



Testing CRM in Education Domain – Success Story

Application: Enrolment Management Application

Services Offered: Functional, Regression, Automation, API Testing Performance, Security & Accessibility testing services

Tools: QTP and Selenium AppScan and WebScarab, WAVE, WAT, JAWS, Jira, Hi-Wire

Client

They are a leading solution provider to educational institutions in the US. Their solution helps educators, administrators, students and families from K-12, and through college. Their learning and management system allows schools to access each student's progress; the CRM platform helps institutions to manage day-to-day contact with students, create cross-media marketing campaigns, and respond to enquiries in a timely manner. The Enrolment Management Services product covers enquiry, promotional offers, and retention management services; and marketing solutions to reach students that are the right fit for their institutions.

Key Highlights

Key Success:

Manual effort reduced by 50%

Domain:

Education

Duration:

6+ years

QA Team:

14

Technology:

Asp.net, SQL 2005, AJAX and IIS

Application Overview

It is an enrolment management application, used at universities for students to enroll for different courses. The application has modules such as Dashboard, Survey, VIP, content and import. Students can have online chats with other contacts about subject topics and stay connected till the completion of their courses.

Business Challenges

Product had some critical functionality and concurrent users' issues, which subsequently had a huge repercussion on their company's reputation.

Multiple vendor relationship was a primary challenge for our client due to bandwidth constraints and they were in need of a vendor who offer end to end testing services.

Lastly, a vendor to rationalize their testing processes.

Testing Challenges

An independent QA vendor to assist them to automate regression suite and bring down the regression cycle time to keep pace with sprint cycle. Some of the key challenges that client faced were test coverage, test efficiency, testing time and automation.

A QA partner to maintain accuracy, reliability and effectiveness of the application during enrolments, perform load test to ensure maximum number of concurrent users and find other performance bottlenecks to improve the response time of the portal.

Our Approach

We have devised an approach to meet both the 'Testing' and 'Business' challenges faced by our client.

- KT to understand the application functional features and architecture.
- Unique test design to ensure test coverage.
- Perform gap analysis and suggest a suitable automation framework.
- Identify test cases for Automation.
- Create Check-lists to ensure the application functionality.
- Adopt agile methodology and take part in Scrum Meetings.
- Parallel QA team, strategic overlap of time – for real time collaboration.
- Collaborative approach to performance test plan and implementation.
- Test the application by scaling concurrent users for critical business transactions.

Our Solutions

The testing services we offered are listed below

- Functional Regression
- Performance Testing
- Accessibility Testing- ADA Compliance (Americans with Disabilities Act, Section 508)
- API testing
- Security Testing

The main objective is to perform Automation & API Testing for their enrolment management system. We have designed and implemented hybrid framework at business process level. We tested reliability, accessibility, and provided dynamic execution of test suites on need basis. We created and upgraded a repository of re-useable test artifacts. We also created a unified process and model for web application security testing and risk modeling. We used IBM Rational AppScan tool through a VPN connected server to perform Vulnerability Scanning.

We have also recommended OS and database level parameters for subsequent production deployments for one application and tuned session parameters for scalability.

Metrics

Totally 1685 test cases were automated across all 4 application and 820 defects were reported during execution of the project. We took complete ownership of regression script maintenance and used Rational AppScan and WebScarab for Web Application Vulnerability Scanning.



If you know how important API Testing is, be sure to check out Indium's

API Testing Services

Resource growth over a period of time

Year	2010	2011	2012	2013	2014	2015	2016	2017
Employee Size	9	7	11	20	10	10	12	14

Our Value Adds

Business Value

Vulnerability Scanning and Accessibility Testing (Section 508 Compliance) were suggested by us in order to improve the PR and User Base respectively.

Total Cost of Testing

Client was using QTP. As the number of users increased gradually, the licensing cost also went up exponentially. We did a thorough tool assessment study and suggested a cost effective tool - Selenium (open source tool) without compromising on quality. This eventually reduced their overall testing cost drastically.

Our team acquired application knowledge in less than 2 weeks. Over a period of time, we were able to get control of smoke testing that happens on the production for every sprint release and on-going maintenance of automation scripts. Release cycle efforts were reduced from 4 weeks to 10 days. Enhanced Test Coverage and implemented the better Performance Test Approach.

Advantage Indium – Offered Managed Testing Services

- Offshore Testing Initiation
- Automation Testing Team Ramp up
- Implementation of Performance Test Approach
- Maintenance of Regression Suite & Performance Testing
- API Testing & ADA Testing
- Enhancing Automation Coverage and QoQ reduction in Test Cycle Time
- On Demand QA