

Rush Hour Performance Improvements

Performance Testing for Mobile & Web Application

Client is a mid-to-high end retailer which operates the largest chain of department stores in Mexico, operating 17 shopping malls including Perisur and Galerías Monterrey. Its 85 department stores comprise 73 stores under the its name, 22 stores under the Fábricas de Francia name, 6 Duty Free stores, and 27 specialized boutiques.

The E-Commerce portal for the client had been facing performance challenges during peak usage of 8000 concurrent users in May – June 2015 time frame. Their team is expecting even higher concurrency during Oct- Dec 2015 holiday season. The team wanted to measure and improve system performance for Oracle commerce solution implementation and peripheral key systems to ensure that application performance meets future load covering web application as well as responsive design for mobile devices. Zensar (PA) has been a strategic partner for Oracle solution implementation and the client approached Zensar in month of August 2015 to complete the performance improvements by Oct 2015 with target through put 400 page views per second.

To target the performance improvements, the performance engineering exercise was to be completed in short span of time for complex e-commerce implementation where multiple application layers are to be tuned along with integrated systems. Performance testing was targeted towards actual user experience instead of server request response level for multiple business critical scenarios in desktop as well as mobile browser application covering multiple device with varied screen sizes. In-depth reporting at each page level component break down and specific interval expected for thorough performance analysis.

How did Zensar bring about the visible transformation?

Zensar implemented rush hour testing approach using cloud based performance tool for application performance measurements & improvements. Key performance scenarios were identified based on analysis of system monitoring data capturing actual user behavior.

Performance measurement & monitoring was planned on production environment utilizing time difference between Mexico and India saving substantial cost of environment replication. Neustar , cloud based performance testing tool deployed with 50% Virtual user and 50 % Real browser users (replicating user behavior in browser) for desktop & Mobile scenarios (with device specific user agents) . Three rounds of testing (5000 CUs, 20000 CUs & 20000CUs) was performed targeting 400 page views per second throughput based on analysis data

Detailed server side monitoring was done during execution to identify contention areas (Monitors : Thread Dumps , dynaTrace Session, Heap Dump, AWR Report, Endeca Dgraph logs, ATG Logs , Apache Logs, Apache WAS Plug in logs, Cache Statistics) and application was tuned and configured at system, Database, AppServer , WebServer & load balancer layers based on thorough analysis at each configuration point.

Business Outcomes:

- 56 % Business growth in festive season primarily through mobile application usage
- First round of tuning enabled 13000 concurrent user support on production specific sale day supporting
- After Final execution and tuning 18000 + concurrent end users were supported by production environment for Black Friday Sale
- No production down time due to application performance since the application performance engineering done by Zensar team.
- No down time on production environment during performance execution

Customer Speaks : "Your work in the load test preparation, identifying the problems and bottlenecks lead us to have a good night sales."

