

360° PRODUCT QUALITY EVALUATION

CASE STUDY | SEPTEMBER, 10 | 2014



Our Client



THE CUSTOMER

Juba Express is an UK registered and licensed Money Transmitter Company with its head quarter office in London, UK. The company was established on February 2009. Juba Express has formed a partnership with both local and international financial institutions and business organizations with required licenses to conduct money transmission services and currency exchange services. Juba Express is the fastest growing remittance company with offices over 50 countries and territories around the Globe, and still growing. Their rapidly expanding business is geared to provide you customer, a safe, fast and competitive money transfer experience.

The mission of Juba Express is to give their customers the opportunity to send money to their beloved families, friends, relatives and business affiliates at competitive rates. The vision of Juba Express is that non-banking remittance is a lifeline for many peoples in the world and thus deserves to be capitalized and improved without causing significant burden to its users. Juba Express will strive to help other financial institutions, government regulators and law enforcement agencies in the world understand how the lives of millions of people and even entire countries depend on the unconventional remittance services.

BACKGROUND

In November 2012, Juba Express in its endeavor to improve their services has drawn the initiative of redesigning their Money Transfer System which is a web based application providing with a central platform to perform all the major operations through a unified interface. Juba Express was facing challenges to gratify quality in their growing business need in their system. Thus in order to check the quality health of Money Transfer System in 360 degree. Juba Express had shown interest in Xcelliti for their revolutionary concept of Smart Services.

Xcelliti offered following services to the Juba Express with a focus on adding true value by helping them out in momentous quality areas:

- End to End Testing
- Security Testing
- Performance Testing



PROJECT OBJECTIVES

Performance Testing

The aim of performance testing exercise was to determine how fast some aspect of a system performs under a particular workload? Thus In-order to make sure that the Money Transfer System ought to perform well enough to be used by the minimum of 1000 users in simultaneously manner, performing different critical transactions by each user. A proper performance testing cycles was required to perform with different Remittance and Cash Transfer Scenarios with the real time users.

To achieve the desired results the Xcelliti consultants determine the following objectives.

- Determine if the application complies with contracts, regulations, and service level agreements (SLAs).
- Detect bottlenecks to be tuned.
- Assist the development team in determining the performance characteristics for various configuration options.
- Provide input data for scalability and capacity-planning efforts. ○ Determine if the application is ready for deployment to production. ○ Determine Load and Stress points.

Security Testing

To identify security risks/vulnerabilities in Juba Express application by performing an application pen/vulnerability assessment cycle which will constitute of various steps. Analysis for design weaknesses, technical flaws and vulnerabilities; and these results are then need to be delivered comprehensively in a report, to Executive, Management and Technical audiences. Different Issues verification and Regression were required to perform to maximize the test coverage of whole application and assure the usage of the Juba Express application by their customers with confidence over the internet.

End to End Testing

The main objective of the end-to-end testing was to know and understand the exact status of the system and in what manner it behaves in a real-time ambiance. End to end testing was an important assessment that Juba Express would need to conduct to improve their efficiency and productivity. In order to achieve the required quality & meet the acceptance criteria, Xcelliti was required to perform comprehensive Functional, Regression, System Integration, AML (Anti Money Laundering), System Scenarios and GUI Testing.

OUR APPROACH For Performance Testing

The Consultants from Xcelliti were already familiar with the Juba Express Money Transfer application and its intended functionality by means of the first phase of the project i.e. End to End testing. However for performance testing it was also essential to talk with the client and development team. The main goal of our involvement was to gain an overall thoughts and identify potential performance test scenarios exists in the system in order to develop a comprehensive testing strategy that would take maximum advantage of automated testing tools.

Once the overall testing strategy had been established the following tasks were performed:

- design a performance testing plan
- create test data taking with consideration to any identified end-user scenarios
- create test scripts for HP Load Runner
- coordinate servers and monitor networks
- identify system performance issues
- provide a detailed test report

Our consultants were able to successfully identify and address the application's live performance issues consequently eliminating the burden of resolving the issues for the in-house IT department.

Our client was satisfied with the project, and therefore selected Xcelliti as their preferred vendor for running the performance testing work throughout the organization.



ACHIEVED FROM 360° PRODUCT EVALUATION

Today Juba Express is appreciating Xcelliti by following benefits on accomplishment of this project:

- **End to End Testing** - Loads of potential bugs are identified and logged in the repository for fixing and to make sure that no blocker, critical and major issue are there in the application which can hinder Juba Express business.
- **End to End Testing** - According to Juba Express, the one year investment made by them in End to End testing of Money Transfer system has now resulted in ROI in form of profit they are getting from their Business.
- **End to End Testing** - Juba Express gained trust in our team's ability by involving them in every step of the project, there was a *high degree of collaboration between Juba Express and Xcelliti team* which delivered high-quality of work whenever they had the opportunity to see tangible results.
- **Security Testing** - Penetration testing helped Juba Express to strengthen the money transfer & fully satisfy the OWASP standards.
- **Security Testing** - It has fulfilled requests to partners/suppliers to substantiate information security controls without having to service individual enquiries or provide confidential information
- **Security Testing** - Helps assure stakeholders, auditors, industry regulators etc. that organization is actively minimizing information security risks by demonstrating organizational commitment to information security (corporate governance or due diligence issue given the potential for information security exposures)
- **Performance Testing** - Gained a true picture of end-to-end performance, which enabled better-decision making and Functionality changes.
- **Performance Testing** - Identified and eliminated performance bottlenecks to tune for better performance.
- **Performance Testing** - Enhanced Juba Express services, allowing thousands of Agents to perform Remittance transaction easily and deliver an efficient service to customers.
- **Performance Testing** - Identified behavior under various workload patterns including normal load conditions, excessive load conditions, and conditions in between Resource utilization in terms of the amount of CPU, RAM, network I/O, and disk I/O resources application consumes.

OUR APPROACH

For Security Testing

Xcelliti team has performed Security testing on Juba Express system with the aim to identify logical loop holes in the system. To identify security risks/vulnerabilities our consultants has covered the major web security threats that can be used to compromise the web applications. Some major vulnerability originated were SQL injection, Blind SQL injection, XSS, CSRF and unencrypted login Request. Furthermore, tons of security

vulnerabilities were identified in application which could impact business badly. Different Issues verification and Regression scan cycles were performed to maximize the test coverage of whole application and assure the usage of the system by their customers with confidence over the internet.

Penetration testing consists of three phase approach. The approach includes following three phases:

Phase – I Pen Testing via IBM AppScan
Phase – II Manual Security Testing
Phase – III Source Code Review

For End to End Testing

Our team has applied its best testing strategy and practices to improve the quality of Juba Express Money Transfer application. Attempts are made to maximize the test coverage of whole application. Loads of potential bugs are identified and logged in the repository for fixing, various regression and bugs verification cycles are performed in order to minimize the risk of failure and to increase the quality of the application and customer satisfaction.

After the overall testing strategy has been established the following tasks were performed:

- Business Requirements gathering and system understanding.
- Functional Specifications for the application
- Test Case Designing
- Testing
- Issue reporting
- Test Analysis & Reporting