



**Building National
eCommerce Payments
Infrastructure in Kuwait**

Founded in 1992, our customer is a Kuwaiti national company providing electronic payment and banking services to member banks. Our customer operates the largest online payment processing rails in Kuwait with the following objectives:

- Serve the national economy by providing reliable and secure payment processing rails to advance adoption of digital payments
- Lower overall transaction processing costs for member banks
- Enable small and medium enterprises (SMEs) to accept digital payments

To support Kuwait's rapidly growing ecommerce market, the customer selected the FSS Payment Gateway to modernize its existing online payment processing infrastructure. The Gateway provides a reliable, secure, and scalable multi-institution payment payments processing capability. Currently, 11 member banks have been onboarded and the Gateway processes an approximate 80M transactions annually.

1. Modernizing Processing Infrastructure

Digital payments are a crucial vehicle for financial inclusion and economic development. The network, a Shared Electronic Banking Services Company, came into existence in 1992 with the aim to connect local bank systems in Kuwait to enable electronic payment services - anywhere, anytime and to anyone - through an interoperable network. Our customer began operations in 1994 when The Kuwaiti Network - Kuwait financial switch - was formed to deliver electronic banking and payment services to customers.

In 2004, the company launched the Payment Gateway to set up online payment processing rails for member institutions. Our customer planned to provide Kuwaiti banks an option to route debit card transactions through its processing platform and save associate transaction costs. The central infrastructure has helped member banks expand their merchant portfolio, reduce processing costs and positively impacted e-commerce growth.

Kuwait e-commerce market is developing rapidly underpinned by favorable demographics, excellent internet, smartphone and bank penetration and growing consumer preference for online payments. Over the last five years, online digital payments have expanded ~9x times faster in value than POS. Kearney Middle East forecasts a greater acceleration in e-commerce segment in the country. Between 2020 and 2022 e-commerce will grow at 20% CAGR, with a gradual growth at 14% until 2025. To effectively manage growing volumes our customer needed to upgrade the underlying infrastructure to address future growth demands of the payment ecosystem. Specifically, our customer needed to

Scale Processing Infrastructure

The value of the network is directly proportionate to the reliability of its transacting platform and the ability to scale to accommodate demand spikes without compromising security and resilience of core payment systems. Moreover, the platform needed to be flexible to launch new products to help member banks offer superior merchant-centric product propositions in a competitive and fast-evolving digital payments landscape.

Increase MSME Participation in the Online Economy

A globally accessible network aligned to principles of safety and affordability provides opportunities to integrate medium small and micro enterprises (MSMEs) into the value chain. Many merchants, especially SMEs, and home business licenses, are not digitally savvy and lack the base infrastructure to support online payments. To enable member banks assist merchants on their digitalization journey, our customer needed to support easy onboarding as well as simple, affordable payment acceptance mechanisms.

Strengthen Trust in the Ecosystem

Fraud and payments are increasingly interwoven. The customer needed to implement measures to protect the integrity of the payments system against growing incidence of online fraud and maintain trust in the ecosystem.

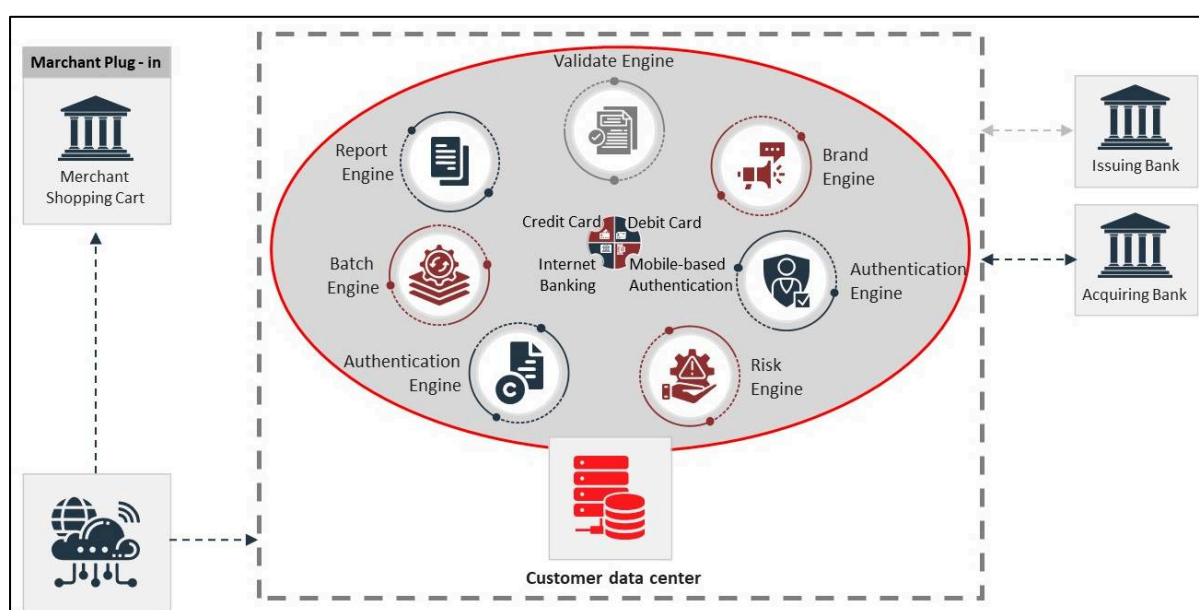
Given the criticality of the infrastructure, the customer needed a technology provider with proven experience in managing large-scale digital payment transformation projects with agility to pivot lockstep with constantly shifting, regulatory market, and consumer trends.

2. Collaboration With FSS


After an extensive multi-stage due diligence process that included assessment along technical and commercial dimensions, the payment network selected FSS to enhance the overall capability of Kuwait's National Payment Gateway (NPG). Specifically, the decision to award the contract was influenced by:


- FSS end-to-end payment expertise as well as three decades experience in deploying omni-channel acquiring solutions in multi-institutional environments for established multi-country payment processors and Central Banks.
- Experience of emerging market and consumer dynamics to bring relevant innovations such as Debit and PIN, Pay on Delivery to the market to bring more merchants and more transactions online.
- Established footprint in the Gulf Cooperation Council countries, understanding of regulatory landscape and region-based support and delivery infrastructure
- Scalable processing engine with an ability to ramp-up to -- 4,000 transactions per second – and support intensive transaction workloads
- Compliant with in-country data privacy and security mandates covering PADSS certification, data security and support for two-factor authentication.


FSS Payment Gateway




Key Capabilities

	<p>Multiple Integration Options for Rapid Onboarding</p>
<ul style="list-style-type: none"> • Merchant Integration plugins provided for Java, ASP .Net, PHP, Shopping Carts • Mobile SDK for in-app payment acceptance • Ready-made checkout UI more secure checkout for the merchant's website or app 	

	<p>Proactively Mitigate Risk - Minimizes Fraud Loss</p>
<ul style="list-style-type: none"> • Comprehensive risk controls based on transaction volume, velocity, merchant, terminal to protect revenues • Improve authorization rates by reducing false positives through transaction screening • Supports tokenization of card-on-file transactions to shield against fraudulent activity and reduce PCI scope and compliance. • Supports two-factor authentication; compliant with EMVCo 3.2 guideline 	

	<p>Keeps Payments Data Secure</p>
<ul style="list-style-type: none"> • Compliant with data privacy and localization norms • Encrypts data in transit and rest • PCIDSS 3.2 compliant 	

	<p>Extensible Architecture</p>
<ul style="list-style-type: none"> • Scalable - Average transactions on a single deployment equals 2 million transactions daily • Supports redundancy and high availability • Modular architecture supports introduction of additional functionality 	

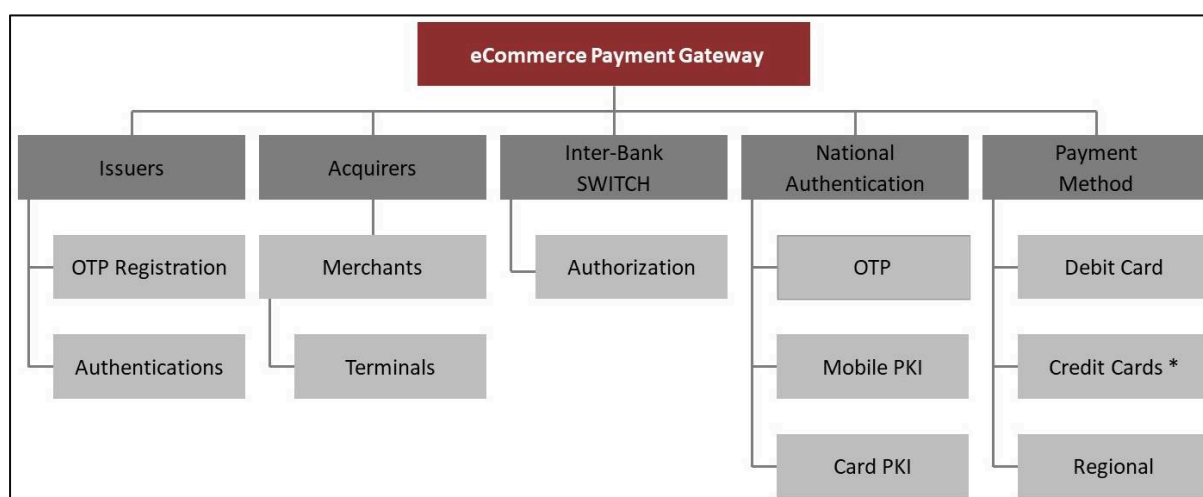
3. Enabling a National eCommerce Gateway

Launched in 2019, the new on-soil National eCommerce Gateway forms the backbone of Kuwait’s online payments acceptance system.

FSS implemented the new online payments processing system in a tight timeframe migrating member banks and merchants onto the new infrastructure without any service disruption whilst providing the stability and reliability needed to support growing volumes,

Currently 11 member banks and government institutions leverage the infrastructure to process digital payments. The Gateway supports standard interfaces to integrate with member banks for transaction processing and switching. Architected to support a multi-institution model, the data structure is logically partitioned, offering complete data security and privacy to each member institution. Deployed in an active-active mode, the Payment Gateway provides assured round-the-clock service to participants. Further, a comprehensive security and risk management framework prevents fraud using point-to-point encryption, 3D Secure, tokenization and rule-based risk screening.

eCommerce Gateway



4. Impact to Date

The collaboration with for establishment of an on-soil payments infrastructure has accelerated the growth of digital payments in the country whilst generating new revenue opportunities and cost-efficiencies for member banks and merchants.

Accelerates Economic Activity 2X Growth in Transactions

The new payment capabilities enable millions of producers across verticals – banking, health, insurance, education – to seamlessly embed payments functionality within their own solutions and make use of our customer’s industrialized and robust processing infrastructure. The modernization efforts have increased transactional activity as evidenced by growing volumes and value of payment transactions. Currently, 11 banks and government institutions have been on-boarded and e-commerce transactions in the country are expected to grow 20 per cent year-on-year. E-commerce transactions have shifted towards everyday necessities, relevant to a large number of consumers. As per reports, the National Payment Gateway handles an approximate 80M transactions, a 2X growth since 2019.

The outbreak of Covid-19 and government-imposed lockdowns provided the trigger to change how Kuwaiti’s shop and pay, Physical sales recoded a sharp decline with consumers migrating to e-commerce and digital payment channels to meet their daily consumption needs. Electronic payment transactions through apps and the Internet jumped by 109% with monthly transactions increasing from 5M before the crisis to 10M monthly. E-commerce sales rose across categories and increasingly involves goods for which availability is critical to a large share of the population, Groceries healthcare and remittances were the best-performing categories and recorded a sharp rise in uptake. During the mission-critical period, the online payments infrastructure could process surging volumes comfortably, delivering the resilience and stability, needed for smooth functioning of the economy.

Generates New Revenue Opportunities

To scale transaction volume, beyond payments processing, Payment Gateway drives growth by enabling a range of innovative use cases including:

- Faster checkout,
- Recurrent payments
- P2P payments
- Link payments

KFAST	P2P Payments Using Mobile Nos
<p>KFAST offers consumers the speed and advantages of providing pre-filled payment information that can help reduce cart abandonment, increase conversion rates, and encourage repeat business. As the name suggests KFAST enables a faster checkout experience by enabling cardholders save card numbers on the Payment Gateway. Customers are validated using, ATM PIN and OTP and the details are mapped to the cardholder number and do</p>	<p>Customer can use the P2P app and initiate a transaction to a mobile number. This P2P server routes the transaction to the Payments Gateway with the account number to which debit and credit should happen. The Payment Gateway routes this to Switch for the transactions respectively and respond to P2P on completion.</p>

Optimizes Payment Systems and Acceptance Costs

Connecting to the central infrastructure helps member banks lower fixed and operating payment system costs due to shared nature of the payment infrastructure, seamless access to functional upgrades and reduce compliance costs and ancillary fees.

Additionally, an interoperable payment acceptance infrastructure improves margins and optimizes acceptance cost for merchants. Merchants save an approximate 20% on every transaction processed through the platform. Affiliate merchants now have an option of processing payments via local, lower-cost networks rather than those provided by global card schemes. This translates into savings for established retailers, as well makes it viable to improve coverage among medium and smaller merchants.

Improves Control over Customer Data

Digital data and payment data flows play an increasingly important role in economic development. As the data-driven digital economy evolves, with the centralized Payment Gateway, the country has better control over its citizens' payments data, as it remains in-country and is not exposed to external parties. The aggregate data gathered from individual activities, products, events, behaviors can be harnessed to gain detailed insights into evolving transacting patterns of citizens for improved revenue and business planning as well as policy decisioning.

5. Way Forward

The growth in digital payments adoption is catalyzing innovation by ecosystem constituents along the entire value chain. . As the industry evolves, the national e-Commerce Payment Gateway will provide the foundation for a wider range of digital financial services and new business models. A few areas that offer exciting opportunities include enablement of bill payments across various acceptance modes such as utility payments, support for new payment mechanisms such as real-time payments. Further, Kuwait is emerging as a fore-runner in payments innovation and the model is now being embraced by other jurisdictions in the region and beyond to reap similar long-term gains.

About FSS

FSS (Financial Software and Systems) is a leader in payments technology and transaction processing. FSS offers an integrated portfolio of software products, hosted payment services and software solutions built over 30+ years of experience. FSS, end-to-end payments products suite, powers retail delivery channels including ATM, POS, Internet and Mobile as well as critical back-end functions including cards management, reconciliation, settlement, merchant management and device monitoring. Headquartered in India, FSS services leading global banks, financial institutions, processors, central regulators and governments across North America, UK/Europe, Middle East, Africa and APAC.