Leading Acquiring Bank in Romania Transforms Nationwide Payments Infrastructure with NewNet STC Platform

A Case Study from NewNet Secure Transactions, Inc.

NewNet SECURE TRANSACTIONS

STC SECURE TRANSACTION CLOUD

NEWNET CASE STUDY

Overview

Romania's top Bank and one of the country's most influential financial institutions and a leader in merchant acquiring, set out to modernize its payments infrastructure to meet the demands of a rapidly evolving digital economy. With transaction volumes soaring past 5 million POS payments per day and annual volumes approaching 2 billion transactions, the bank needed a next-generation platform capable of delivering uncompromising performance, security, and scalability.

NewNet Secure Transactions(NST) together with our Reseller in Romania partnered with Romanian Bank to deploy the Secure Transaction Cloud(STC) solution in a fully virtualized private cloud environment — a strategic move that redefined the bank's ability to process, secure, and innovate across all payment channels.

The Challenge

Romanian Bank's legacy switching infrastructure was reaching its limits. The bank needed a platform that could:

- Handle massive transaction growth without latency
- Strengthen security and cryptographic governance
- Support new digital payment services such as eCommerce, RTP, and A2A
- Operate efficiently in a virtualized, cloud-ready environment
- Provide a future-proof technology roadmap

The stakes were high as a national leader in acquiring, the Romanian Bank required a solution that could scale seamlessly while maintaining the highest levels of reliability, security, and compliance.

The Solution:

The ideal solution for the challenge was NST STC solution for secure payment transaction routing and switching along with the Marvell LS2 Virtualized Cryptographic module for secure storage and acceleration. NST deployed its STC payment switching platform, engineered for high-volume, low-latency transaction routing. The solution was implemented in Romanian Bank's virtualized environment leveraging virtualization to deliver agility, resilience, and operational efficiency.

A key differentiator was the integration of the Virtualized cryptographic module, enabling essential functions including hardware-grade cryptographic acceleration, secure and highly isolated key management, high-throughput TLS operations, and broad level virtualization support.

This combination delivered the top-notch performance of virtualized cryptographic module with the flexibility of cloud-native infrastructure.

Benefits and Value

The solution delivered unmatched performances at national scale with the new platform equipped to process 5+ million POS transactions daily, with peak loads exceeding 4000 TPS and nearly 2 billion transactions annually. End-to-end authorization times improved significantly, with cryptographic operations accelerated by 40–60%.

The deployed solution had the unique advantage of stronger security and compliance with LS2 module and STC's security-first architecture. These ensure that the Romanian Acquiring Bank achieved enhanced cryptographic operations, full alignment with PCI DSS 4.0, secure multi-channel transaction routing, end-to-end encryption and tokenization. Evidently the NST solution had ensured that security became a competitive advantage rather than a constraint.

STC designed as a Payment Platform built for expansion and its deployment at the Bank created a unified foundation for Bank's next wave of digital services. These positioned the Bank to attain remarkable success with limited time to roll out new or enhanced solutions for a variety of payment services and payment transaction capabilities including those listed below:

- eCommerce acquiring with 3-D Secure support
- Real-Time Payments (RTP) with ISO 20022 readiness
- Account-to-Account (A2A) payment initiation
- API-driven merchant onboarding and service orchestration
- Enhanced capabilities for AI based fraud defense mechanisms

The NST solution at the Bank gave it a great opportunity to launch new services faster, with lower operational overhead. Operational efficiency and agility were another significant achievements for the Bank as the virtualized architecture enabled rapid and dynamic scaling as desired during peak seasons, zero-downtime upgrades, reduced hardware footprint and automated failover and resilience of the deployed solutions.

Apart from the payment platform infrastructure, the payment analytics capabilities of the solution deployed primarily based on the CEM and AV CE solutions, the Bank was provided with immense functionalities in terms of real time monitoring, system health statistics, transaction volume charts, payment success dashboards and wide variety of real time performance information and periodic reports based on various payment parameters including merchants, terminals, location, value, time, peak traffic, success rates, usage proportions etc.

Overall, the Acquiring Bank gained the agility of a cloud-native fintech while maintaining the reliability expected of a national bank.

NEWNET CASE STUDY

NewNet STC Solution Advantages for the Bank

Leading Acquiring Bank's modernization initiative has positioned the bank as a regional leader in digital payments innovation. With NST's STC platform and Marvell's Virtualized Cryptographic module for crypto acceleration, the bank now operates a high-performance, secure, and future-ready payment infrastructure capable of supporting the next decade of growth.

The result is a seamless experience for merchants, faster transactions for consumers, and a scalable foundation for the bank's expanding digital ecosystem. The top Acquiring Bank's success demonstrates how forward-thinking financial institutions can transform legacy payment systems into agile, cloud-powered platforms that deliver superior performance and security. NST and Marvell are proud to support the leading Acquiring Bank in shaping the future of payments across the region.

NewNet Solutions for Payment & FinTech Providers

NewNet has delivered digital payment infrastructure solutions supporting switching, routing, transport and hardware cryptographic solutions to payment solution providers, acquirers, and retailers for decades. Expanding further on these successful technology solutions, NewNet has led to the emergence of cloud-based solutions. Capturing a market where clients demand higher security, faster switching, and lower ongoing costs, NewNet has virtualized its hardware capability. The result is the STC, could-based virtual software version of the Company's market-leading switching, routing, and hardware crypto product suite. Japan's leading Payment Services Provider utilizes the rich capabilities of STC to support the multiple payment types and payment devices in their network with futuristic potential to leverage the robust future road map of STC for capabilities to support emerging payments including B2B, CBDC, 5G IoT payments.

NEWNET CASE STUDY

About NewNet Secure Transactions, Inc.

NewNet Secure Transactions Inc. offers Digital Payment Infrastructure solutions for aggregation & acquiring payments with intelligent routing, switching, secure transport functions, and Cloud transformation, standards compliant Modernization for full spectrum of entities in the payment ecosystem. NewNet solutions provide integrated capabilities for Payment Transaction Routing, Secure Network Access, Real Time Payments, Payment Data Security, Transaction Analytics, AI Fraud Defense, Agentic Commerce, FinTech SASE etc.. by smart utilization of flexible APIs enabling Omnichannel, Multimode, Integrated payments.

NewNet Secure Transaction delivers reliable and scalable solutions to Acquirers, Processors, Banks, PSPs, Payment Gateways, PayFacs, MNOs, NSPs, FinTechs, CSPs as well as Telco, Retail, ISV, GigEconomy, Hospitality Enterprises for Real Time Payments, A2A/P2P Payments, Aggregation, Acquiring, Processing of Payments, and Emerging Payments in the areas of Open Banking, CBDC etc.. in all geographic regions globally.

For further information, visit
www.newnet.com
or email
traxcominfo@newnet.com

NewNet SECURE TRANSACTIONS

STC SECURE TRANSACTION CLOUD