

## Background

Our client is the biggest ANZ Online store selling books, music, movies, games and toys. Kualitatem was engaged to conduct performance testing and check the stability of business processes.

## Challenges

- The main challenge was to perform a Performance Testing for huge number of user up to 20k users.
- To verify stability of business processes on daily bases.
- To find a reliable and cost effective Performance Testing tool to satisfy the performance measures implemented in the system.
- Meet the deadline and produce the quality results with in limited timeframe.

## Response

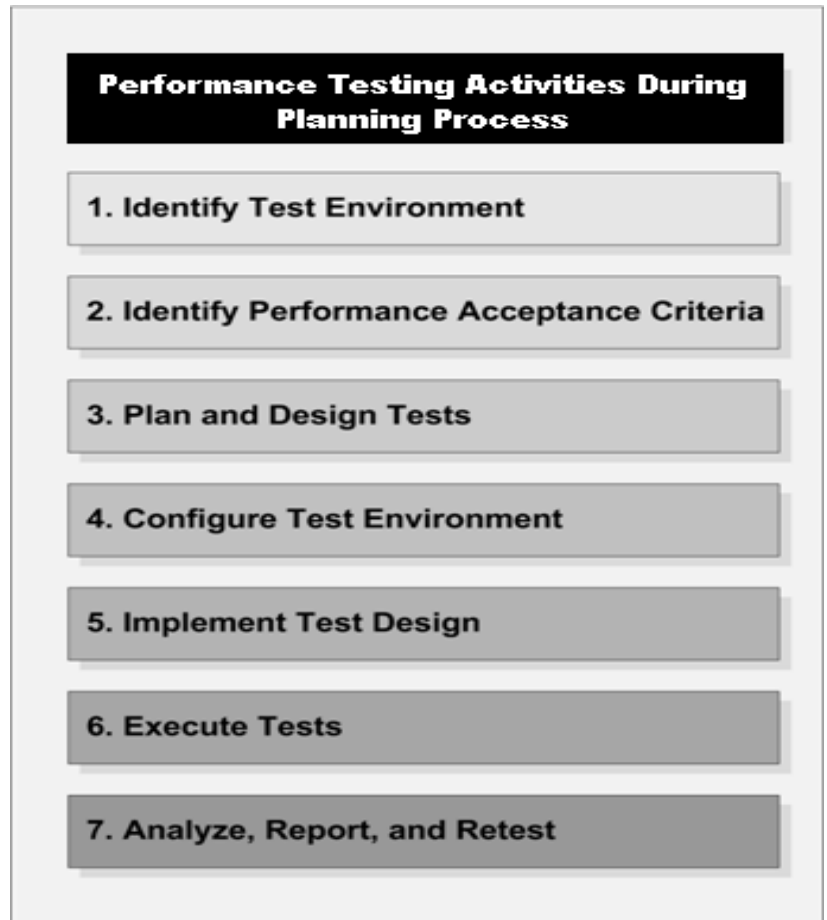
- The major task as like any other was to get the domain knowledge to meet the goal.
- Learning and understanding the client defined Performance standards.
- Team at Kualitatem worked on the layout of the report that should be presentable.
- Client suggests couple of tools and WebLoad was selected after mutual understanding as it met the requirements completely.
- Detailed analysis was performed to finalize the layout and its contents.
- 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 testing of business scenarios to determine its stability on daily basis.
- Business scenarios test cases were prepared on Zephyr by our team
- Testing of business scenarios test cases was conducted on development servers, test servers and live servers
- Incidents found during business scenarios test cases testing were reported on Redmine test management tool.

## Process

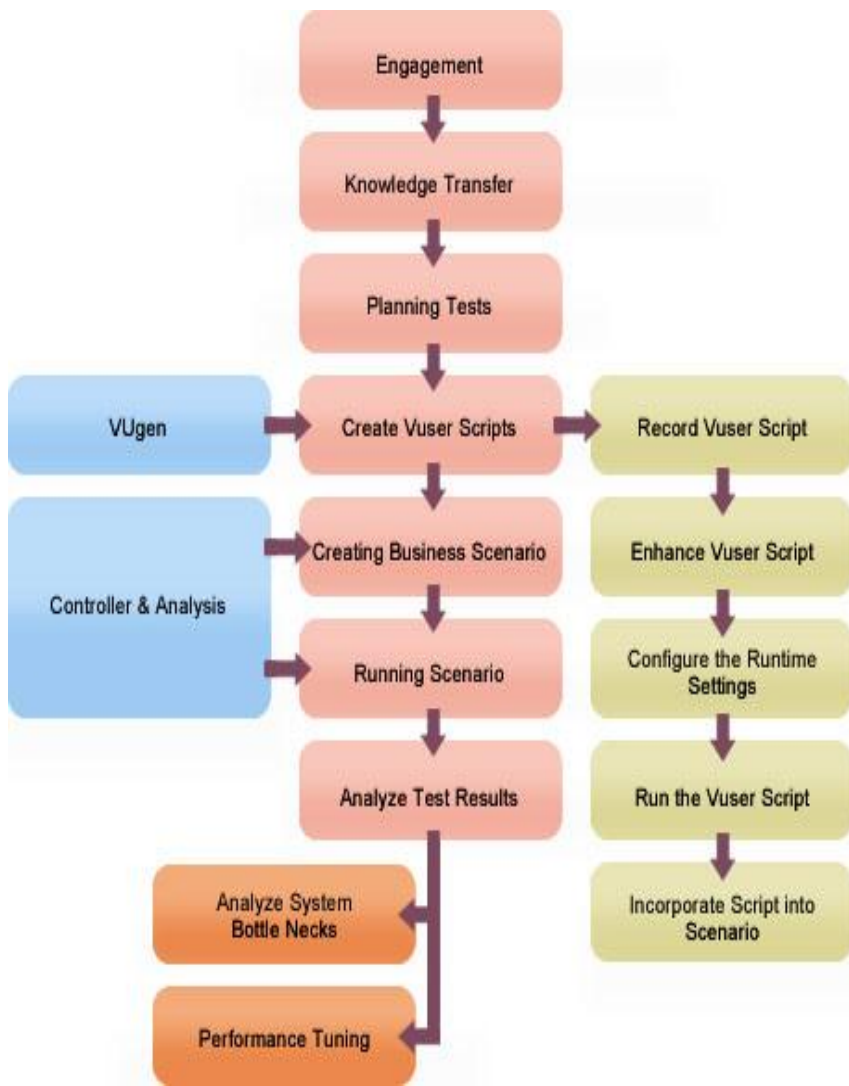
Here is the step by step process followed by the team at Kualitatem to successfully accomplish Performance Testing task and checking stability of business scenarios.

Test cases were made from business processes scenarios on Zephyr. These test cases were manually executed on daily basis and issues were reported on Redmine test management tool.

Below are the steps that were followed during planning of Performance Testing.



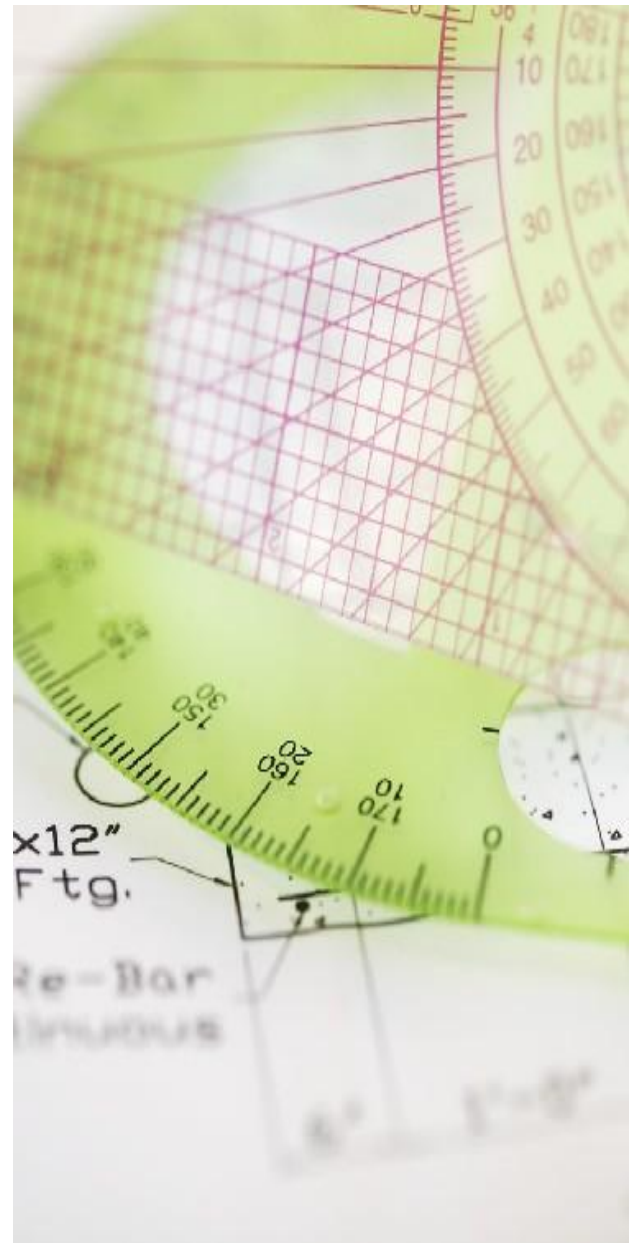
After initial steps of planning for Performance Testing, the following trends were finalized.



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 independent software quality assurance services using innovative framework, latest standards and multiple tools. Our team gelled into client's development environment and worked as onsite team to assure that timely updates are defect free when they go live. Rigorous business scenario changes were catered comprehensively in test plans and test cases and strict reporting and execution guidelines were followed to minimize any process gaps. The process also ended up in thorough documentation produced by Kualitatem team as the client was busy evolving their application features.



## Strategy

All scenarios' scripts were recorded and updated as per requirements. Each scenario had run individually across the tool for around 20k users in the incremental manner. The load size starts from 5k and concluding to the 20k. The results for all scenarios' had statistically compared with our profiling strategy and deviates the 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 10k to 20k users.

Response time for the scenario of 'Search' on average is constant but at every instant whenever the number of users are randomly increased the response time has been increased by 1.312 sec to 7.953 sec. The average response time was 3.102 sec on the average minimum taken. The poor response time achieved has been 7.953 sec whenever the load on the server has been increased.

The throughput on the whole scenario has been low ranging from 38390.100 to 10597.400 bytes per sec. The numerical part showed better values at the end of the scenarios by the value 6033.258 bytes per sec.