



# Strategic Quality Assurance for a Retail Giant

In addition to ensuring that applications meet functional specifications, we ensure non-functional requirements such as security, performance, and scalability are also met.



## Project Overview

To implement a comprehensive QA strategy for our client, we performed test automation on the new ReactJS-based applications. Our QA strategy improved the internal code structure by transforming functions, without altering functionality to meet business needs. We ensured quality via Test Automation processes and added value with new features. We streamlined the QA process and put in place an automated testing mechanism to ensure that all release changes are sent to production for quick implementation.

### Client Profile

One of Asia's largest clothing retailers with more than 2,500 stores across the globe. The company operates in segments such as manufacturing and sale of apparel in the domestic and overseas markets.

## Business Requirement

- **Interoperability Testing** to check whether the application interacts seamlessly with other software components and systems
- **Multi-country (localization) Testing** to check the effectiveness of UI and content
- **Automate the Regression Suite** to ensure zero errors and bugs
- **Error Handling Testing** to resolve runtime errors by adopting reasonable countermeasures depending on the environment
- **Performance Testing** to measure the performance of the site and specific functionalities
- Consolidate and scale up multi-country eCommerce mobile web applications
- Develop a single version of the existing CMS, which currently has multiple versions in various languages

## Our Solution

We kicked off the testing process by executing the QA phases simultaneously and independently. By adopting this strategy, we significantly reduced turnaround time.

Our QA team prepared test cases for various scenarios and performed manual and automation testing of framework components. We identified different sets of test cases to be automated for Regression, Smoke, and Night Job testing.

The QA team performed both manual and automation testing for the CMS and SPA components of web application, analyzing test coverage and results to verify functionality.

Migrating to the latest ReactJS-based technology helped the client to achieve uniformity in terms of design language and layout. We ensured easy maintenance of the test automation framework by leveraging Selenium as the test automation tool.

## Benefits

- 40% reduction in release cycle time enabling faster roll-out of new features
- Reduction in development costs with re-usable automation test scripts
- Saved considerable costs by utilizing Selenium, an open source test automation tool
- Reduced regression testing time from 48 hours to less than 6 hours
- Automated daily smoke test reports are accessible via email

## Technologies

- npm
- Node.js
- JMeter
- Selenium
- WebdriverIO
- Cucumber Framework
- Chai
- Jenkins



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