



Highlights

- Delivers functional, integration and performance test automation
 - Helps reduce risk with continuous testing of application integration and messaging platforms
 - Enables collaboration among subject experts, developers, and test automation specialists for improved business outcomes
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IBM Rational Test Workbench

Test automation for highly complex and integrated applications

Application delivery has changed significantly in just a few years. Business applications and processes are increasingly built on interconnected systems, exchanging information over a wide variety of client and server platforms. Integration, business process management (BPM) and messaging technologies are key enablers of this interconnectivity but add another level of risk to application delivery. Therefore, test teams need a test automation solution that can address their key technology risks and enable a holistic view of application quality.

IBM® Rational® Test Workbench provides functional, integration and performance testing capabilities to help meet the challenge of testing highly integrated and complex applications. Codeless, wizard-driven test authoring helps accelerate the delivery of test suites, while integration with IBM Rational Quality Manager can drive collaboration and align priorities and objectives at each stage of your integration project.

Delivering continuous integration testing

Developing integrated applications adds another element of risk to software delivery, no matter which integration technology you are using as your foundation: service oriented architecture (SOA), business process management (BPM), message-oriented middleware or others. Validating that the service interfaces and message formats can support the intended business function is critical to avoiding late-stage integration problems that can be very costly to repair.



Rational Test Workbench provides extensive support for SOA and leading integration technologies. You can develop service-level tests by recording existing system behavior, leveraging business process execution language (BPEL) models or modeling data exchange in your visual test designer. Predefined transports and message formats for IBM WebSphere®, TIBCO, Software AG, JMS, Oracle UDDI/SCA and the web simplify the creation of tests. You can build your own transports and formatters to deal with your organization's custom messages or use the IBM library of industry standards for SWIFT, IATA, EDI, HL7 and other industry formats.

With Rational Test Workbench you can visualize the connections and dependencies between services and components to plan your integration test strategy. With the ability to stub out services that are unavailable for testing, you can implement continuous integration testing to help reduce the risk of errors in your application. Coverage reports identify which processes and services have been covered and which are still missing, so you can optimize your test development.

Optimizing functional and regression testing

Although the integration layer is an increasingly important dimension of testing, your user interface (UI) is also likely to include business logic that requires testing. Rational Test Workbench integrates with Rational Quality Manager to optimize the planning, authoring and execution of these functional test suites.

With Rational Quality Manager, your business-side subject expert can quickly capture these important client-side scenarios and collaborate with developers and test automation engineers

to help prioritize and identify process flows for automation. Rational Quality Manager combines risk-based assessment and review workflows with work items that can be viewed by the tester directly in the Rational Test Workbench. Test execution status and test results are returned to Rational Quality Manager so stakeholders can have a common view of status and progress.

Keywords and work items help testers identify the application workflows for automation. Storyboard testing combines English-language narrative with UI screen captures to simplify the creation of automated functional tests. Test steps and data-driven or validation actions can be added or modified by selecting objects in the screen capture. Shared object maps and IBM ScriptAssure® technology help you build tests that are resilient to UI changes. Rational Test Workbench can support web, Java, Eclipse, .NET, Silverlight, Flex and other UI technologies to complement the service-level testing needs of your projects.

Validating performance and scalability

With Rational Test Workbench you can reuse your service-level tests to create performance scenarios and help validate the scalability of your integration infrastructure. You can capture resource statistics at the server level that can help identify system bottlenecks that are limiting performance; monitors are also provided for TIBCO Rendezvous, EMS and Hawk. You can examine the flow and content of messages during runtime to repair tests or identify new test scenarios.

Web and application servers are an important part of the integrated application environment. Rational Test Workbench includes application-level load testing that uses a record-playback model designed to accelerate the delivery of

large-scale, user-independent performance test suites. An automatic data correlation engine can recognize server responses that are dependent on a user's data entry and automatically identify them for reuse in later server requests. The engine can be extended with user-defined correlation rules for applications with special dynamic behavior. The Rational Test Workbench solution can support a wide range of application technologies including web, Citrix XenApp and XenDesktop and TN3270. The solution can also support SAP technologies including SAGUI, NetWeaver and JCO, along with Oracle technologies, including Siebel, PeopleSoft and eBusiness Suite.

Enabling earlier lifecycle testing

One of the challenges of testing integrated applications is that the testing often depends on services or components that might not be available. Rational Test Workbench is designed to integrate with Rational Test Virtualization Server, a solution that helps you create virtualized application environments that enable you to bypass your dependence on third parties components and test earlier in the lifecycle.

Rational Test Workbench lets you create virtualized services from your existing integration tests and publish them to a centralized repository for use with Rational Test Virtualization Server. With a web-based console you can use these services to create, modify and deploy virtual application environments that can be used to support different testing activities and scenarios. Virtual services can be replaced with the real application components once they become available for testing; and the virtual environment can be changed without having to reconfigure the underlying application, helping to avoid costly configuration errors and related risks.

Rational Test Workbench can automatically deploy a virtual environment to run an integration test. The solution can also be deployed manually to support other test and development activities including manual or exploratory testing. With Rational Test Workbench and Rational Test Virtualization Server, you can implement an earlier and continuous testing process that can help reduce risk and accelerate the delivery of your integrated application.

Advancing your agile development practices

Rational test automation and lifecycle management solutions can help reduce development cycles and improve the return on your software quality activities, so your teams can:

- Improve alignment with business objectives
- Increase agility and predictability with continuous integration testing
- Address the costs of deploying and configuring complex test environments

Why IBM?

IBM offers one of the most complete solutions for testing complex and integrated applications delivering functional, regression, load and integration test automation to help boost cycle time, reduce cost and improve quality. The solution can be integrated with IBM Collaborative Lifecycle Management (CLM), providing lifecycle traceability and alignment with business requirements and objectives. In addition, you can take advantage of flexible licensing and a strong base of service providers.

For more information

To learn more about **IBM Rational Test Workbench**, please contact your IBM sales representative or IBM Business Partner, or visit: ibm.com/software/rational/products/rtw

See also:

IBM Rational quality management and testing

ibm.com/software/rational/offerings/quality

IBM Rational Performance Test Server

ibm.com/software/rational/products/rpts

IBM Rational Test Virtualization Server

ibm.com/software/rational/products/rtvs

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