



QA@BPA Tailors a Complete QA Solution For a leader in HR solutions

Client

A leading niche HR solutions provider in the US

Application

A suite of applications hosted on a single web platform.

Business use

The applications are used extensively by internal call center employees and a limited subset also accessible to external end users. Together, the applications allow internal users to manage all stages of a leave process, while the end users can apply for leave and view their absences online.

Challenge

The applications were developed in house, exclusively for internal users and had multiple features added on over several years. As the applications were gradually opened up for end users, the management was interested in improving the overall quality of the platform.

Also, there were multiple new issues associated with the rapidly scaling audience. To ensure that the end user experience remained satisfactory, the client asked QA@BPA to help rigorously test the application for functionality and performance.

Solution

The highest priority was to ensure that performance SLAs were maintained during peak hours. The Performance Testing team at BPA used HP LoadRunner to test the business critical and/or high volume transactions and identified several crucial bottlenecks. The team worked with the respective administrators to resolve the system and network related issues. Once the issues were resolved, the performance team continues to engage with this client during every release to ensure that there is no adverse impact on performance with bug fixes or new features being implemented. Reports generated by the team are shared with customers to assure them of the scalability of the system.

The applications had a straight-forward UI, but each field required complex business logic to be applied. To ensure that all critical functionality and values were tested, QA@BPA developed a custom solution that blends manual testing with automated functional testing to achieve a high level of test coverage.

Due to the complexity, test indices were created instead of detailed manual test cases. Each test index contained descriptive test cases without specific test steps. A dedicated team executed these test indices and reported results using spreadsheets.



Simultaneously, the automation team utilized BPA's rapid automation strategy to build a Selenium-based framework. A keyword library and Page Object Design pattern were implemented to enable multiple layers of abstraction. This approach allows for a robust framework that can quickly and easily adapt to changes in both functionality and UI. Multiple open source libraries were leveraged to enhance the utility of the solution.

Using this tailor-made solution, regression test suites for three key applications were automated. Additional transactions have been identified for automation. Also, the team has proposed a Continuous Integration solution that will allow for fully automated sanity and regression testing once new code is committed to the source code repository.

Result

Over a period of 3+ years, the performance testing team has ensured that there were zero issues in the production environment due to the code and infrastructure tested, even though the target audience and traffic had more than doubled during this period.

With rigorous testing on pre-prod builds, there have been no P1 issues reported in Production for tested functionality. Reports of functional issues from customers have significantly dropped.

The turnaround time for a complete regression was cut by over 50%, since the automation suite allowed the QA team to focus more time on testing new features using ad hoc and exploratory testing methodologies.

Currently, the client has proposed that QA@BPA overall ownership of QA for all IT projects, including 3rd party/vendor integrations.