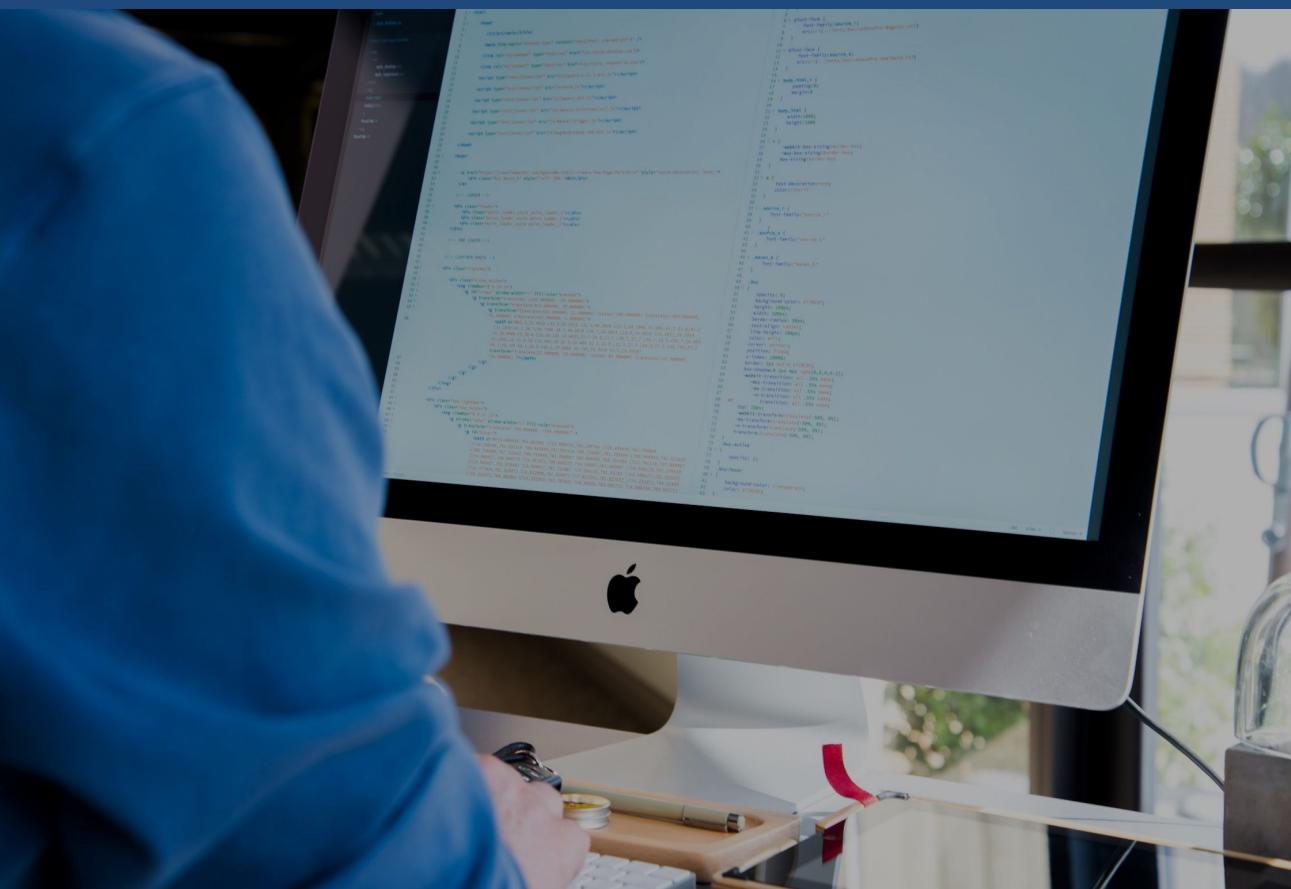




# BairesQA's Success Story with Salesforce Partner Manager

## Mulesoft / Salesforce



# Overview

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Anypoint Partner Manager is a powerful integration platform designed to streamline B2B transactions through APIs and traditional EDI formats. Given its complexity and reliance on multiple transport protocols and security mechanisms, rigorous testing was essential to ensure its robustness and reliability.

BairesQA played a crucial role in the quality assurance of Anypoint Partner Manager, leveraging extensive automation and deep technical expertise to validate integrations, data transformations, security protocols, and system reliability.

# Testing Scope

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Our testing covered multiple environments:

- **QA and Stage Environments** – Daily automated test execution ensured early detection of defects.
- **Production Environments (Europe and the US)** – Each new release was validated in both production environments to ensure seamless global functionality.

Our work included a **broad range of test scenarios**, validating integrations across different transport and security protocols, as well as verifying error handling and user feedback mechanisms within the application.

# Technologies and Protocols tested

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Anypoint Partner Manager continuously evolved, incorporating new functionalities over time. Our team validated each enhancement through manual testing, followed by the development of automated test cases. The key protocols and technologies we tested included:

- ***Transport Protocols:*** AS2, SFTP, FTP, HTTP/S
- ***Security Mechanisms:*** OAuth, digital certificates, encrypted data exchanges
- ***Data Format Transformations:*** Extensive testing of format conversions, including EDI to and from JSON, XML to CSV, EDIFACT to and from XML or JSON, and more.
- ***Error Handling & Logging:*** Ensuring that error messages were properly managed and displayed to users

# Custom Test Automation Framework

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To handle the complexity of Anypoint Partner Manager, BairesQA developed a highly flexible and scalable test automation framework using JavaScript and Node.js.

## Key Features of Our Automation Framework:

- **Dynamic Test Configuration:** Defined test parameters on the fly, allowing easy extension without modifying the core framework.
- **Support for Multiple Formats and Protocols:** Enabled validation of different file formats, transport mechanisms, and security protocols.
- **Automated Execution and Scheduling:** Integrated with a scheduler to execute daily automated tests across QA and Stage environments, significantly reducing manual effort.
- **Advanced Error Detection:** The framework not only validated system outputs but also performed in-depth log analysis across multiple servers, ensuring the detection of hidden system errors.
- **Template-Based Validation:** Compared test results against predefined message templates, ensuring consistency and compliance.

This architecture remained highly reusable throughout the project's evolution, adapting seamlessly to every new feature introduced by Mulesoft. The flexibility of our framework was particularly valued by Mulesoft, as it reduced the overhead of test case maintenance and adaptation.

# Key Challenges and Solutions

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- ***Handling Multiple File Formats & Transport Mechanisms:*** We implemented a parameterized test structure, allowing smooth switching between protocols and data formats.
- ***Error Analysis Across Distributed Systems:*** Our framework performed deep log analysis, identifying root causes in system logs beyond just front-end validation.
- ***Scaling Automation to Cover Expanding Features:*** The modular architecture of our framework ensured rapid expansion without major rework.

# Impact on Mulesoft

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One of the biggest challenges for Mulesoft was finding QA professionals with deep technical expertise in EDI technologies. BairesQA's technology-oriented approach enabled us to provide a highly specialized QA team, fully dedicated to Anypoint Partner Manager.

- ***Accelerated Testing Process:*** Daily test executions provided immediate feedback to the development team, reducing defect leakage.
- ***Improved Stability & Performance:*** Our rigorous testing approach ensured that each release was robust before deployment to production.
- ***Seamless Knowledge Transfer:*** After two years of continuous development and refinement, our automation framework was successfully handed over to Salesforce's internal QA team, ensuring continuity in testing efforts.

# Conclusion

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BairesQA's contribution to Anypoint Partner Manager exemplifies our expertise in **complex integration testing, automation, and cloud-based system validation**. Our ability to develop scalable, reusable testing solutions significantly enhanced Salesforce's ability to deliver a stable and secure product to its partners worldwide.

This success story highlights ***our strength in tackling technically challenging QA projects***, reinforcing BairesQA as a trusted partner in high-end software quality assurance.

# Thanks!



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