly modify existing code, as well as create custom libraries that can be called by other test scripts. Coding is greatly simplified thanks to the Eclipse and Visual Studio .NET editors, both of which provide advanced editing features such as automated code completion and advanced debugging options. Customization possibilities are limitless, and communication of test scripts with development is vastly simplified. In fact, GUI developers and other members of the development team can access Rational Functional Tester software from within their Eclipse or Visual Studio .NET code-based integrated development environments (IDEs) to create their own tests.

Supporting diverse team needs

As teams take advantage of Rational Functional Tester advanced scripting capabilities, the need to store multiple versions of a test script becomes important. Add to this the complication of supporting geographically distributed test teams, and the need for multisite parallel development becomes clear. Rational Functional Tester software supports the use of parallel development, enabling the version control of test scripts. Colocated teams can use the IBM Rational ClearCase® LT product that ships with the Rational Functional

Tester software, and upgrade to the full IBM Rational ClearCase solution, to enable work with geographically dispersed teams.

Built on open standards

The Java scripting capabilities of Rational Functional Tester software are built on top of the Eclipse architectural framework and its test, trace and monitoring extension, called the Test and Performance Tools Platform (TPTP). Both are open source projects that provide shared, open source services across tooling environments that target application development, testing, deployment and monitoring. Usage of this infrastructure can promote benefits ranging from the elimination of proprietary data store formats to enabling support for both internal and third-party customization and contribution. An investment in tools based on Eclipse and TPTP can help avoid vendor lock-in and encourage future innovation.

Integral part of the IBM Rational Software Delivery Platform

IBM Rational Functional Tester software is an integral component of the IBM Rational Software Delivery Platform—the industry’s most complete and powerful solution for software system creation and application lifecycle management. The platform provides automation support for all aspects of software development. It unites team members by enabling them to share information effectively with one another and with others’ tools.

Integration into the Rational Software Delivery Platform is designed to ensure access to various software development lifecycle assets such as application requirements, and it enables a shared user experience across team disciplines. From the perspective of functional testing, this ensures the ability of developers and testers to build, share and analyze functional tests from within the same user interface they use to construct, test, deploy and monitor their applications using other tools within the Rational Software Delivery Platform.

IBM Rational services

With an eye on what’s right for your business, IBM offers a variety of services to complement IBM Rational tools and best practices. Rational services are available for large and small projects to help you build team skills, reduce the time to productivity when implementing a new solution, and maximize the return on your investment in IBM Rational tools.

- *IBM developerWorks®: Rational is the technical resource for the community of development professionals using or evaluating IBM Rational tools and best practices. An informative online resource, developerWorks: Rational offers a variety of downloads, materials, discussion groups and education designed to help you utilize IBM Rational solutions to best advantage. To access the latest trial evaluation software, visit: ibm.com/developerworks/rational/downloads.*

- *IBM Rational software training offers a curriculum that includes courses covering all the software development capabilities. A blended curriculum of instructor-led and Web-based training provides a variety of options to suit your organization’s education needs.*
- *The IBM Rational worldwide staff of professional services consultants brings years of experience to help you lay a solid foundation for successful software development projects. You can engage Rational professional services on large-scale customized consulting projects that are tailored to meet your organization’s unique needs, or you can engage your local account team for short-term assistance with a single challenge. Several types of packaged services are also available, including offerings that provide an objective assessment of your software development capabilities, help you deploy a new tool or methodology, or enable you to produce tangible assets through a facilitated workshop.*
- *IBM Rational customer support helps ensure that your project keeps moving forward with the help you need, when you need it. These maintenance programs offer efficient problem resolution with both online access to tens of thousands of technical notes, patches and upgrades, as well as direct access to a talented team of support engineers. IBM Software Maintenance is the standard maintenance offering, and IBM Technical Support Account Services can supplement this offering, according to your business requirements.*



About IBM Rational software

IBM Rational quality management solutions offer testers leading-edge support for performance testing, functional and regression testing, manual testing, developer testing, and test management. With Rational solutions, QA teams can easily manage and address issues with application functionality, usability, reliability, scalability and performance. Supporting a broad range of environments and built on a comprehensive, self-managing platform, Rational quality management tools enable tighter collaboration of distributed test assets and information across the entire delivery lifecycle. The Rational iterative lifecycle approach to quality provides testers with higher-quality code, improving their productivity and enabling them to meet tight deadlines.

For more information

To learn more about IBM Rational Functional Tester software, visit:

ibm.com/software/awdtools/functional

© Copyright IBM Corporation 2007

IBM Corporation
Software Group
Route 100
Somers, NY 10589
U.S.A.

Produced in the United States of America
05-07
All Rights Reserved.

ClearCase, developerWorks, IBM, the IBM logo, Rational and ScriptAssure are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product and service names may be trademarks or registered trademarks or service marks of others.

The information contained in this documentation is provided for informational purposes only. While efforts were made to verify the completeness and accuracy of the information contained in this documentation, it is provided "as is" without warranty of any kind, express or implied. In addition, this information is based on IBM's current product plans and strategy, which are subject to change by IBM without notice. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, this documentation or any other documentation. Nothing contained in this documentation is intended to, nor shall have the effect of, creating any warranties or representations from IBM (or its suppliers or licensors), or altering the terms and conditions of the applicable license agreement governing the use of IBM software.