



## THREESIXTY LOGICA TESTING SERVICES

# CASE STUDY : MANUAL AND AUTOMATION TESTING

**CLIENT** Our client is a U.S. based global leader in cloud business intelligence (BI) and corporate performance management (CPM). A cloud-based solution that allows companies and nonprofits of all sizes to enhance the strategic value of their finance organizations and elevate their CPM cycle. It offers the leading cloud-based revenue planning, budgeting and forecasting software for cash flow projection, sales planning & balance sheet forecasting. Its cash flow and sales forecasting software combines a powerful financial modeling engine with an easy-to-use, drag-and-drop interface.

### APPLICATIONS & REQUIREMENTS

- We were required to work on Budgeting and Forecasting project where there is a short release cycle of 2-3 months.
- Client wanted to streamline their release process without impacting their ongoing projects.
- Involvement in providing complete testing to the client for various releases.
- There is a short release cycle of 2-3 months and within each release, our client launches multiple major and minor projects which affects top players in various industries which impacts their revenues.

### TOOLS AND TECHNOLOGIES

- BugZilla
- Asana
- QMetry
- Ranorex
- Selenium Web Driver
- J Meter
- QTP
- Perforce
- Gantt tool
- Java
- Oracle, MySQL

### PROBLEMS STATED/ CHALLENGES FACED

- Client adds new products on a regular basis, currently we are handling 6 products.
- Different kinds of testing had to be performed - API, BI, Functional, Embedded, Localization.
- Our team was responsible to automate their feature including manual testing which was very challenging.
- Different teams were located at different locations, co-ordination with each team with time zone difference proved a difficult task.
- Client also required real time updates to critical issues which were possible to affect the release.

- Deployment was also a challenge because at times we received builds frequently to deploy and test.
- Product was based completely on numbers, which was tough to manage.
- Managing a large number of Regression and Acceptance test runs in short time of release.
- In a couple of products we got the implementation very close to release.

### PROCEEDING & SOLUTIONS

- Assign resources for each major/minor projects with one module lead and individual responsible of his/her module.
- Seeing the QA skill set, we scheduled training of products - this saved time.
- We designed a different set of test plans for API, Embedded, Localization etc. In localization we supported Tier 1 and tier 2 languages, therefore prepared different test data based on languages that made testing easy.
- It's wasn't possible to automate all test cases in parallel to release but we found a solution to it - Identify the p1 testcases, reviewed it first with development team to make sure that around these cases there are no more development changes, finally we automated the approved test cases to reduce the maintenance part.
- To have better coordination, we allotted QAs in different shifts to have more overlapping hours, it worked well for us and the client as well.
- Root Cause Analysis of production issues on weekly basis, this actually gave the team an idea what are the different issues the client faces in different situations.
- Earlier there were a couple of QAs doing the deployment, we learnt this deployment process and assigned at least one QA for each product to perform deployment.
- QAs enhanced their accounting skills by the trainings provided by the Accounting team.

- Visualising the upcoming features and their integrations with current features, we created upgraded tests instead of randomly generating the test cases.
- For handling different frameworks we developed competency within the team.
- We separated the test cases on base of expertise QA that takes less time in running them instead randomly picking any area.
- Within the team we assigned different environments with different browser versions to have complete compatibility testing.
- QA involvement from Day-1 helped in understanding the product and plan the QA Cycle effectively.

## ADVANTAGES OF THE TOOLS USED

- BugZilla – an open source widely used bug tracker, easy in usage and its user interface is understandable for people without technical knowledge. Easily integrates with test management instruments, automates documentation.
- Asana – uses My Tasks list to prioritize your daily tasks, Focus Mode to increase concentration. Integrate with Harvest for time tracking. Upload files and add attachments to any Asana task. Follows tasks and receive notifications to your Asana inbox or personal email when changes have been made or comments have been left.
- QMetry - test plan management, test case organization management, test execution management, defect management, change management, release & build management.
- Ranorex – automates the testing for any technology, out-of-the-box Robust Test Automation, script-free testing for non-programmers, seamless integration into existing environments.
- Selenium Web Driver - implementation of listeners - a much awaited feature. Better features for Ajax testing. Unlike RC you don't have to start a server in webdriver. Keyword driven framework is very easy to build in webdriver.
- J Meter - a pure Java tool, which allows to execute this tool in any platform (i.e. platform independent), has a lot many configuration mechanism like Http Request, FTP Request, java request, SOAP Request.
- QTP – easy for a non-programmer to understand QTP and start adding test cases. Excellent Object Identification process / mechanism, supports different addins like Java, Oracle, SAP, .NET, Web Forms, Siebel, PeopleSoft, Web services, Main frame (Terminal Emulator) etc. QTP comes with an inbuilt IDE, which is simple and easy to use. Loads of inbuilt properties and methods in QTP as well as inbuilt functions in VBScripts, supports XML. Test reporting with all necessary details for analysis is provided.
- Perforce – P4 keeps track of your working copy on the server. There are two GUI client applications which offer the best functionality: P4Win and P4V, of which P4V is newer and more easy to use but not as feature-rich. Working copy definitions were nice and flexible.

## BENEFITS TO THE CLIENT

- The challenge was met and delivered keeping in mind the client's fast paced development cycle and the business impact on client as well as their partners.
- Client was always updated with current testing progress and roadblocks – helped focus on major issues.
- Multiple review cycles assured that there was no requirement miss for testing. This further helped in reducing production issues, which needed patch releases, saving both time and cost for the client.
- Test Cases update and reusability increased, thus saving more time.
- Involvement in Root Cause Analysis helped team in understanding the common issues on production environment and decreased the issues over a period of time.

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