Intelligent Automation and Smart Tooling Reduces Cost by 70%

STAG's intelligent automation strategy and smart tool selection results in a 70% reduction in testing cycle time and 60% reduction in license cost respectively for an IT services company specializing in the healthcare domain.

▶ Domain/Category - Healthcare

▶ Technology - Delphi, VB.Net

CUSTOMER AND PRODUCT BACKGROUND

The customer is a leading IT services company based in India and specializing in custom software development, serving customers across the globe and sharing a leadership position in the healthcare domain in the Australasia region.

The product in question is a healthcare application developed in Delphi.

PROBLEM STATEMENT

As a strategic business decision, the customer planned to move their existing product developed in Delphi to Microsoft Technology - VB.Net. The product development threw up unexpected QA challenges in automating the existing test cases. Furthermore, issues began to crop up as product development moved forward and closed in on the first milestone. Process inadequacies led to unpredictability in the quality of the product. Lack of in-house automation skills and inability to select the right automation tool within budget was a serious concern for the customer, raising doubts about the possibility of an effective and on-time release of the software to the market. Therefore, the customer looked for a highly skilled QA partner to protect their business interests.

SOLUTION

The STAG team conducted a review of the existing test process and detected the following gaps:

- The available test artifacts lacked sufficient traceability to ensure consistency.
- The available test cases lacked efficient maintenance, validation, and adequacy.
- The application used some third-party controls that were not recognized by the popular toolsets in the market.

▶ # Test cases automated: 326 (out of 509)

▶ # Test scripts developed: 300+

The STAG team then formulated a clear, organized, and goal-oriented automation strategy. Existing test cases were segregated and neatly classified based on test types – smoke, sanity, and regression – and complexities. The UAT test cases were grouped together. A few test cases were validated and improved upon.

The STAG team then designed an automation architecture that was flexible, scalable, and reusable. The team selected 326 test cases for automation. It developed test scripts using strong coding guidelines and structured them to be modular.

The STAG team evaluated four different automation tools on a selected core module of the application by using sample test cases. One of the critical criteria in tool selection was recognition of the third-party controls used in the application by the toolset. Finally, the team identified the TestComplete tool as one that met all the vital criteria. The tool was found to have some limitations with respect to handling custom objects, hence the team developed smart workarounds to handle them, which involved interaction with runtime methods and properties of the custom objects.

Metrics and data were collected to calculate the time, effort, and resources required for automation.

OUTCOME AND VALUE ADDITIONS

The robust automation architecture developed by the STAG team ensured a well-defined and disciplined test process, thereby reducing the testing cycle effort from 50 hours to just 12 hours, a 70% reduction. Selecting TestComplete as the tool for automation ensured a 60% cost saving, owing to its significantly low per seat license cost. The goal-oriented automation strategy largely contributed to effective product release as per the scheduled time frame. The workaround solution was effective and its performance was closer to expectations.

Further, the STAG team also trained the in-house QA team on the usage of the tool, which was a saving compared to the tool vendor training cost.

CUSTOMER SPEAK

" *… While moving our product development from Delphi to Microsoft technologies we encountered severe bottlenecks in automating the existing test cases in the new environment. STAG helped us evaluate and procure the right test tool that brought us up to 60% savings in cost and helped identify the critical test cases for automation, which resulted in a 70% reduction in test cycle effort.* "

- Country Manager