
Case Study

For Functional Testing of an Insurance Product



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1. The Client

The client is a global management consulting, technology services and outsourcing company with more than 110 offices in 48 countries. They developed an insurance application for a premier health insurance company in the US. The health insurance company focuses on excelling in delivery of health care products and services at affordable prices to approximately 88 million Americans.

The client decided to outsource testing to the Gateway and eliminate the risk of overstaffing. The existing testing practices at the client's place were ad-hoc. Since the scripts and test cases were not maintained properly, the client was not receiving the desired results. Gateway took over the job of testing the application and ensured that the releases were on time.

2. Business Need

The e-insurance application addresses key areas of health insurance through its complete suite of 20 modules. The application covers entire processes such as Customer registration, New Business Quote, Coverage, Policy Issuance, Renewals, Cancellations, Census Summary and Mass Benefit Change.

The goal of the testing engagement was to:

- Reduce the test cycle time using test automation tools
- Enhance the effectiveness of test automation by using innovative methods
- Ensure that product has successfully cleared the functional testing and to gather pre-production defects
- Improve the testing process and provide recommendations to enhance
- Productivity

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3. The Challenges

➤ **Lack of Proper Documentation**

Reference documents for testing the application was not provided to Gateway. The client could share only the 'level one' tests scenarios. Gateway's domain experts overcome this challenge by quickly understanding the application through a series of interactions with the Client.

➤ **Improper existing Test Process**

As the Testing activities at the client location started before the completion of the development, it lead to rework of activities. Gateway over come this challenge by implementing its proven QA & Testing methodology.

4. Gateway Approach and Solution

The Project was kicked-off with a pilot. One key module was identified for the pilot and the entire test plan, test cases and test results were presented to the client within 45 days. This phase presented an opportunity for the client to experience and evaluate Gateway's project management, testing methodology, documentation and reporting capabilities. Impressed by the strenghts demonstrated during the pilot, the client agreed to continue testing for the rest of the modules.

Test Execution and Results approach

A team of QA engineers led by a QA lead with proven domain and technical experience were involved in testing the application. Test Automation experts were involved in creation and execution of automation scripts during the automation phase.

- Comprehensive Functional and Regression testing performed for 30 builds including both positive and negative test cases..
- Test Automation was performed using RationalRobot.
- 350 test cases divided into 6 scenarios, were created within 6 weeks time.

Result

- Automation reduced the regression testing efforts by 90%.
- 100% test coverage achieved due to domain and technology experties.
- None of the deadline were missed during the entire duration of the project.

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5. Benefits

5.1 Some highlights of Gateway's contribution

1. Authentic QA Partner

During the entire project duration, Gateway served as a partner and an extended arm of the client's QA team. Gateway provided assistance in terms of environment setup, understanding and documenting requirements of the application.

2. Improvements to the testing process

- Incorporation of Gateway's test methodologies, processes and documentation strengthened the client's testing initiatives.
- Extensive usage of parameterization enabled easy handling of dynamic objects ensuring minimal efforts in script changes for future builds.
- Test case id was mapped to the respective scripts thereby significantly reducing the script maintenance effort.

3. New Reporting initiatives

Incorporation of Traceability matrix and "Read me document" as a part of test document deliverables helped the project team trace test cases to the functional requirements. This also served as a valuable guide to ascertain the impact of new feature additions and changes.

5.2 Business Benefits

Gateway helped the client meet the release deadlines without compromising on the quality of the application.

- Significant reduction in testing time due to the use of modular scripting techniques - 70% of the scripts generated for one module were reused there by lowering TCO and future testing costs for the client.
- Eliminated risk of improper resource utilization by right staffing and effective project management. Saved client cost of maintaining additional resource.

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- Eliminated the risk of opportunity loss due to delay in product release which helped in releasing a bug free application on time.
- Saved significant time and resources by implementing new process and techniques in test automation.

6. Tools and Technologies

Platforms	: Java, Javascript, XML, XSL, LDAP
Operating systems	: AX UNIX, Windows 2000
Databases	: Oracle 9i
Web server/ Application server	: Web sphere
Hardware	: 6 workstations and one server
Test Tools	: Rational Robot