

CASE STUDY

Functional Testing Solution for a Leading Oil & Gas Data Provider



OVERVIEW

The client is a leading geoscience data provider to energy exploration companies, selling data through its flagship product, a shopping-cart website. The administrative interface is used by the company's support staff to run the operations on website. Both the portal and admin interface, in combination, make up a critical business application. The client's existing testing solutions lacked quality and required serious improvements. The testing process was unstructured, lacked documentation and relied on a tester's intricate knowledge of the application and its domain. Often the support staff reported severe issues in the admin app which could have been caught in testing. Such issues could have easily compromised the functioning of the client's portal, thereby affecting the company's reputation.

CHALLENGES

Contata faced a variety of challenges with the project. The admin app was not an isolated application. Being the administrative interface of the website, most actions were reflected on the portal. So, the challenge was to test both at the same time. Additionally, there was an Internet based website and a LAN-based web application—available only to internal users of the company. So, we had to access the application over Remote Desktop, switching to VPN access later in the project.

Slow access over VPN seriously threatened Contata's automation efforts as the automation tool encountered frequent time-outs. AJAX was the biggest challenge for automation since the asynchronous responses were hard to detect. So, we upgraded FTAF to provide this capability, proving its flexibility and extensibility.

INSIGHTS

The client's flagship product and administrative interface lacked quality, affecting the functionality of its web portal. Through functional testing and test automation, Contata provided solutions to the client to ensure reliable, time-efficient testing.

INDUSTRY

- Oil & Gas

SERVICES

- Functional Testing
- Test Automation

TECHNOLOGY

- FTAF based on QTP
- XML (AJAX)



SOLUTION

Contata's strategy included a structured testing process to improve the level of QA for the admin app. The goal was to combine the best of both - manual and automated testing. Contata focused on automating most non-sapient tests to help human testers focus on more critical scenarios. We followed a step-by-step approach to develop the solution starting from the basics:

- We first analyzed the application and identified the functional test points i.e., a comprehensive documentation of functionalities to be tested.
- Secondly, manual test cases were developed corresponding to each functional test point. These test cases were organized into suites like smoke test suite, regression test suite, usability test suite, etc. The manual test cases were executed to establish the stability of the application for automation.
- Once the application was proven to be stable, we converted the manual test cases into automation scripts.
- For automation, we used our custom automation framework called FTAF (Functional Test Automation Framework) based on QTP. FTAF enables easy development and maintenance of automation scripts through its user-friendly syntax and easy-to-use spreadsheet interface.
- For the first time, we automated AJAX functionality by taking FTAF to the next level. We succeeded in automating almost 75% of the manual test suite except critical and complex scenarios that were better suited to manual testing.

Finally, we delivered manual test suite and automation scripts to the client along with test reports and test metrics data

BENEFITS

- Ensured smooth functioning of the product
- Early detection of potential issues
- Quarterly releases improved with organized, time-efficient testing
- Increased the reliability and reputation of the portal

About Contata

Contata Solutions is a trusted leader in technology and digital innovation. Through our work in data engineering, data analytics, machine learning, marketing automation and app development, we deliver solutions that address complex problems in ways that are simple, insightful and impactful.

Our promise and value proposition to our customers is simple: we leverage our deep technical expertise and global presence to bring software products and data-driven decision capabilities to life.

Founded in 2000, Contata is a privately-held company headquartered in Minneapolis that serves clients globally from offices in the United States and India.