

## Background

Client approached Kualitatem with a need to test performance, data validation and cross browser testing. The product was a web based tracking portal built on latest web technologies. Primary objective was to perform rigorous data validation testing to make sure that it is ready for launch within a tight scheduled timeline.

## Challenges

- The main challenge was to perform a data validation Testing.
- To verify that application is functioning properly on different browsers.
- To execute performance testing of specific business processes.
- Meet the deadline and produce the quality results within limited timeframe.

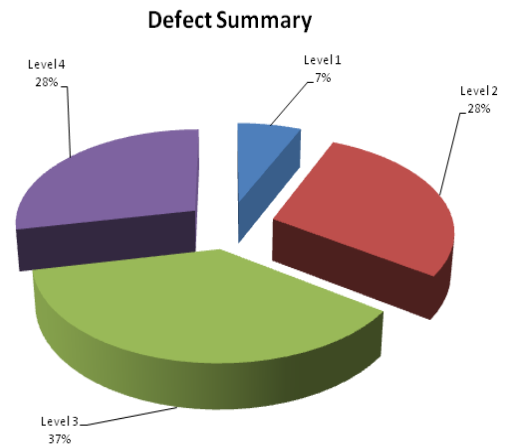
## Response

- The major task as like any other was to get the domain knowledge to meet the goal.
- Kualitatem team prepared layout of reports according to client requirement.
- Web Load tool was selected for Performance Testing as it completely covered the functionalities required to comply with client's requirements.
- Environment was setup to check application on different browsers and for performance testing.
- Some resources were set on data validation testing while other part of team was appointed on Performance testing.
- After the successful environment configurations performance testing was carried out and all the results were efficiently stated in performance report.
- Besides Performance testing, team at Kualitatem also conducted data validation testing to check the consistency.

## Process

Here is the step by step process followed by Kualitatem team in order to successfully accomplish Data Validation, Performance and Cross Browser Testing task.

Test scenario matrix was prepared to cover all the functionalities of the application. Then test cases were made from scenarios. These test cases were manually executed and Bug report was prepared in such a way that bugs were classified under categories according to their severity. A defect summary chart was prepared for defects over different levels.



Below are the activities of the custom test approach to deliver the project according to the client needs.



## Strategy

All scenarios' scripts were recorded and updated as per requirements. Each scenario was run individually across the tool for around 10k users in the incremental manner. The load size starts from 2k and concluding to the 10k. The results for all scenarios' were statistically compared with our profiling strategy and resulted in figures for the overall performance for the website.



## Test Results

Initially, the application Response Time, Throughput, Round Time and Hits per Second had been noted and analyzed by generating the load of 8k to 10k users.

Response time for the scenario of 'Search' on the average was constant but at every instant whenever the number of users were randomly increased the response time had been increased by 0.889 sec to 29.979 sec. The average response time was 15.434 sec on the average minimum taken. The poor response time achieved has been 29.979 sec whenever the load on the server has been increased.

The throughput on the whole scenario has been low ranging from 15166.500 to 179161.100 bytes per sec. The numerical part showed the average throughput of 179765.

The hits per second for the website across all scenarios' increase as the number of virtual users are increased and though it has affected the throughput in terms of the overall results.

## Conclusion

Kualitatem provided impeccably independent software quality assurance services using innovative framework and latest standards. By combining the testing expertise of Kualitatem with the development expertise of client, testing milestones were achieved effectively and on-time.

QA team at Kualitatem added significant value to the product, by suggesting exactness in process flow, business flow and feature usability. Apart from performance, data validation and cross browser bugs other issues and suggestions were also reported in order to improve the overall quality.