



Test Coverage for Finance Analytics Platform

Application:

Analytical and Research
Application for Capital Markets

Services Offered:

Functional, Regression,
Exploratory, Database,
Automation, API and Compatibility
Testing

Tools:

SoapUI, Postman, Redmine,
Cisco Jabber

Key Highlights

Key Success:

Round the clock QA Services with a significant increase in Test Coverage supporting various customized versions of the application. Indium Software Test Team supported continuous integration for multiple builds.

Domain:

Capital Marketing

Duration:

3 Years

QA Team:

5 Test Engineers

Technology:

.NET, SQL Server, Java, Angular JS;

OS: MAC and Windows

Client

The client is a global financial market intelligence and analytics company providing ratings, research, and risk and policy advisory services.

Application Overview

Client's application is an analytical and research toolkit for financial analysts to reproduce specific tasks and optimize decision making. The platform allows users to create financial models, perform peer analysis, sensitivity analysis and generate customized reports and analytics dashboards amongst other intricate financial intelligence use cases.

1 Business Challenges

- Complex Application Architecture and exhaustive features
- Continuous business workflow changes to meet the trends in capital marketing
- Demands a vast knowledge of Analytical formulas such as YOY logics, Growth % etc. to test the application on a full swing. Resource skillsets should, therefore, fit appropriately to project requirements

2 Testing Challenges

- » Extensive support on all three modules of the application with a wide knowledge on Web, Offline, CDL modules
- » Operating with multiple development teams (vendors) required centralized QA governance and standard processes
- » Multiple Environment Support with more than one iteration in a sprint: extended QA support on both SIT and UAT environment
- » Regression testing on a weekly basis due to new builds on the application on a regular interval of time
- » 6000 test executions across multiple browsers and 2 different OS combinations with a 2 weeks' delivery cycle.

3 Our Approach

- » Indium Software Testing Team initiated the engagement by organizing a precursor phase for knowledge sharing that would help prep work for the financial intelligence based functional knowledge.
- » Defined QA Standards and Governance for assigning project resources and test assets
- » Prepared Test Strategy and Test Plan based on an end to end workflows of the application
- » For data related workflows, the scenarios were designed for relevant mathematical logic
- » Performed end-to-end testing including Workflow execution, Error handling, Log validations, DB checks
- » Conducted Test iterations on Workflows for every test release
- » Optimized test cases for every test iteration and release ensuring 100% test coverage
- » Optimized test cycles to reduce release time to further UAT and eventually production releases
- » Executed relevant test cases and entire workflows during defect retest with a new set of data to make sure the impact areas do not show bug results

4 Solution and Test Execution

Test Management:

- » Open source tools were used for test progress, defect management and configuration management
- » Redmine for test management
- » VSTS tool for bug triage and reports management
- » Selenium is used to automate the test scripts
- » Resource productivity tracker to report utilization and optimize efforts accordingly on a weekly basis

Product Knowledge:

- » Knowledge sessions on a weekly basis to discuss new enhancements and requirements among the Business team
- » Product recommendations for the modules that required additional focus. Good understanding of integration between modules helped us identify the root cause analysis for every failure.



Defect Knowledge:

- » Defect triage
- » Standard defect log maintenance
- » Defect descriptions for unstable functions and rework issues
- » Continuous log tracking using logDNA tool by user id and ensure all the error and warnings are reported with appropriate analysis/root cause steps

Reporting: We consolidate the defects and prepare test summary reports on a daily basis marking the failures across the requested test combinations. Any blocker issues are called out in the daily Stand-ups. Continuous updates are provided to the client with regards to the health of the project.

5 Value Additions

Process: With a streamlined QA process for testing objectives in place, Indium Software team performed end to end testing including API testing, Database validations, Log verification, Business Impact full regression for major releases and smoke tests for every patch release.

Compatibility testing is done for all cloud releases and sanity testing for defect fixes and impacted areas. Quick deployments / Installation of products with proven Quality Program has reduced the Post Launch Defects by 80%.

Test Executions & Defect Report Rate:

- » Our Domain expertise contributed to maximum test coverage.
- » Setting up of a QA Implementation Process cycle has increased the Defect Identification Rate by 80%.
- » Maintained Regression suite which captured all the key functionalities to make sure that the new build does not impact the workflow of the application.
- » Exploratory testing helped us to focus on the defect-prone areas unveiling more defects. Our team often has quick clarification and collaborative triage with the onsite team to identify the pain areas based on compatibility results and escalate it to the client to prioritize their development task.

Communication:

Cisco Jabber and Web EX are used as IM to communicate between onshore/offshore teams. Seamless communication between teams helps us operate efficiently. Daily stand-ups helped us to plan/delegate the task for the day and to also overcome roadblocks.

Brainstorming sessions with the business team laid the platform for us to express our own ideas on implementing any new features or any enhancements to the application

Maintained one click dashboards for design, execution and defects with slicer settings along with graphical representations.

We kicked off this project with a 2-member team focusing only on functional testing which then in a short span of time became a 5-member team as the scope increased to cover more products. We provided round the clock QA support to accommodate the QA needs in a faster release cycle. Indium Software's proven best practices are appreciated and implemented by the client.



6 Customer Relationship

Our team received accolades (You Made a Difference) from the client on multiple instances for the test process we have in place, defect reporting/tracking through the tool, addressing clarifications through clarification trackers and helping in defect RCAs initiated by QA team is much appreciated by Customer. Review the engagement by conducting monthly governance meeting with higher management and it also supported to showcase our accomplishments along with some inference for better product enhancement. Regular customer visits have also helped us to understand/share expectations for continuous customer engagement.

Client Testimonial

“They are constantly available, easy to work with, and extremely communicative. They expand test coverage hours and help increase productivity cycles. They provide quick responses and seamless information exchange within existing toolsets and communication channels.”

“I think that QA Lead and his team have been vigilant in logging and finding issues, they continue to provide efficient testing and are completing code coverage on schedule. They are learning the software at an acceptable pace and have been able to help us identify bugs in areas that we have not had time to document.

I am very satisfied with the team’s overall performance and look forward to working with them.”

– Director, Software Quality Assurance



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