

IBM Rational Functional Tester

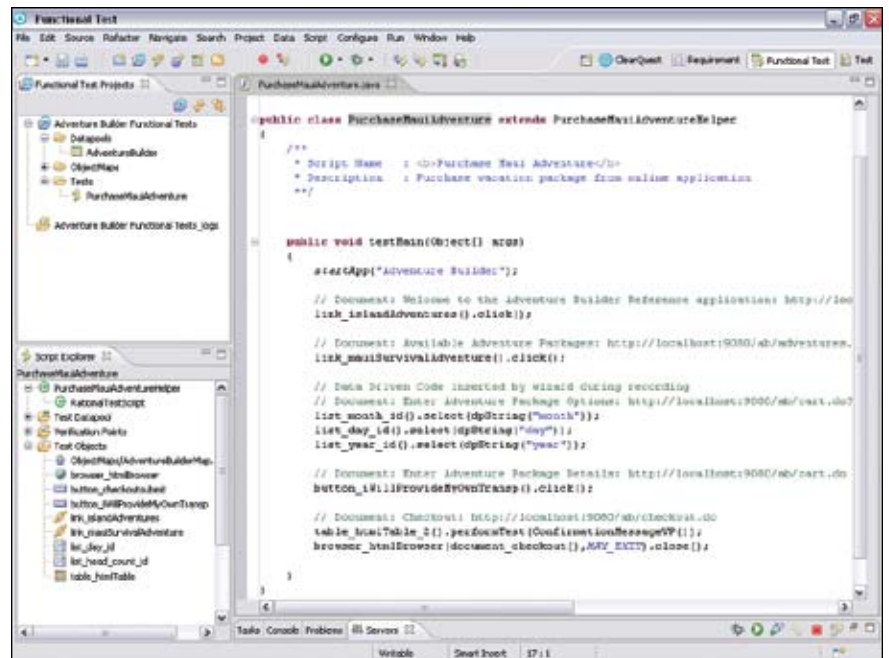
Highlights

- **Provides robust testing support for Java, Web, SAP, Siebel and Microsoft Visual Studio .NET Windows Forms applications**
- **Allows the use of keywords to bridge the gap between manual and automated testing**
- **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 rerecording 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 technologies, Rational Functional Tester software combines a robust recorder of user actions with multiple customization options and intelligent script

maintenance capabilities to help 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 who needs to ensure 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, such as:

- *Enabling regression testing—testing for feature regression from one build to the next—without tying up tester resources.*
- *Freeing quality assurance (QA) departments from maintaining and executing basic tests, encouraging the creation of additional, thorough tests.*
- *Automating nontesting activities such as test lab machine preparation and database configuration.*
- *Reducing 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 its own needs or its customers' needs 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 QA departments, functional testing allows users to verify the successful implementation of requirements in categories such as functionality, usability and appearance.

Lower the cost of functional testing

The benefits of automated testing are quickly lost when teams expend great manual effort keeping test scripts up to date throughout the project. Rational Functional Tester software uses the IBM ScriptAssure™ advanced technology to learn user interface (UI) control characteristics, thereby enabling the software to identify 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 Rational Functional Tester can help make maintenance even easier.

Used to compare actual data with expected data, verification points inserted within test code can 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 helps reduce the need for test maintenance activities to accommodate changes in the application(s) under test.

Bridge to automation

Often inefficient and inconsistent, testing can result in much time wasted creating, organizing and managing the most mundane tasks. Keyword testing, a framework for organizing and managing test steps, allows testers to rapidly create and reuse test scripts as needed. Using Rational Functional Tester software, testers can develop automation scripts that are associated with keywords, and enable easy reuse and improved efficiencies. When testers use these automated scripts in concert with IBM Rational Manual Tester software, they can enable the incremental adoption of automated tests by using keyword testing as a building block to automation. And then organizations can build a collaborative test environment between manual and automated testing tools that can eliminate the friction and gap between manual and automated testing—and leverage the strength of the entire testing team.

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 organizations avoid vendor lock-in and encourage future innovation.

Integrates with the IBM Rational Software Delivery Platform

IBM Rational Manual Tester software is an integral component of the IBM Rational Software Delivery Platform. One of the industry's most comprehensive and powerful solutions for software system creation and application lifecycle management, the IBM Rational Software Delivery Platform provides automation support for the aspects of software development. Further, it can help unite team members by enabling them to share information effectively across various tools.

Integration into the Rational Software Delivery Platform is designed to help 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 helps ensure 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.



About 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.

About IBM Rational quality management 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 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 the tight collaboration of distributed test assets and information across the delivery lifecycle. The Rational iterative lifecycle approach to quality is designed to provide testers with higher-quality code, and to help them improve their productivity and meet tight deadlines.

For more information

To learn more about IBM Rational Functional Tester software, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/awdtools/tester/functional

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Software Group
Route 100
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U.S.A.

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01-08
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