

Performance Testing Services Conducted for Premier Case Management System Application

About The Client

Client is the world leader in providing risk intelligence services that reduce customer exposure to potential threats posed by the organization and people they do business with. More than 4,500 institutions, including over 49 of the world's top 50 banks and 200 enforcement and regulatory agencies are their customers.

About The Project

The main goals and objectives were following:

- Automate the functional flow of the automated research process
- Automate the functional module of Report generation
- Automating the integration test to ensure integration with a third party application for end customers using web services report generation in word and PDF formats
- Conduct 'Performance Testing' of the automated functional flows with desired load and provide evidences in terms of load test report

The major technology utilized for developing the products are:

- Savvion Business Process Manager 7.6
- EXT-JS controls for GUI
- Tinymce controls for data entry
- Clustered Environment

Key Challenges

- Conducting testing on clustered environment
- Recording of encoded data in protocol level transactions
- Identification of controls required for automation
- About 10000 'work in process' instances are available at any point of time the team had to perform 'Testing services' for this data and multiple execution cycles of the data
- Around 300+ concurrent users access the site at any given point of time and team was required to generate similar concurrent user access load on clustered environment

Solution Approach & Methodology

- Micro Focus Silk Performer 2011 was finalized as the tool after researching on thirteen different tools available
- The team used browser driven framework with 'Agent-Controller' architecture. The agents are located in Mumbai, Penang, London and India whereas server is based in Canada
- Real-user load simulation with collection on server statistics (CPU, Memory, Database, Network)

Real time capture of slow performing pages and effective recommendations in form of test report

Tested by generating a load of creating and processing 10,000+ instances of the business process

The architecture successfully generated a load of 300+ concurrent users and overall 800+ application users



Framework enabled to effectively capture the screen shot of the pages where loading took time or other errors were encountered in the application

Ramp up and ramp down of the load was achieved easily with the agent-controller architecture

The choice of tool helped in overcoming the auto generated IDs for the UI components by ExtJS framework and scripts were not getting changed due to dependency on UI frameworks

Achievements



Successfully generated and performed load testing with desired load



The Controller-Agent architecture helped to overcome the infrastructure constraints



The generated reports were effective for the development team to fine tune the server or the application logic and helped majorly to elevate the performance and meet the non-functional requirements



The scenarios of ramp up and ramp down were effectively configured to simulate the real load environment

Technology Deployed

Authentication and Authorization Frameworks	JDBC realm based authentication in conjunction with authentication provided by Savvion platform
Presentation Tier Frameworks	ExtJS
Business Tier Frameworks	Spring
Persistence Framework	MyBatis
Application Servers	Pramati
RDBMS Systems	Oracle
Testing Tools & Frameworks	Micro Focus Silk Performer 2011
Operating Systems	Windows Server 2012 Enterprise R2
Cloud Infrastructure	Server for load test was mounted over Canada based infrastructure hosting company
Integration Services	Integration with ISIS/EDDO system at client end using JMS

Project Highlights

Client	A market leader in risk intelligence, due diligence services
Location	UK
Industry	Due diligence & risk management
Project Duration	12 months
Team Size	6 people
Delivery Model	Offshore
Engagement Model	Turnkey

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