

Going the Extra Mile: How Parallel Testing Pumped Up Our Client's Sports Ecommerce Game

When our Client, a leading sports eCommerce platform, needed to develop their own web application they utilized parallel testing for maximum success



Challenges

Running tests on a single instance underutilized available resources. Sequential test executions were time consuming, delaying the feedback loop.

As a test suite grew, maintaining reasonable test execution times became challenging.



Solutions

Parallel testing was scaled by adding more instance or subsets to accommodate growing test suites.

Multiple instances were utilized which helped to speed up the testing process.



Results

Test suites were divided into subsets that ran concurrently, which significantly reduced overall test execution time.

Significant cost efficiency made the cost per test much lower.



Client overview

Our Client is a well-established and reputable British sports-fashion retail business with over 40 years of operation. The headquarters is located in Bury, Greater Manchester, England, UK, employs over 44,488 individuals.

They offer a discounted range of merchandise, clothing, and footwear, including top brand names. The Christmas period is crucial for the business, with a significant portion of customer demand concentrated in the second half of the year. During this time, there is a heightened need for a substantial range of Christmas-related products.

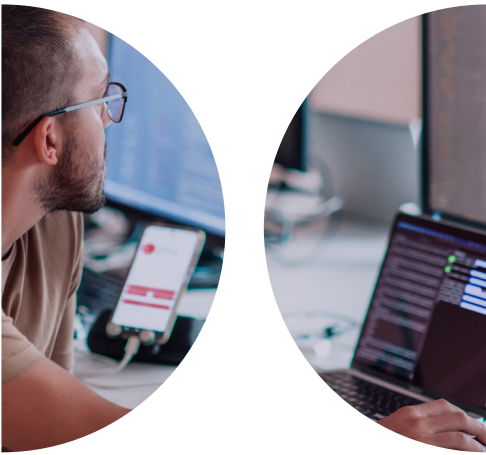
A sprint not a marathon: ensuring maximum success with manual and automated testing

Our Client took the business decision to develop its own web application for their existing eCommerce website, and needed support with their testing activities. Manual and automation testing began in parallel with the aim of fast-tracking deliveries to their customers.

It was difficult to accomplish this using manual testing since there were many facets to our Client's web application which all needed to be tested in a short time frame. Test cases were therefore accelerated to progress them by reducing the time taken for testing, reducing the cost of testing, increasing the test coverage and overcoming the challenges that manual testing provides.

Due to it being an eCommerce web application, handling the test data and picking the common objects was a challenging process due to the web app having multiple facias. Therefore, it was imperative that our Client's expectations were met by ensuring their regression suite was enabled as well as parallel execution, as this significantly reduced their efforts and cut down on their test execution time.

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Bug-athlon champions: overcoming hurdles, high jumps and testing glitches

Our Client's main objective was to reduce dependency and to ensure their web app was user-friendly, easy to maintain, and compatible for all users. Parallel execution was also a value-add addition for them. They wanted to:

- **Improve efficiency:** to reduce their manual efforts, minimize errors and speed up the testing process, lower operational costs were obtained by optimizing the need for manual labor.
- **Accuracy and consistency:** this was required to improve accuracy and ensure consistent results in repetitive tasks, which in turn reduced the likelihood of human error.
- **Time saving:** solutions resulted in time savings by expediting processes and in order for our Client to focus on more complex and strategic tasks.
- **Scalability:** solutions were developed in a way that scaled with our Client's business growth, accommodating their increased workload and evolving requirements.
- **Integration with existing system:** seamless integration with existing software and systems and enabling smooth transition and collaboration.
- **Flexibility and customization**-> Solution should be adaptable to specific needs and should be customizable.

Game, set and match: winning strategies for manual and automated testing to achieve a big slam dunk

Our Client implemented an iterative process model with clear and well defined phases:

Phase 1 – assessment, planning and requirement gathering

In this phase, the specific business processes were identified that can be benefit from automation. We collaborated closely with our Client to get their detailed requirements and expectations for the proposed automation solution. The scope and objectives of automation testing were defined, the best test scenario was identified and prioritized t based on criticality, and reasonable timelines were agreed.

Phase 2 – tool selection and identifying the right framework

In this phase it was crucial to understand our Client's business needs and select appropriate automation tools based on our Client's requirements, technology, and budget. Considering the above factors, we developed and recommended JAVA- Selenium with our QualiFrame Framework as an automation platform.



Phase 3 – development, configuration and execution of the script

In this phase, a test script was developed by ensuring that the script used was modular, maintainable and reusable by implementing coding standards and best practices. The test environment was configured with relevant test data and later in this phase the test script was executed against the application, monitored and the test results were logged. Any issues or defects that were found during the test run were documented and reported to our Client.

Phase 4 – regression run, maintenance and optimization

In this phase, automated regression testing was executed to ensure new changes did not negatively impact existing functionality. The test script was regularly reviewed and updated based on the changes in the application. Strategies for effective test data creation and management were also developed by ensuring test data was relevant and diverse.

Phase 5 – the regression run was made easy by introducing parallel/concurrent execution on different web browsers

In this phase, automation test specialists took all the necessary steps to simplify the regression run on multiple instances of the browser which meant running multiple tests at the same time. This reduced the testing time and effort required, and results were able to be provided ahead of schedule. To overcome all the manual operations and dependencies, the tool was optimized in user-friendly, compatible, easy to maintain, and most importantly no manual intervention was required during execution where a simple command or click can quick start the execution.

“ Lower operational costs were obtained by optimizing the need for manual labor, minimize errors and speed up the testing process. ”





Key Benefits






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“ Our Client benefitted from seamless integration with their existing software and systems, enabling a smooth transition and greater collaboration. ”

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