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Scaling Satisfaction and Growth by Redefining Deposit Processing

Case Study

Overview

Enhancing customer convenience and enabling global expansion

A UK-based retail exchange broker for trading forex, stocks, CFDs, and crypto had limited payment options, latency issues, and manual processes. These issues were hindering customer convenience and global expansion. The absence of interconnectivity between different payment vendors was another key factor that had a negative impact on the deposit experience.

Zensar's brief:
Deliver a transformative deposit processing solution to support these crucial business requirements:

- Extensive payment options
- Concurrent deposit processing
- Real-time transaction checking
- Scalability to support growing volumes

Beyond the brief:
Guided by our commitment to "experience-led everything," we ensured that our focus was not just on technology, but more importantly, on the people who use it.

Challenges

Addressing multiple priorities

The client's IT department needed a technology partner with the experience and expertise to reliably plan and implement a solution that delivers on these priorities:

- **Offer multiple payment options**, including cards, e-wallets, and mobile payments to cater to a global clientele.
- **Facilitate concurrent deposits** without performance bottlenecks, ensuring a seamless experience.
- **Enable real-time funding checks** to prevent fraud and adhere to regulatory requirements.
- **Deliver the scalability** to handle growing transaction volumes and support global expansion.

Solution

Streamlining deposit processing

With the goal of supporting the client's widening customer base and its growing expectations, we collaborated closely with the client's IT team to deploy a comprehensive solution in four stages:

[1] Extensive payment options: The solution features robust payment gateway integration, supporting a wide array of payment methods including AliPay, PayPal, Google Pay, Apple Pay, Skrill, Neteller, and Nuvei. It leverages Amazon SQS to receive deposit requests and trigger AWS Lambda functions for asynchronous processing, ensuring reliable message delivery and effective management of potential bottlenecks. Moreover, the architecture enhances operational efficiency and scalability, enabling the seamless onboarding of virtually unlimited payment vendors.

[2] Concurrent deposit processing: To support concurrent deposit processing, we implemented multithreading within AWS Lambda functions, enabling the system to handle multiple transactions simultaneously and maintain seamless performance

during peak periods. Further, by fine-tuning provisioned concurrency settings, we enabled the solution to achieve optimal performance, resulting in significantly increased concurrency and reduced deposit processing times. These enhancements have accelerated client onboarding and improved overall system responsiveness.

[3] Real-time transaction checking: We implemented real-time transaction checking by leveraging AWS Lambda Functions integrated with a dynamic business rule engine, enabling immediate evaluation of transactions and the ability to block suspicious activity on the fly. This dynamic rule engine allows for conditional checks tailored to specific products, regions, and payment methods, ensuring flexibility and precision. T his feature significantly enhances security by facilitating real-time fraud detection and ensuring compliance with regulatory requirements.

[4] Scalability to support growing volumes: To address scalability challenges associated with high volumes of deposit transactions, we leveraged AWS Lambda to enable serverless processing, eliminating the need for infrastructure management and allowing the system to scale seamlessly based on demand. This serverless architecture ensured that performance bottlenecks were removed, enabling the solution to efficiently handle increased transaction volumes while maintaining reliability and responsiveness.

Solution enablers

- **AWS SQS** enabled event-driven and asynchronous processing.
- **AWS Lambda** enabled serverless processing of deposit requests.
- **AWS Step Functions** enabled parallel and real-time processing.
- **AWS EventBridge and API gateway** enabled token generation and helped keep those tokens active.
- **AWS Cloudwatch** enabled efficient monitoring.

Impact

Customer experience redefined

- **Faster deposit processing** with 20+ payment vendor integrations
- **Prepopulated user data** with fewer clicks
- **Higher accessibility** with 16+ languages
- **Real-time funding checks** to prevent fraud and adhere to regulatory requirements

Business outcomes: The solution enhances customer satisfaction and global reach by offering diverse, secure, and real-time payment options. It also ensures operational efficiency and scalability to support high transaction volumes and business growth.

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Part of the $4.8 billion RPG Group, we are headquartered in Pune, India. Our 10,000+ employees work across 30+ locations worldwide, including Milpitas, Seattle, Princeton, Cape Town, London, Zurich, Singapore, and Mexico City.

For more information, please contact: **info@zensar.com | www.zensar.com**