

Standardization and speed with end-to-end testing

CLIENT
MAJOR EDUCATION AND
ELEARNING ORGANIZATION

INDUSTRY
EDUCATION

TTC SOLUTION
OPENSOURCE TEST AUTOMATION
USING SELENIUM AND CUCUMBER



Looking to the future to drive great outcomes

TTC's client is dedicated to combining world-class content and evolving technology to drive successful learning pathways for its students. This education leader's deeply knowledgeable and committed specialists live and breathe each course and discipline, determined to clear any learning obstacles. To uphold its stellar reputation, this client's commitment to quality in its software development is critical.

In early 2018, the client wanted to implement end-to-end testing to enhance its customer experience and minimize end-user risk and defects. This required a change in overall quality assurance processes and bringing scrum teams together onto one platform. The client also needed to increase speed to market and wanted to implement test automation, so it engaged TTC to aid the development of a framework and process to ensure seamless end-to-end automated testing.



Key client challenges

The first challenge was bringing together parts of an organization that had never truly collaborated. Before implementing the framework and tools, outlining a process for scrum teams to communicate was critical.

The next challenge was a lack of scope because end-to-end testing and test automation were both new to the client. To ensure the initiatives TTC was implementing were successful, we needed to properly train the client's existing staff as well as onboard additional team members.

The new framework required a specialized set of skills, which included vast knowledge of the JavaScript coding language, a skill that was relatively scarce in the local market. Lastly, time was of the essence as the project needed to meet a tight deadline.

“Before we started working with TTC, we had never achieved end-to-end testing. Within 2 weeks, we had lean and exploratory testing strategies that aided in the execution of end-to-end testing.”

– Test Manager

TTC's approach

TTC kicked off the project by gathering information about the new system via interviews with team members. The goal was to better understand the narrative missing in the user stories.

Once the flow and general testing needs were understood, we moved forward with a lean testing approach focused on exploratory to prepare for our first test execution cycle, which was scheduled for two weeks after the test teams' start date.

We prioritized the application functionality in conjunction with the engineering and product teams. This allowed us to focus testing on the functionality most critical to the product owners, and the functionality that was considered the highest risk technically.

To ensure that all resources in place were working on a common foundation, an upskilling and testing standardization training course was implemented. This led to increased test coverage and repeatable test cases as well as a more efficient defect tracking process.

To improve test cycle execution times, TTC built a framework using Selenium and Cucumber, coded in JavaScript to help enable the QA team to start test automation. This new framework was written to client specifications and technical needs. This included ensuring automated test could be understood by the product owners reviewing them, easy to code with a QA staff with varied technical skills and to work in a continuous testing environment.

“The new automation framework allowed us to use Jira, Jenkins and GitFlow to execute the tests in Dev integration, QA and the End To End QA environments automatically as the app code migrated through the test environments and ended with a solid end to end regression suite.”

– Test Manager

The results speak for themselves

TTC led a successful implementation of end-to-end automated testing, which has enabled our client to:

- Test end-to-end across all applications
- Reduce testing time from 5 days to 2 hours
- Move to a continuous software delivery model
- Perform faster regression runs
- Embrace a standard framework across the organization
- Provide metrics for leadership to understand risk and quality of software releases
- Increase speed to market
- Provide a markedly improved customer experience

“Test automation started with the end-to-end team that TTC recruited and trained. Due to its success, the clarity Cucumber provides to product owners and its ease of use, every team in the organization has now adopted this framework.”

– Test Manager

Let's talk

For more information, talk to a member of our team today.
