Leading Japanese Payment Services Provider Deploys NewNet STC

A REPORT FROM NEWNET COMMUNICATION TECHNOLOGIES, LLC

NewNet
SECURE PAYMENT TRANSACTIONS

DS Technologies Japan, a leading IT Engineering company in the country with major enterprise and service delivering customers and offering top notch payment services with highest security and a robust roadmap for evolution to future of payments, deploys NewNet's Secure Transaction Cloud (STC) for the rollout of the state of the art secure payment infrastructure in AWS Cloud.

DS Technologies Inc. provides technical support and development, specializing in the area of LegalTech and Payment, wherein the company provides a foremost approach to customers by promoting quality, progress management and required skills unique to industry experience and work closely with business partners. DS Technologies also engages in the BNPL business. The customers who can shop at online merchants and pay later at about 65,000 convenience stores, 24,000 branches of Japan Post Bank and Post offices nationwide, or by reading the Bar-Code on the smart phone apps. DS Technologies sought to offer Payment services to their large multi-segment enterprise customers for ecommerce, web, mobile and POS based payment solution for their consumers. They required a highly secure, cloud native, high performing, resilient system with remarkable ability to scale and offer highest level of security for payments as demanded by their end customers. NewNet's STC products were selected to deliver virtualized secure payment transaction transport, routing and switching as well as virtualized hardware security modules. NewNet's STC delivers benefits that include heightened security, faster transaction throughput, unmatched resiliency, seamless expansion, and economic efficiencies.

Key Requirements

DS Technologies team was seeking a high security, high volume payment system in the Cloud for faster deployment, shorter time to market, high reliability, conformance to the standards, highly scalable and proven ability to offer seamless redundancy and resiliency. Among the many areas of focus included the following.

Security

The necessity to ensure standards based security of the transactions from in-store POS devices, web/mobile payment transactions and providing protection to the sensitive payment transaction data is very critical for end to end security. As the payment provider expands the solution to multiple enterprises and with several million customers covering large volume of transactions, it is critical to ensure top level security for handling the payment transactions from millions of payment user and devices including POS, Web, Mobile payment sources. Key security capabilities include the following:

- HTTPS/TLS based data exchange
- Secure REST/JSON API interface
- High Security Key Management

Performance & Reliability

It is most essential to deliver and sustain top notch performance availability and highly scalable payment processing systems to support the routing and transport of millions of transactions corresponding to billions of dollars annually. The chosen systems and solutions must invariably have the targeted scalability to expand to meet the higher demands of performance over the years.

Redundancy

The payment solution is expected to be seamlessly integrated with the respective POS providers and the back end processing systems supporting a variety of payment transaction types required by multiple customer categories. Operating with the best in breed virtualized and hybrid networks, the solution for payment processing must have the highest level of redundancy to suit deployment and payment service models. The need is for a system that can deliver high end services uninterrupted and continuously, meet international standards of security and support all relevant payment and transaction protocols.

Capacity for Transaction Volume Growth

Industry study indicate steady growth in payment traffic with a phenomenal increase in transaction volume origination from location based devices, along with internet and mobile payments from several million payment devices. Total transaction processing volumes are expected to grow at a steady pace and exceed several million transactions annually. The payment provider continues to deploy advanced payment terminals, integrate payment services to present and upstart FinTechs for mobile, internet payments which is expected to drive payment volumes, and there is a significant growth requirement predicted in future transaction volume.

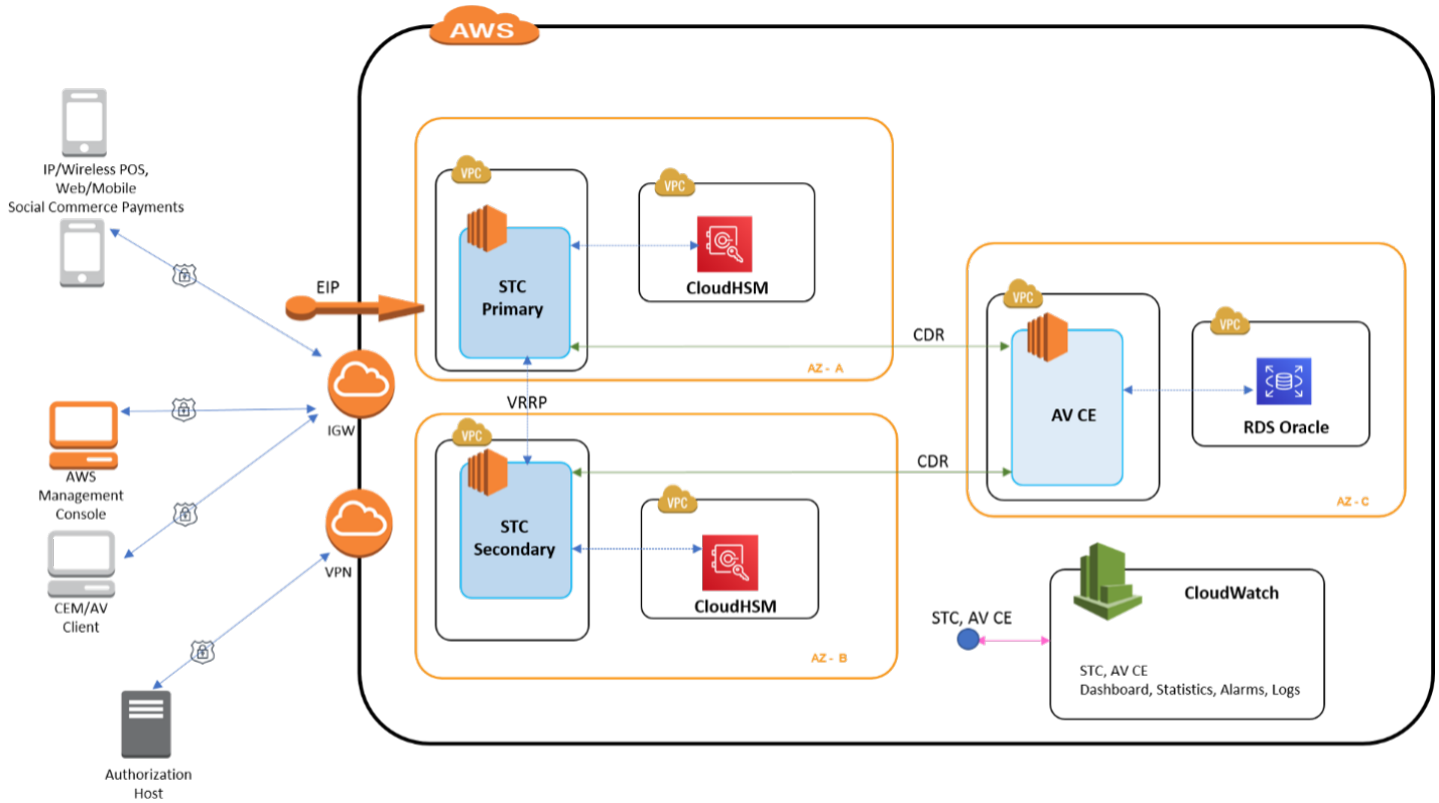
Generic objectives expected to solve for include:

- Reduce per transaction costs as scale is achieved
- Address risk of fraud and the resulting costs
- Meet ever evolving regulatory compliance
- Location redundancy and international expansion

Solution

For meeting the technical requirements, minimize upfront capital investments and gain pay as you grow solutions, DS Technologies selected NewNet solution that includes multiple STC instances in the AWS cloud environment integrated with AWS CloudHSM solutions for security, performance, and redundancy. The deployed configuration includes the Common Element Manager (CEM) application system, which is a graphical tool for configuration, management, monitoring etc., and AccessView Cloud Edition application deployed in AWS allowing access to all call data records generated and support statistics, reporting and transaction analytics.

AWS based NewNet's STC payment security, transport, routing, switching application for handling mobile, web, ecommerce and POS based payment transactions authorization and settlement with highest level of integrity and security. Highly resilient and scalable cloud instances enable the customer to utilize NewNet STC application together with AWS CloudHSM for high speed performance, rapid deployment, and advanced security while integrating with local card networks for payment processing.



STC Benefits for Payment Provides

Payment client terminals and devices like IP/Wireless POS, Smart POS/mPOS, Mobile payment application devices interface with STC in an extremely straightforward, easy to consume manner, requiring no modification to the residing payment application on the device population with IP connections. The cloud-based deployment of STC provided the perfect platform for client device integrations. Key Benefits include:

1. High Volume Payments Handling

High volume secure payment transport for Mobile, Web, POS and Ecommerce payments and operating specific payment protocols and routing these transactions at high speed to the authorization servers, and the AWS cloud environment for high performance computing, resiliency, elastic scalability, comprehensive dashboards, and geographic redundant operations.

2. Optimum Processing Power

Cloud deployments have almost limitless and scalable processing capability and storage ensure transaction processing is optimized. STC is efficient to support their settlement requirements corresponding to the multiple payment types including Ecommerce, QR code payments, and Mobile/Web/POS payments.

3. Leverage Cloud Infrastructure

STC, along with AWS cloud infrastructure, offers significant benefits to the processing and acquiring transaction processing industry segment including:

- Geographically agnostic
- Scalability with rapid creation of additional instances
- STC is centrally monitored and always current to regulatory requirements
- Extremely secure/disaster recovery capability, and
- Elastic computing - pay for the usage and grow on demand

4. High End Performance & Seamless Operations

STC together with AWS CloudHSM for high end security is unmatched in terms of the payments functionality, fit, features and future roadmap to enable the customer to meet the current payment routing, switching, transport needs plus the custom requirements for additional services which are addressed with new capabilities developments on the STC. Primary and secondary instances setup with STC on AWS for ensuring seamless operation of payment processing with uninterrupted operations with round the clock support, and all these very critical to meet the customer criteria for success.

NewNet's STC Solution for the FinTech Industry

NewNet has delivered 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 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, cloud-based virtualized, 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.

IP/Wireless In-Store POS, ATMs

NewNet's advanced payment transport and routing capabilities on the STC payment application enables to support secure and standards-based payment processing for multiple IP/Wireless POS, ATM terminals with faster completion of transactions. Additional encryption capabilities for securing the mobile device-based transaction with complete end to end encryption of transactions with virtualized hardware crypto module make this solution a favorite from the security perspective.

Internet/Web, Ecommerce Payments

High volume, high speed processing capability equipped NewNet STC application offered for delivering advanced industry standards-based security capability and support major expansions and newer service for the future growth anticipated in the network. NewNet's delivers software customizations for rapid deployment of new TLS & HTTPS services with compatibility for legacy server interfaces.

Smart POS/mPOS/QR Code

Based on growth predictions and for offering services to some of the major merchants and institutions in the country, the ability to handle high volume of transactions per month from the newly introduced Smart POS with user friendly payment applications is a key challenge. Industry proven, and the highly rated STC transaction transport application enables the service delivery for this challenging requirement with capability to handle over 2 Million busy hour transactions per application instance at full capacity, which is a significantly high volume in the industry for short duration transactions.

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For more information contact a NewNet Representative,
visit www.newnet.com or email traxcominfo@newnet.com