
Case Study
For
Manual Testing of Web based
Application Development Product (Onsite
and Offshore)



Gateway TechnoLabs Pvt. Ltd.
8th Floor, Corporate House, Judges Bungalow Road, Bodakdev,
Ahmedabad - 380 054, India
Tel: +91 79 2685 255/5/6 Fax: +91 79 26858591
E-mail: gateway@gatewaytechnolabs.com
URL: www.gatewaytechnolabs.com

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Case Study for Product Testing of Java Based Software Development Tool in Dual Shore Model	

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1. The Client

A UK based software Product Company extending their software services to major financial and banking sector companies across European region. Their product enables organizations to significantly reduce the development time and cost of building front-end applications to support multiple user interfaces and presentations through a single process.

2. Business Need

The Software/Application Development tool has been introduced in market since 2002 and is continuously being enhanced to meet specific client requirements. Enhancements included improvement in the existing features as well as addition of new features.

The modifications/enhancements/additions required the client to continuously test the application. Client was looking for an offshore test partner who could:

- Understand the current application in limited time period and also visit onsite for the knowledge transfer session of around 4 weeks.
- With development team, plan the testing and define the approach for each release for next couple of releases.
- Develop the test cases to pledge the complete coverage of each new feature and its integrity with the existing.
- Ensure that the tool quality is intact with the new features added - by performing functional and regression testing.
- Test the application within the given timelines adhering to the product release schedule.
- Eventually test and support all the testing requirement of client's products and solutions.
- Work in dual shore model (combination of onsite and offshore activities) where the QA Lead would visit onsite frequently to gather the requirement and get back to the offsite location to work and get the work done by the extended team which was ramped up during the product release.

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3. The Challenges

- Being a tool to develop software applications, understanding technical procedures and underlying business rules was difficult and complex.
- Close communication with client was required as the product being developed rapidly in accordance with the end user requirements.
- Test cases had to be extensive to have complete coverage of new features added and its integrity with existing features.
- Team management in very effective way to lead the way through to client's expectations up to the mark.

4. Gateway Approach and Solution

Gateway Offshore Testing team was preferred as an extension to client's existing test team to develop suite of test cases for the new functionality for manual testing. Gateway was selected from the list of the other competitors based on the overall selection process and was awarded the pilot product testing assignment for three months. Gateway was successful in meeting the client's expectations in the pilot phase leading to a multi-year engagement for product testing.

Gateway QA team had to guarantee the product quality at each release with regression testing of existing and new functionalities.

Being a website and web based application development tool, the software under test was technically very challenging and hence QA Analyst had to work with a mind set of developer to test the application. Test cases written had to be extensive and in-depth to cover each permutation and combination involved to ensure the best quality of the tool and easy usage for developers. To overcome the technical limitation, Gateway derived module based approach with the tool testing. For each module and functionality under test, Gateway followed the following approach:

- Basic training with the tool was provided offsite to save the time.
- Enhanced training was planned onsite for the duration of 4 weeks during which the knowledge understanding was carried out through daily review meeting, query solving sessions, etc.

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- Modular test plan was generated and approved by the client. All documentation from QA team was initially reviewed by the QA Lead prior to sending for the final review/acceptance by the client.
- QA Lead was responsible for planning and allocation of the work, day to day communication with client, knowledge transfer, release-planning and product improvement initiatives.
- The team was responsible for test case generation, test case updation and final approval by the client.
- Test execution, reporting, daily/weekly/monthly bug reports and delivery/release notes were provided to the client.
- Scenario based testing was also coupled with rounds of exploratory testing to check for the integrations after each regression test cycle. Based on the outcomes of exploratory testing, the test scenarios/cases were updated.
- Gateway team enabled the client to stabilize the application by virtue of finding more defects which were not uncovered during the earlier test cycles.

5. Tools and Technologies

- PLATFORM: Microsoft Windows
- TECHNOLOGY: Core Java, JVM 1.4.2 and higher, Servlet, JDK 1.4.2 and higher, Jetty (Internal server), Tomcat (External server)
- DATABASE: SQL Server 2005, MySQL
- TOOLS: Scarab for bug tracing, Skype, MSN, Gotomeeting for client co-ordination.
- TESTING TYPES: Functional Scope Validation, Regression Testing, Usability Testing

6. Benefits

- On time release(s) with extensive and in-depth testing.
- Heavy time saving and cost reduction by effective process set-up and offshore team management by a dedicated Tech lead.
- Quick team ramp-up at any time with the back up resources in place.
- All testing related to this product and its solutions was performed under one roof resulting in the reduction of time and cost to the client.