



Testing Content Curation Portal

Application:

Content Curation Portal

Services Offered:

Compatibility Testing, Regression Testing, User Experience Testing, Exploratory Testing and Patent Testing.

Tools:

J2EE, Java Server Faces; Middle-ware: Merlin; OS: Linux

Key Highlights

Key Success:

30% more test executions performed in 30-35% lesser time

Domain:

Life Sciences

Duration:

5+ Years

QA Team:

24

Supported:

1500 test executions across 12 OSs/Browsers combinations in 4 days

Client

Our client is a 108-year-old organization, who is the world's authority for chemical and scientific information. The application is an online portal with 75 million chemical substances information, providing the global scientific community with access to the most current chemical and related scientific information available immediately through databases.

Application Overview

Application is an online database portal where scientists, academicians and professionals can log in, search & gather information on chemicals using names, reactions and other related information.

1 Business Challenges

Client has never worked with an IT offshore vendor. Client had to overcome the reluctance to IT outsourcing.

- » Wanted a Transaction / Outcome Based Pricing Model
- » Since their portal has more than 75 million chemical substances information, client wants their vendor to ensure confidentiality, availability and integrity of data

2 Testing Challenges

- » Required Infrastructure – Compatibility Lab
- » Required consulting on browser trends
- » No compatibility Test Process & Framework
- » 1-week Delivery Cycle – Execute 1500 test cases with 12 OS and browser combinations



3 Test Approach

Test Lab Setup: With the understanding of the test requirements, we prepared a test plan with test strategy.

Our team set up the test lab with the latest trending OS and Browsers – Windows 60% and Mac OS 40% with the compatible JRE for each browser.

Jump Start Kit: To ensure there were no major issues in the requested OS and browsers combinations, our experts performed a quick smoke test and maintained a Jump Start kit with recording of known failure patterns across browsers.

With the given set of test cases, we performed test execution. To ensure no deviation in the schedule, test progress was monitored. As newer versions of browsers were tested, repository with compatibility checklist and defect failure patterns were updated frequently.

Test Management: Open source tools were used for test progress, defect management and configuration management. Used Quality Centre for test management.

With User Experience testing, we recorded the responses times for various test scenarios.

Product Knowledge: Our Strong product knowledge helped us to proactively monitor the module changes based on the change requests.

We could identify the modules that required additional focus. To support scripted testing for increased test coverage, 20% exploratory testing was performed.

Defect Knowledge: For supporting the defect triage with the onsite team, we maintained a defect log in Quality Center and additional clarifications notes.

Root Cause Analysis was performed to identify the key origin of the defect which helps the onsite team to address the source.

Reporting: We consolidated the defects and prepared test summary marking the failures across the requested test combinations.

We ensured delivery in line with the customer expectations ahead of Release.

4 Differentiating Factor

Process: Streamlined QA process to the testing objectives. On each iteration, compatibility (60%) and regression (40%) testing was performed.

To ensure streamlined operations and uninterrupted delivery, continuous process improvement was introduced.

Test Executions & Defect Catch Rate: With the same delivery timeline, test execution ramped up from 800 to 1200. 30% more test executions performed in a week in 30-35% lesser time.

During the initial days of engagement, delivery cycle was 9 days. However, with the increase in the test executions from 800 to 1200 per week, streamlined process helped to reduce the delivery cycle to 5 days. Now with 1500 test executions per week, the delivery time line is 4 days.

Defect catch rate was improved by 18% and the quality index is now at 24%. Exploratory testing helped us to concentrate on the defect prone areas and unveiling more defects.

Our team had quick clarification and collaborative triage with the onsite team.

Identifying the pain areas based on compatibility results. We escalate it to the client to prioritize their development tasks.

Communication: With the help of Skype, inter team communication took place. WhatsApp group helped quicker message communication within the team.

Streamlined communication happened between the onsite team and extended team.

Team was divided into small internal teams for delegation and assignment of tasks. To share technical knowledge, improve communication skills and for developing the team spirit, internal teams had weekly meetings.



5 Our Value Adds

We have helped our client with capacity planning and technology consulting to give them the right direction they need. With our Transaction based pricing model, our client was able to predict budget and reduce risk involved in the assignment.

A trained pool of resources on the product is maintained and ramped up on need basis. Jump start KT helps for faster transition.

By reducing the compatibility testing overheads, we saved 50% – 60% thereby increasing the testing ROI. Dedicated infrastructure with multi OS systems helps in easier maintenance and helps to reduce the cost on frequent updates.

We kicked-off this project with an 8-member team focusing only on compatibility testing. Over a period of time, we have ramped up the team size to 24 in order to additionally offer regression and user experience testing.

The performance report on OS/Browser compatibility matrix was prepared. With top performing browsers based on the product response times recorded and reported helped to identify the bottlenecks of the reported modules.

We developed and maintained high level test cases to perform additional coverage. Module based SME observe the changes across modules. RCA on the defects found done by the SME to address the origin.

Including the extensibility to mobile platforms, we provided end to end compatibility solutions. Based on upcoming market releases and defect trends, we suggested the test matrix to the customer.

6 We initiated the Extended QA Team Supporting the Clients Round the Clock

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Test Executions / Week

Test Execution	240	600	800	1200	1250	1500
Years	2010	2011	2012	2013	2014	2015

Delivery Cycle

Days	6	7	10	7	4	3
Years	2010	2011	2012	2013	2014	2015



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Compatibility Testing

Regression Testing

7 Customer Relationship

Our team received appreciations from the customer on the defect reporting and clarifications process, for reporting product defects and helping in RCA.

Ensuring operations are in line with the customer expectations, we conducted review meeting of the Governance team monthly.

Sharing of newsletters – InSync and a video magazine capturing the work, fun, about the team and internal events made our work more enjoyable and interesting.

With regular customer visits and visiting onsite teams, we ensured seamless support and customer relationship.

Client Testimonial

“We totally understand it is a holiday weekend for everyone there and appreciate your willingness to take this assignment on with fewer staff..... Your summary is particularly helpful as well... We appreciate your efforts in accommodating this special assignment, you guys rock, as always”

– VP, Application Development



INDIA
Chennai
+91 44 6606 9100
Bengaluru
+91 80 4645 7777
Mumbai
+91 022 6215 4028

USA
Cupertino | Princeton
Toll-free: 1 888 207 5969
SINGAPORE
+65 9630 7959

UK
London
+44 773 653 9098

General Inquiries : info@indiumsoftware.com
Sales Inquiries : sales@indiumsoftware.com