Rational software

Fujitsu New Zealand achieves full lifecycle test management with IBM Rational Quality Manager

Overview

■ *Challenge*
To ensure software quality and meet customer demands for require-ments traceability and timely progress reports, Fujitsu New Zealand needed to automate its labor-intensive, manual test man-agement processes

■ *Solution*
Fujitsu New Zealand began using IBM® Rational® Quality Manager to plan tests, manage test assets, enable requirements-based test-ing and improve collaboration across the testing team. Fujitsu New Zealand offers customers view-only access to IBM Rational Quality Manager assets, providing an up-to-date view of project progress that includes reports detailing tested and to-be-tested requirements.

■ *Key Benefits*
  • *Test management time reduced by an estimated 20 percent*
  • *Time spent tracing requirements to test cases has been reduced by 60 percent*
  • *Improved insight into all aspects of the testing process enables managers to make better-informed decisions, allocate resources, improve predictability and mitigate business risk*

As the world's fourth-largest IT services provider, Fujitsu provides professional expertise, consulting and application services to customers in 70 countries and virtually every sector. Headquartered in Wellington, New Zealand, Fujitsu New Zealand has earned a reputation for designing, building, operating and supporting comprehensive business solutions across multiple markets including government, retail, utilities, financial services and telecommunications.

When Fujitsu New Zealand designs and implements a business applica-tion solution, the testing team performs rigorous system testing before the application is delivered to the client for user acceptance testing (UAT). In the past, this testing process comprised numerous manual tasks, which made it

difficult to track progress, trace require-ments to individual test cases and manage test assets. This lack of insight into testing activities made it difficult to manage or improve the process, make informed decisions and meet customer requests for requirements traceability and reporting.

"Much of our test management was heavily dependent on manual activities," says Tracie Stapp, practice leader, software testing, at Fujitsu New Zealand. "Tracing requirements to test cases and producing reports require a huge amount of effort when done manually, and in many cases our customers were unwilling to incur those extra costs. As a result, there were some instances in which requirements were missed during system testing."

"We have better visibility for all aspects of testing, which mitigates risk. On the test management side, Rational Quality Manager has saved me about 20 percent of my time, and we spend about 60 percent less time on requirements traceability across the team."

—Tracie Stapp,
Practice Leader,
Fujitsu New Zealand

To address these challenges, Fujitsu New Zealand adopted IBM Rational Quality Manager software, a collaborative, comprehensive quality management solution built on the IBM Rational Jazz® platform. "With Rational Quality Manager, we can see exactly what is going on with all aspects of the test process," says Stapp. "We use traceability reports to quickly determine which requirements have and have not been covered. We set up an account for our customers to use, so they can generate the reports whenever they want and see where we are with the testing effort. That saved a tremendous amount of time, because we no longer had to track down all the information to generate the report."

Starting the first project

Stapp's group within Fujitsu New Zealand is responsible for system testing on a wide range of projects from relatively simple Web sites to complex Service Oriented Architecture (SOA) applications and Web services. The first project managed using IBM Rational Quality Manager involved three testers, 200 test scripts and dozens of test cases. Stapp installed and configured Rational Quality Manager in about a day. She then put together a test plan and began loading the project requirements provided by the customer. For now, requirements are managed directly in Rational Quality Manager, but the group also has plans to track them through a dynamic link to IBM Rational RequisitePro® requirements management software.

As the team developed each test case in Rational Quality Manager, they linked it to a requirement. When issues were found during test execution, the team used IBM Rational ClearQuest® change management software to record the defect. This combination enabled full lifecycle traceability from requirements to tests and defect resolution.

A collaborative platform

Rational Quality Manager has helped Fujitsu New Zealand testers prioritize their individual assignments and work together in a collaborative environment. Stapp uses Rational Quality Manager to create work items, assign them to team members and then follow up on the tasks. "After assigning the work items, I can see from my dashboard exactly what people were working on and what has been started. That is invaluable," she notes.

With all of their testing assets in one repository, the team has also minimized duplicated efforts and time spent looking for information. "With Rational Quality Manager, we all have a clear view of what everyone is doing. If I'm writing a test script, I can quickly determine if someone has started writing a similar script under a different test case. That was something we could not do before," says Stapp.

Better informed decisions

Stapp reports that Rational Quality Manager has helped her manage change, track progress and identify areas of improvement for the team. "In the past, we used documents and spreadsheets for our test assets and there was no way to tell who changed what," she recalls. "Using Rational Quality Manager, I can analyze the impact of changing requirements, I can see the changes we've made to test cases and I know when a feature in the code is broken from one release to the next."

"Tracking progress against project milestones is another activity that was very time-consuming in the past," she continues. "In Rational Quality Manager, everything is tracked automatically. I can identify areas of the project that are falling behind and make resourcing decisions to help them catch up. I'm able to evaluate the abilities of individual testers, so I can match tasks to specialized skills and ultimately get more done on a more predictable schedule. The insights have also helped me identify some training needs for the staff, which is a benefit I didn't really expect from a test management product."

Faster test development, more coverage and less effort

Rational Quality Manager keywords have enabled Fujitsu New Zealand testers to reuse common steps between tests and begin to incorporate automated test scripts that are powered, for example, by IBM Rational Functional Tester software. "We found keywords to be extremely helpful because we often have to repeat the same test steps—for example, logging in—numerous times. We created keywords for these procedures, and now we can quickly assemble complete test scripts from our existing keywords, which makes regression testing much easier for us," says Stapp.

Going forward, the team plans to further accelerate the test process by integrating IBM Rational Quality Manager with other IBM Rational software quality management products they already use, including IBM Rational Functional Tester, IBM Rational Performance Tester and IBM Rational Service Tester for SOA Quality software.

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Fujitsu New Zealand has already realized numerous gains since adopting Rational Quality Manager. "Our requirements coverage is far better than it has been in the past," says Stapp. "We have better visibility for all aspects of testing, which mitigates risk. On the test management side, Rational Quality Manager has saved me about 20 percent of my time, and we spend about 60 percent less time on requirements traceability across the team. We've increased customer satisfaction at the same time, because we can deliver access to traceability and progress reports without increasing costs."

For more information

To learn more about Rational Quality Manager software, contact your IBM representative or IBM Business Partner, or visit **ibm.com**/software/awdtools/rqm