IBM

Essential Computer Systems Automates Software Testing, Saves Time and Money with IBM Rational® Robot

Overview

■ **The Challenge**
Essential Computer Systems wanted to conduct automated regression testing on an ongoing basis rather than at the end of each technical build.

■ **The Solution**
Using IBM Rational Robot, Essential was able to automate much of its testing procedures.

■ **The Benefits**
Ensuring a more complete test coverage every time has reduced the costs per release. Automating testing processes has saved significant staff time, freeing up resources for other projects.

About Essential Computer Systems

Founded in 1990, Essential Computer Systems is an Australian company that provides software and services to financial services institutions, specialising in online and back-office products for superannuation funds, funds administrators and banks.

Essential's flagship e-commerce products ePASS and SuperData are industry leaders. These applications support members, advisors, call centres, Web developers and back-office employees in administering superannuation contributions and payments.

The company employs more than 80 staff in its offices in Adelaide and Melbourne.

Enhanced Software Testing Increases Product Quality and Reliability

Essential takes time to understand the individual requirements of each type of user and uses that knowledge to build solutions that satisfy these needs. This approach results in products that are appropriately positioned and easy to extend and change. However, building such complex systems involves an enormous amount of testing, a time-consuming and expensive process.

"We wanted to increase the overall quality of our products by making sure the test coverage was 100 per cent every time, regardless of the size of the development effort," said David Brebner, Head of Product Strategy at Essential. "We were also interested in seeing if we could improve the speed of getting the products to market by increasing the frequency of repeated testing.

"In our market it's not a case that someone who finishes a month earlier is going to grab the competition," he said. "We have long-term contracts with customers who trust our solutions. However, being there faster is important from our perspective because it means we can work together with our customers to completely satisfy their needs in the timeframe of a normal project."

IBM Rational Robot Revolutionises Testing Processes

Essential decided to use IBM Rational Robot to automate its testing processes. The company was impressed by the system's excellent support for Sybase PowerBuilder, which it uses for much of its development work.

"When we purchased IBM Rational Robot, it did exactly what it said it would do and exactly what we expected it to do," said Brebner.

IBM Rational Robot is a general purpose test automation tool which can be used to perform functional testing of client/server and Web applications. It enables software developers to uncover more defects by extending test scripts with conditional logic to cover more of the application. The system also provides test cases and includes built-in test management processes.

Higher Quality Drives Cost Reductions, Increases Customer Satisfaction

IBM Rational Robot has streamlined the process by which Essential develops and executes its testing procedures, by automating as much of the testing cycle as is possible in each release.

This has enabled the company to increase the testing coverage and frequency which catches bugs earlier in the process. Testing staff now manually cover all the product areas, knowing the unit tests that cover the core of the product are automatically completed.

"Developing a higher quality product first time around through more complete test coverage means the costs per release for regression tests are lower," said Brebner.

Test Automation Saves Time and Resources

IBM Rational Robot is saving Essential significant time by allowing test engineers to script processes which then run automatically. With automated testing, one hour of manual testing time becomes one minute of scripting time.

"This year, we will spend about 700 hours writing scripts," said Brebner. "This equates to a saving of 700 hours of testing time. In subsequent years, we may only do 200 hours of scripting and increase the test coverage to 1,000 or 1,500 hours.

"In this industry, there are always corner cases that you don't get to every time," he continued. "IBM Rational Robot is allowing us to get to the point where we can script the corner cases and then run them repeatedly. If we were testing manually, we may not always get to them."

Brebner said that Essential expected to generate a return on investment within two years. "That doesn't include the testing we couldn't do or didn't get around to previously," he added. "We have five testers using IBM Rational Robot and are saving a significant amount of money."

Future Plans

Essential is planning to offer test coverage for its customers when they integrate Essential's products into their technology environment.

"The fact of the matter is, the product does what it's supposed to do," said Brebner. "It does exactly what it says on the box. It has helped us with our day-to-day work in exactly the right way. It will save us money in the way we anticipated. That's a very powerful message."

IBM