

# OCI and RGA: Ensuring Quality, Now and in the Future.

## *A Case Study*

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## The Scenario

Reinsurance Group of America (RGA) is a leader in the global life reinsurance industry, with approximately \$2.9 trillion in policies and assets of \$44.7 billion (2015).

RGA uses Automated Underwriting and Risk Analysis® (or AURA®), a proprietary rules-based electronic underwriting solution, to quickly approve “clean” cases and route more difficult cases for underwriter review. Over the last decade, AURA has expanded and evolved into a multi-function e-underwriting and management solution, currently handling more than 3 million life, health, and annuity applications each year.

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Growing and maintaining a solution of this size requires frequent testing and improvement. All application services must handle RGA’s sizable workload, while maintaining a positive user experience. OCI worked closely with RGA to research, integrate, and implement the right testing tools, all while empowering RGA’s teams to handle future testing and maintenance.

OCI’s contributions included:

**Testing of the Legacy AURA system:** OCI worked with RGA’s architects and Quality Assurance team to identify goals and build a series of tests, using open source testing tools and wikis. OCI conducted extensive research on the various tools (FitNesse, Geb, WebDriver, and more) and ensured that they would work together as needed. OCI then completed health check tests for several AURA Legacy load-balanced servers, to periodically check for and identify failing servers. The health checks were integrated into a custom reporting script so that results could be parsed and sent to relevant parties in an email summary report.

**AURA Next Generation testing efforts:** OCI also created a new integration fixture intended for use on the next generation of AURA. This fixture combines the web automation capabilities of WebDriver and Geb, with the organization and testing tools of FitNesse. Using this fixture, RGA's Quality Assurance team is able to dramatically increase the number of tests that can be run for AURA's user interface, while reducing the need for developer intervention.

Beyond running these tests, OCI also organized and documented the web application and server testing which, along with training, has empowered RGA's Quality Assurance teams to define and run their own tests, with minimal programming resources or developer intervention. This allows RGA to identify and resolve issues more quickly, and reduce downstream correction costs and potential production reliability issues.

As RGA Senior Project Manager remarked:

Because we are an agile shop doing new development, changes are happening to our interfaces continuously. It is not unusual to have new deployments to QA multiple times per day. What the FitNesse / Geb framework has given us is a tool to automate some of the tedious and repetitive UI regression testing, freeing the QA analysts to do focus on the higher value functional testing. Because the tests are built on Geb page objects, the tests have proved very resilient to constantly changing user interface styling and composition. At the same time, we've leveraged the Geb framework to do integration tests, which are run with every deployment in our continuous integration environment. This has allowed us to catch integration and regression issues before ever deploying to QA, which saves everybody time.

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