GENROCKET TEST DATA AUTOMATION EMPOWERS MAJOR AUTOMOTIVE FINANCIAL SERVICES FIRM

Brief Overview

GenRocket's dynamic synthetic data generation capabilities have significantly accelerated and enhanced the accuracy of test data provisioning for a major financial services firm's auto loan processing system. This has allowed the company to overcome previous challenges associated with manual and error-prone data handling, delivering a new level of efficiency and reliability.

Key Objectives

- Reduction of data creation time from hours to minutes, enabling the generation of tens of thousands of auto loan agreements rapidly.
- Implementation of a fully automated, API-driven approach, integrating with existing test frameworks seamlessly.
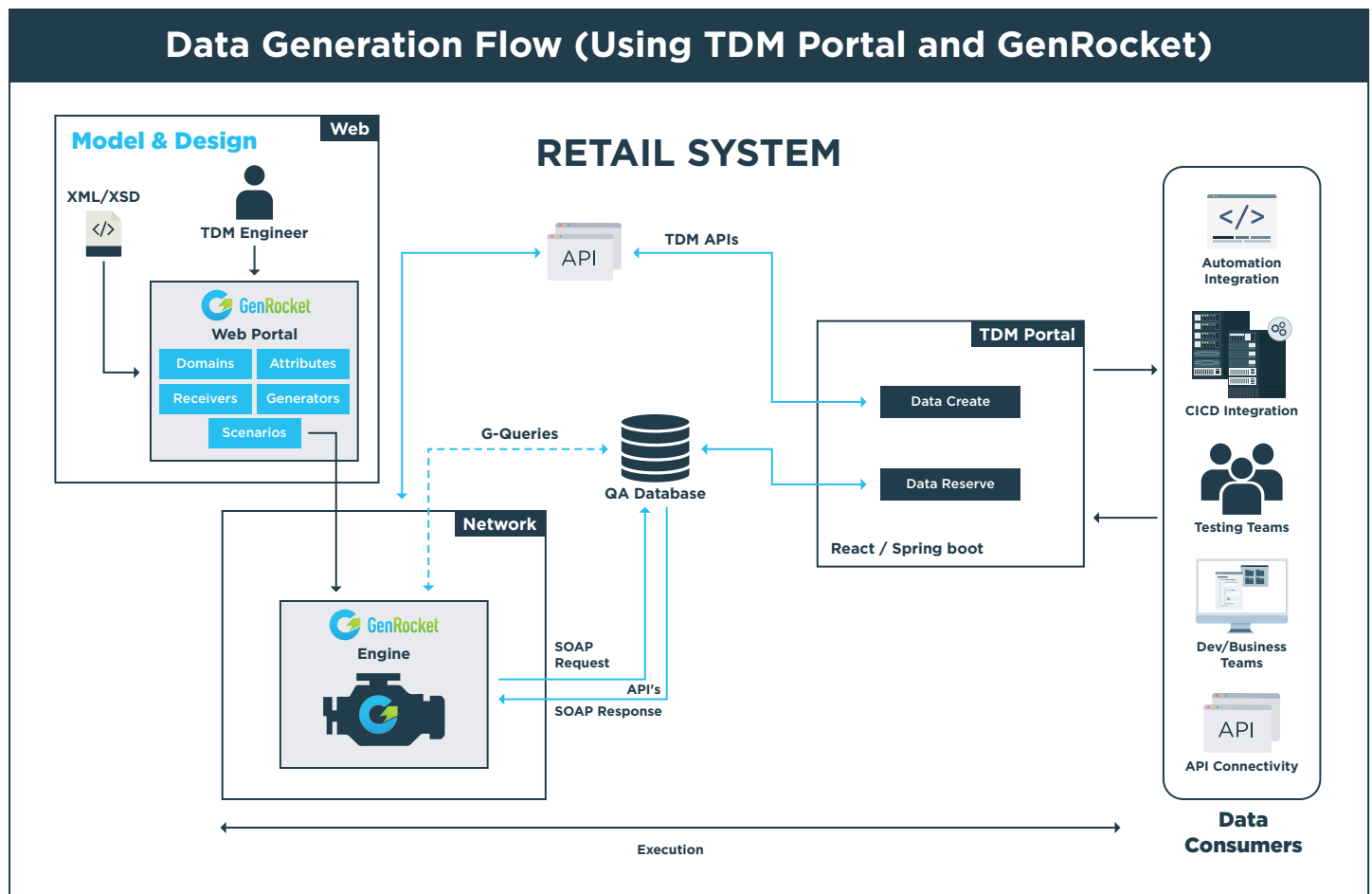
Introduction

In the rapidly evolving domain of financial technology, the ability to efficiently test and validate software systems is crucial. Financial institutions face the dual challenge of maintaining high data security standards while ensuring their systems are robust and error-free. A prominent financial services group tackled the challenge of efficiently generating test data for their auto loan processing system by partnering with their IT systems integration partner and GenRocket.

The Challenge

Previously, the firm relied on cumbersome, manual data creation processes involving static spreadsheets. This method was time-consuming, error-prone, and lacked the scalability needed for efficient testing of their complex system. The pressing need was for a solution that could handle the quality and volume of data required for testing a complex transaction flow for a loan origination application.

GenRocket's Solution

GenRocket provided a next-generation test data provisioning solution through its Test Data Automation platform, leveraging dynamic data generation to create synthetic test data on-demand. The GenRocket Multi-User Server (GMUS) played a crucial role by allowing multiple users to simultaneously generate different scenarios of synthetic test data on demand.

Data Generation Flow (Using TDM Portal and GenRocket)

Model & Design — Web

XML/XSD

TDM Engineer

GenRocket
Web Portal
- Domains
- Attributes
- Receivers
- Generators
- Scenarios

RETAIL SYSTEM

API — TDM APIs

TDM Portal
- Data Create
- Data Reserve

React / Spring boot

G-Queries

QA Database

Network

GenRocket
Engine

SOAP Request
API's
SOAP Response

Automation Integration

CICD Integration

Testing Teams

Dev/Business Teams

API
API Connectivity

Data Consumers

Execution

Technical Details

- **API Integration:** GenRocket's API integrations facilitated the creation of Third Parties (Customers), Agreements (Loan Accounts), Alerts (Data Reservation), and Payment Processing using SOAP APIs. The system was capable of capturing key data elements from each API call response, such as TP numbers and Agreement numbers, which are crucial for accurate testing of the auto loan processing workflow.

- **Custom-built TDM Portal:** Integration with a custom-built Test Data Management (TDM) portal developed by the Systems Integrator enabled real-time, dynamic test data scenario modifications and synthetic data generation. The portal also allowed users to specify test data requirements interactively, further enhancing the flexibility of the testing process.

Implementation

The GMUS was configured to interact with the Systems Integrator's TDM portal, receiving JSON formatted data requests and returning responses for database insertion. This setup effectively replaced manual data entry, enabling high-volume automated data generation for testing the accurate creation of loan agreements at scale.

Quantitative Results

- Dramatic reduction in test data generation time, from several hours to mere minutes.
- Capability to generate large volumes of test data, scaling up to tens of thousands of loan agreements.

Qualitative Benefits

- Enhanced accuracy and consistency of test data, significantly reducing the risk of errors in the testing process.
- Significant improvements in testing efficiency, freeing up resources for other critical tasks.
- Increased flexibility to test a wider range of auto loan testing scenarios and types.

Challenges Overcome & Lessons Learned

Adopting GenRocket's solution required a shift from traditional manual data creation methods to an automated, API-driven approach. One challenge was ensuring seamless integration with existing test automation frameworks and workflows. The collaboration between GenRocket, the systems integrator, and the customer led to successful integration that matched their existing test architecture.

Conclusion and Future Outlook

This case exemplifies how GenRocket's synthetic test data automation platform can revolutionize test data management in complex financial environments. The customer's journey from manual to automated test data generation demonstrates potential for significant efficiency gains and accuracy improvements across a wide range of financial services use cases. The firm plans to expand the range of loan products tested, further leveraging GenRocket's capabilities to enhance their operational workflows.

Discover how GenRocket can transform your software testing and test data management processes. Visit our website for more insights and to explore our range of solutions tailored to meet your enterprise's unique needs.