



Symphony performed extensive Software Validation and Verification of SOA-based Check21 application resulting in high-confidence release and leading to high performance for distributed deployment environment.

The Client

The client is a San Diego, US, based leading provider of .Net technology solutions for image payment and advanced item processing combining the latest advances in technology with the regulatory advances promised by the Check21 Act. Its revolutionary check-processing solution caters to the evolving needs of financial institutions for their check processing environments.

The Challenges

Symphony was engaged with the client in the end-to-end product development of its Check21 software that included comprehensive set of business processes, workflows and data capture mechanisms to enable transactions between multiple financial institutions, automation in identifying the data of Check, reconciliation etc. Before delivery to market, the software required

- Integration Testing of more than 30 modules with databases like – SQL Server , and third party components
- Performance testing of the integrated modules and capability to handle large transaction in limited processing window
- Regression testing of both web based and window applications across multiple deployments

The Solution

The solution to the client included a flexible Service Oriented Architecture (SOA) using .NET technologies, a collection of multi-threaded Windows Services, Web Services interfaces, Smart Client modules, Web interfaces and SDK for multi-environment – clustered (OS, database) and distributed – deployment.

Software Testing

Integration Testing, Regression Testing, Performance Testing

Environment

Web, Windows applications

Industry

Banking and Financial Services

Engagement Key Points

- Peak Team Size – 5
- Team composition – Test Automation developer

Technology and Tools Used

- VMWare (for different version and environments)
- Mercury QTP 9.2
- AdminiTrack (hosted issue management software)
- Visual Studio Team Test

Highlights of Software Testing

- A maintainable and extendable Automation Library
- Effective defect management
- Automation of product configuration for quicker set-up
- Extensive logging and reporting options - for QA manager to analyze test results for each build In case of test failures, developers can follow the steps logged and quickly reproduce the issue



Considering the complexities and volume of test scenarios involved, Symphony proposed test automation to accelerate the testing effort. Symphony's test engineers identified key process areas through Root Cause Analysis and adopted best practices from Symphony QMS.

Symphony's test engineers used Mercury Tool QTP to automate the testing efforts and manage the complex test suite and in Test Planning. Using AdminiTrack a web-based issue tracking, defect tracking and task tracking software solution helped to improve Defect Management.

Thirty modules integrated with SQL Server and third-party components required extensive integration testing. The software had capability to handle large transaction in the range of 10 Million checks per day with limited processing window. Symphony's test engineers performed extensive performance testing of the application's various integrated modules to strengthen the product performance under peak load.

Automated product configuration helped in quicker environment setup. Mercury QTP 9.2 helped to automate regression testing resulting in accelerated release cycle time. Symphony's test engineers also performed elaborate regression testing of software product across multiple deployments - web based and windows application - before the software release.

The Benefits

Symphony's high performance driven QA processes achieved the following benefits for the client:

- Achieved release-confidence of client
- Achieved high performance of the software for distributed deployment
- Improved test coverage and increased visibility of hidden defects for the complex test scenarios and multiple deployments
- Improved product performance by simulating business scenario