Rational testing solutions for TIBCO Software

Automate lifecycle testing of TIBCO Software integration projects

Highlights

- Create BusinessWorks and iProcess integration tests faster

- Simplify test development with support for EMS, Rendezvous and ActiveEnterprise messages

- Optimize the testing process with a detailed BusinessWorks coverage report

- Identify performance bottlenecks with statistics from EMS servers, RVDs, RVRDs, BusinessWorks and Hawk

Finding a way to test complex, distributed applications seems more difficult than ever. Test environments are more expensive, require more effort to deploy and configure, and take valuable time away from the testing cycle itself. With faster time-to-market goals and the rising cost of software quality, testing is often seen as just another bottleneck in the application delivery process. How can you streamline test processes while maintaining a balance between quality and speed to market, while controlling cost?

IBM Rational® test automation solutions for TIBCO Software help address the challenges of testing highly integrated and complex systems. They can capture, send and receive any kind of TIBCO message and deliver end-to-end test automation from unit testing through performance assessment. Service virtualization helps reduce dependencies on unavailable services, enabling you to test earlier in the development cycle. It also helps enable the delivery of 24x7 test environments to help contain costs. With Rational software, you now have a solution to address the time, cost and quality dilemma.

Testing a TIBCO integration environment is complicated. What may appear to be a seamless integrated business process is actually a connection of many enterprise systems using a variety of SOA, BPM and messaging technologies. Messages may be sent over many interfaces,

often changing form on the way to their destination. However, these environments implement mission-critical business processes where the impact of poor quality can be extremely high. And time-to-market pressures demand business agility which means these processes will probably require frequent changes.

What do these challenges mean to your software quality process? What do you need to know to help ensure the quality and integrity of your business process as they change over time? You need to know what services and messages have been tested and which ones need repair. You need visibility into all message types and protocols to validate communication at each step of the process. Your time-boxed test cycles will require you to find creative ways to manage the impact of components that are late for delivery, or third-party services that are not yet available, or the extremely long time it may take to configure and deploy a proper test environment. You will need to assess the scalability and performance of your integration infrastructure to ensure you can manage the volume of transactions running through your system. And you'll need to do this over and over again. You will need Rational test automation.

Simplify test automation

Rational provides test automation for all aspects of TIBCO technology—BusinessWorks, iProcess, BusinessEvents, ActiveMatrix, Rendezvous (RV) or Enterprise Message Service (EMS). Rational test solutions can capture, send and examine any type of TIBCO message to create tests that can be shared and reused across phases of the development and maintenance lifecycle. With the ability to capture and simulate the behavior of application services and end points, Rational test automation solutions help remove dependencies that can affect your test cycles and implement a continuous integration testing strategy to accelerate testing and help reduce the risk of late integration defects.

Connect to TIBCO BusinessWorks and ActiveMatrix to automatically build a test project with everything you need to start creating and implementing test cases. A model is created that shows how the system fits together and guides you through the process of selecting the components and operations to include in the test. The TIBCO BusinessWorks Coverage Report gives precise details of the test coverage for each process: which of the activities were called and which ones were missed, so you can optimize your test coverage. Native integration with TIBCO iProcess allows you to start cases, acquire and modify work items, close cases, even trigger events to move cases on from one step to another.

Build your own transports and formatters to deal with your organization's own messages, or use our library of industry standards for SWIFT, IATA, EDI, HL7 and more. And with support for middleware environments from IBM, Oracle, Software AG, SAP and others, Rational can handle the most complex and challenging integration projects.

Testing performance and scalability

You can reuse your functional integration tests to create performance test scenarios. Combine your tests in different ways to simulate real-world transaction workloads that assess the scalability of your integrated infrastructure before deploying to production. We provide a wide range of probes for RV, EMS, BusinessWorks, system statistics, Hawk and others to help you pinpoint the source of an application bottleneck. Our use of the iProcess API allows you to stress the system without the need to develop a GUI-level load test script.

The TIBCO BusinessWorks Performance Report shows you where the performance flaws are in your process or which activities are using all the system resources. The powerful charting interface compares old runs with new runs, so you can see if your tuning efforts are making the problem better or worse.

Accelerate testing

Any enterprise system or application connecting into BusinessWorks, iProcess, or the integration bus is a dependency that can affect your ability to perform testing in a timely manner. Rational test solutions can use the same messages captured during the integration tests to create virtualized services (or stubs) which can replace these systems and allow development and testing to proceed as planned. You can build a centralized library of simulated services to create and deploy virtualized application environments, simplifying the creation and deployment of test systems and allowing testing earlier in the lifecycle. Test virtualization is a key weapon in dealing with the challenges of complex test infrastructure.

Better, faster, simpler testing

With Rational test automation solutions, your SOA, BPM and other integration projects can go into production faster to help meet business expectations. You deploy services more confidently, knowing they have been fully tested at every stage and that all test results are thoroughly documented.

Use service virtualization to enable testing earlier in the lifecycle, accelerating application delivery and reducing the risk of costly late-stage project integration errors. Service virtualization also enables the delivery of cost-effective, 24x7 test environments helping you contain the rising costs of quality driven by these complex applications. Transform test data into valuable insight with reporting that lets you assess the current state of software quality helping you to answer the question, "Are we ready to release?"

Rational test automation solutions are easier to adopt, deploy and use. They offer one of the most complete solutions for creating virtual services and supporting industry formats. Our test automation solutions integrate with the industry-leading IBM Rational solution for Collaborative Lifecycle Management (CLM) providing lifecycle traceability and alignment with business requirements and objectives for the most complete quality management offering in the industry. And because these solutions are from IBM, you get the extra value of flexible licensing as well as a strong—and growing—partner base including IBM Global Business Services and many system integrators.

For more information

To learn more about IBM Rational software quality and testing solutions, please contact your IBM sales representative or IBM Business Partner, or visit:
ibm.com/software/rational/offerings/quality

See also:

- **IBM Rational Test Workbench:**
  ibm.com/software/rational/products/rtw
- **IBM Rational Performance Test Server:**
  ibm.com/software/rational/products/rpts
- **IBM Rational Test Virtualization Server:**
  ibm.com/software/rational/products/rtvs

Additionally, IBM Global Financing can help you acquire the software capabilities that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize a financing solution to suit your business and development goals, enable effective cash management, and improve your total cost of ownership. Fund your critical IT investment and propel your business forward with IBM Global Financing. For more information, visit:
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