



## Driving Application Performance Using Test Automation Framework

## Success Story

A leading health plan company partnered with CitiusTech to automate workflows of Clinical Care Advance (CCA) applications and established a test data management strategy for business-critical processing of sensitive healthcare data.

## Business Impact

A leading health plan leveraged CitiusTech's QA automation engineering capabilities to build a test automation framework for CCA applications to perform tests faster and fix errors earlier in the development cycle.

**85%**

decrease in UI test  
execution time

**99%**

decrease in API test  
execution time

**95%**

increase in yearly  
effort savings

## Client Requirement

Client is a leading health plan organization with over 3 million members across Washington, Oregon, Idaho, and Wyoming.

The client required a QA automation strategy to test its CCA applications and web services and reduce the manual test cycle time. The automated test solution also needed to be scalable for other applications.

To ensure applications perform better on deployment, the client needed a test data management approach that could run tests in any environment and integrate automation scripts using CI/CD pipeline.

## The CitiusTech Advantage

CitiusTech set up a testing cadence across different modules that ensured complete test coverage, standardized QA processes and optimal utilization of test management tools.

An in-depth assessment was conducted to analyze and identify gaps in the current QA processes. CitiusTech designed an automation framework to test CCA & other applications using commercial and opensource framework and tools.

The team also developed a test data strategy and ensured seamless integration with CI/CD pipeline to save time on testing and effort.

# Technology Overview

CitiuTech's Automation QA engineering team build a test automation framework to reduce the cycle times for OS, security and version upgrades. The team developed a solution to achieve the following:

## Automated Solution for UI, API and Batch Testing

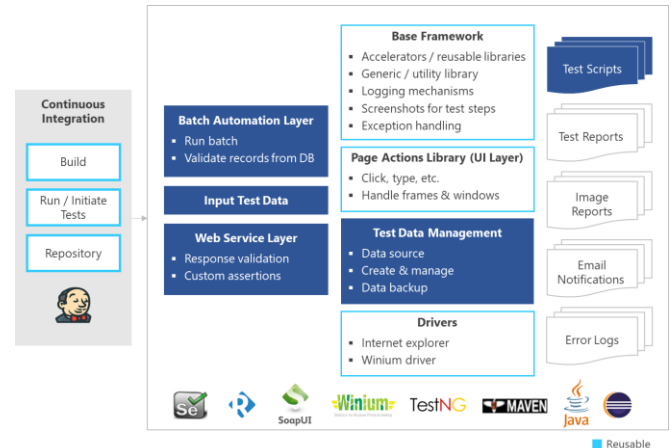
- Analyzed and identified gaps in existing QA processes
- Assessed end-to-end workflows with test data required for UI, batch, and API testing
- Developed automated test environment for all applications, including support for web, mobile, desktop apps, and third-party component libraries

## Test Data Management

- Built test data strategy through re-usable test logic to reduce maintenance and improve test coverage
- Implemented test data management to run test cases in any environment with minimal changes
- Established framework-level data security to secure PHI data

## CI/CD Pipeline Integration

- Built capability to run test scripts across multiple platforms / environments, with integrated scheduling and real-time reporting
- Automated test scripts integration with CI/CD pipeline to enable limited touch test execution
- Enabled parallel execution and increased consistency across multiple environments



Solution Schematic

## About CitiusTech

CitiusTech is a specialist provider of healthcare technology services and solutions to healthcare technology companies, providers, payers and life sciences organizations. With over 4,000 professionals worldwide, CitiusTech enables healthcare organizations to drive clinical value chain excellence - across integration & interoperability, data management (EDW, Big Data), performance management (BI / analytics), predictive analytics & data science and digital engagement (mobile, IoT). CitiusTech helps customers accelerate innovation in healthcare through specialized solutions, platforms, proficiencies and accelerators. With cutting-edge technology, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare organizations worldwide.

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