Qualitest Helps Large American Used-Car Retailer Modernize and Upgrade Customer Experience

Challenge

The client lacked a modern solution.

Its finance solution and overall business workflow processes needed an upgrade.

Solution

Data-driven Excel approach leveraging SoapUI.

The framework was continually enhanced to handle more testing preconditions.

Results

The new framework was a success.

Less testing errors, quicker load times and enhanced automation.

The client is one of the largest used-car retailers in the United Sates and lives up to its motto to drive integrity by being honest and transparent in every interaction with customers. The client's high level of service and emphasis on integrity and seamless customer experience drives a focus on being able to use advanced technology solutions and to flawlessly operate robust systems.

As a Fortune® 500 company with a strong e-commerce presence and more than 195 stores across the country, the client has sold over eight million cars.

Outdated Systems = Outdated Customer Experience

The client lacked a modern solution to its finance solution and overall business workflow processes. The organization had been using up to five different systems to track multiple pieces of its finance business.

With this push to modernize the software, the client planned to rely on two pieces of software to handle its finance and workflow processes. The modernization would allow the call centers to better serve clients and provide a much better customer experience. It would also improve its workflow processes to eliminate errors and speed up processes

One aspect of this modernization was a move to a customizable platform, as it would have allowed the client to customize its different business workflows to fit its needs.

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Qualitest was tasked with leveraging its previous experience with Alfa to help the client to implement a testing strategy and to functionally test the different business workflows. One of the biggest hurdles that had plagued the client was the data requirements and time it took to set up data for each test.

Specific data was paramount in walking down the correct path of the business workflow. Testing needed for the website included:

- Testing user experience across all sites.

- Leveraging open-source tools for a cost-effective automated solution.

- Automation testing with implementation of best in class framework.

- Leveraging open-source tools for data generation.

- Helping to build the QA practice from the ground up.

More Accurate, Faster and Automated = Customer Success

Qualitest investigated a solution for data generation using a data-driven Excel approach leveraging SoapUI. Data conditions were extremely important for each workflow path, as even one piece of data being off could cause a test case to fail incorrectly and it would have to be restarted.

The first piece we tackled was the data generation after a new config code release. The previous process did leverage SoapUI, but each account was submitted individually. This required a lot of user interaction with SoapUI and Excel. A user would fill out an excel spreadsheet given the customer and car they were buying (roughly 50 columns), which would build out two separate SOAP requests - one for the customer and one for the loan. These would then be copied into SoapUI and run individually.

The requests could be saved, but everything was hard-coded, and the system date could shift. This would have created loans that may no longer meet conditions after data was wiped and the system date would change.

The process could take two days per environment in order to get all the data loaded back in. The QA team was working on two environments at

the time, so loading data would take almost a week before testing could begin.

To fix this, Qualitest leveraged a data-driven approach that still used Excel. Instead of Excel building out the SOAP requests, code in SoapUI using groovy script built out different spots of the request and filling in the variables where applicable. Data in the spreadsheet was all calculated based on the system data (hard coded value in the spreadsheet, but changeable). Each refresh would recalculate based on the new system date. We were able to reduce timing down to an hour to load in test accounts. Using this one solution, Qualitest was actually able to fix two problems: account load time and data consistency.

The framework was continually enhanced to handle more and more testing preconditions to reduce testing errors. It was also rolled out to the configuration team to load data into their environment for dev testing and to other teams to help load data into their respective environments.

Key Benefits

- The new framework created consistent data to lead to **less testing errors.**
- **Quicker data load times** during code wipes.
- Automation adapted account generation into script to **enhance automation.**