

Case Study

Performance Testing using Radview WebLOAD 9.5 for major Financial Services client

SNAPSHOT

Solution Group:	Testing Services Group
Solution Offering:	Performance Framework Setup and Performance Test execution using WebLOAD 9.5HP
Project name or title:	Radview WebLOAD 9.5 for Financial Services

CLIENT PROFILE

Client is an Australian retail financial services group with operations spanning all mainland capital cities and major regional centres throughout Australia. In Home loans domain, company introduced the securitization of home loans, allowing them to offer loans upwards of 3% cheaper than its competitors making them market leaders in their segment. Company's accredited mortgage brokers represent 18 home loan brands, including all four major Australian banks, and also offer their own suite of loan products including home loans, personal loans, credit cards and insurance

BUSINESS SITUATION

The system in question is a web based CRM application developed for the client. It brokers loan products funded by other financial institutions. Affiliated Mortgage Brokers across Australia use this system to identify the right loan product based on the customer's specific needs and preferences. After validating the application against rules defined by the Funder of the product, system submits the Online Mortgage Loan Application. The system is designed to replace numerous legacy systems while integrating the ones that are irreplaceable.

Adactin was involved in development of an performance test framework for a Web Based Application developed in an Agile (Scrum) environment having a two weeks sprint cycle. Initially scope of performance was confined only to key scenarios but as the phase I progressed and issues were uncovered, the stakeholders expanded the scope to end-to-end testing for critical scenarios.

SOLUTION

AdactIn proposed and implemented performance execution process in 5 phases

Phase 1- Knowledge Transfer and Requirement Analysis

- The AdactIn team comprising a Team Lead and a performance Test Analysts initially spent time with Business Analysts (BA) and Subject Matter Experts (SME) to understand the system, end to end business processes and testing requirements of the application.

Phase 2- Test Planning and high level Test Case Design

Implemented Performance Framework for the client with features like:

- Data Driven approach to test functionality with different sets of data.
- Auto data generators for unique names and numbers.
- Demonstrated a proof of concept covering one key scenario.
- Finalized performance scope considering the key scenarios, Business Priority and client requirements.
- Formulated Performance Test Plan and schedule.

Phase 3- Scripting

- Scripted test scenarios.
- Created input data files.
- Correlated dynamic data to ensure usage of clean data for every run and to avoid cache problems in measuring response time.

Phase 4- Test Execution

- Analysed Execution Report to identify defects and logged these in JIRA for defect tracking
- Script maintenance.
- Liaised with development team, infrastructure team and Technical Architect for the fixes done and analysis of the results with the changes in configuration.

Phase 5 – Documentation and Handover

- Versioned the scripts in SVN and handed over the documents and reports in a shared repository.
- Prepared a Performance Summary Report summarizing the results of the tests done, conclusion highlighting the usability and stability of the application.

BENEFITS

Find below benefits of technical solution proposed to the client

- Traced the transactions taking long time to respond
- Found missing indexes on Database
- Code was optimized to reduce time taken to load page
- SQL queries were tuned
- Garbage Collection time reduced to free memory
- Heap size increased
- Client saw significant improvement in the transaction response time with the implementation of changes when compared the results from the first round of execution with the second round.

PRODUCTS AND TECHNOLOGIES WE USED

- OS – Windows2007
- Database – MySQL
- Language – PHP
- Performance Testing Tools – Radview WebLOAD 9.5

BENEFITS

- Assistance provided by client's DBA team in backing up existing production server data
- Client's Windows Server team had setup Performance test environment
- Controller and Load Generators were set up for performance testing by the Client's Infrastructure team
- Knowledge transfer on application workflows

Adactin is a premium Australian software consulting company dedicated to excellent software development and testing with a comprehensive service suite encompassing quality assurance, design and development services, data analytics products and other digital transformation enterprise solutions including quality ICT training programs. The company has a core competency and thought leadership position built around the science of IT development and testing application development. For more information, please visit <https://www.adactin.com>

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