

Ensuring Seamless Data Integrity Across Systems with Boomi Platform

ORGANIZATION

Our client is a leading provider of cloud-based software solutions, serving over 1,950 premier professional and financial services firms worldwide. Built on a robust, scalable, and secure architecture, their platform is powered by Artificial Intelligence (AI) and designed for interoperability, flexibility, and high configurability to meet the unique, industry-specific needs of their clients. Since 2002, they have been pioneers in providing the first No-Code integration solution tailored for professional services organizations, revolutionizing their approach to system integration.

CHALLENGE

The client faced the challenge of ensuring seamless data synchronization and integrity between various cloud, on-premise, and hybrid applications. The key systems involved in this integration project included OP4I, Salesforce (SFDC), and NetSuite, with the following complex integration combinations:

- **NetSuite to OP4I Integration:** (Invoice, Payments, Notes)
- **OP4I to SFDC & Vice Versa:** (Accounts, Contacts, Documents, Deals, Deal Line Items, Contracts, Contract Approvals, Products, Product Lines, Attachments)
- **Client Entitlement:** (OP4I to OP4I)

Several critical obstacles were identified in the integration process:

1. **NetSuite Profile Expansion:** Each element within the NetSuite profile needed to be fully expanded to make use of relevant values. Failure to expand these elements would result in missing data during the integration process.
2. **Currency Converter:** The endpoint system required separate column and row APIs. Row APIs were used for creating/updating records, while column APIs were used exclusively for updating the currency type.
3. **Environment Mismatches:** The UAT (User Acceptance Testing) and Development environments were not synchronized, leading to discrepancies in the schema across these environments.
4. **Cache Management:** One of the objects involved over 20 lookups, necessitating the management of over 20 'Add to Cache' shapes in Boomi, creating inefficiencies.
5. **API Overload:** Multiple API calls were required to fetch specific lookup values, which adversely impacted the system's performance.
6. **Technical Expertise for QA:** The quality assurance (QA) team needed to possess advanced technical expertise in the Boomi platform to execute efficient integration testing.

TECHNICAL SOLUTION

The XTIVIA team adhered to an Agile methodology throughout the project, focusing on close collaboration with both the customer and the development vendor to ensure timely and efficient delivery. The key technical solutions implemented were:

1. **Boomi Essentials Training:** To ensure high-quality testing, the QA team completed Boomi Essentials courses, equipping them with the knowledge needed for advanced integration testing.
2. **Seamless Collaboration:** The QA team collaborated extensively with both developers and business stakeholders to gain a comprehensive understanding of the integration requirements and business processes. This collaboration enabled the creation of effective and comprehensive test cases.

3. **Process Setup and Customization:** XTIVIA QA worked in tandem with the development team to configure and optimize the Boomi processes. They maintained a separate set of Boomi processes dedicated to testing, ensuring complete control over test environments.
4. **Efficient Data Flow and Performance Optimization:** The team addressed API performance bottlenecks by consolidating multiple incoming documents into a **comma-separated list**, reducing the number of API calls required. This solution significantly improved the system's performance and streamlined data handling.
5. **Environment Synchronization:** Given the inconsistencies between the UAT and Development environments, the team managed and tested two independent versions in Boomi, ensuring consistency in schema and data flow between environments.
6. **Optimized Cache Management:** The cache complexity was resolved by utilizing a **unique key for individual lookups**, consolidating over 20 lookup values into a single cache. Rigorous testing was conducted to ensure cache functionality and data accuracy.

BUSINESS RESULT

XTIVIA's QA team ensured the flawless migration of data between the three integrated systems (OP4I, SFDC, and NetSuite), effectively addressing the challenges posed by data integrity, environment mismatches, API performance, and cache management. The team's diligent integration testing on the Boomi platform resulted in:

- **Seamless Data Flow:** Achieved smooth data integration and synchronization between multiple systems.
- **Enhanced Performance:** Reduced API calls and optimized cache usage, significantly improving system performance.
- **Accurate and Consistent Data:** Ensured that all data points across systems were accurate and synchronized, enhancing business operations.
- **Successful Deployment:** The successful execution of integration testing helped the client deploy a robust, error-free solution across their platform.

KEYWORDS

Data Integrity, System Integration, Boomi Platform, Cloud-based Integration, Hybrid Integration, API Optimization, Data Synchronization, Performance Optimization, Cache Management, Integration Testing, Agile Methodology, No-Code Integration, UAT & Development Environments, Seamless Data Flow, Process Automation, API Performance Bottlenecks, Data Migration

SOFTWARE

Boomi Platform: Integration Platform as a Service (iPaaS) for seamless system and data integration.

ABOUT XTIVIA

At XTIVIA, we've been providing IT solutions and consulting services for over 30 years with a wide range of services, including technology assessments, IT service and asset management, software development, data analytics, cloud migration, DevSecOps, ERP, and enterprise content management. Dedicated to each discipline, ensuring that our clients receive the best possible service. Through strategic acquisitions, we've acquired talented people who are experts in their industries, passionate about what they do, and committed to providing exceptional service to our clients. Whether you need to improve your IT infrastructure or implement new software solutions, XTIVIA is here to help you achieve your business goals. XTIVIA has offices in Colorado, New York, New Jersey, Texas, Virginia, and India. www.xtivia.com