Entrust HSMs help secure Nationwide's 135+ year heritage of innovation and integrity

With 135 years of expertise and experience serving the interests of its members, Nationwide Building Society is the world's largest building society and one of the U.K.'s biggest mortgage and savings providers.

Headquartered in Swindon, England, Nationwide's approximately 18,000 employees serve more than 15 million members at 650 branches located throughout the United Kingdom.

Nationwide is renowned for continually evolving its portfolio of pioneering and innovative services and products. The company's online banking initiatives have attracted many accolades and industry awards; most recently, it was designated the Which? 'Best Banking Brand of the Year' twice in a row.

The company also has gained a reputation for offering an enhanced member experience, underwritten by an ability to recognize key trends and rapidly bring customer-centric innovations to market. Nationwide was one of the first in the U.K. to release a banking application for the Apple Watch and similarly enabled Android Wear smartwatch owners to perform account-related tasks such as real-time balance checks.

« **Our standardization on Entrust HSMs is a critical element of Nationwide's overall security strategy.** »

– Rob Broome, senior infrastructure manager, Nationwide

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BUSINESS CHALLENGE

To benefit consumers, and drive standardization and interoperability throughout the banking sector, Nationwide has been a prominent contributor to many U.K., European and cross-industry projects. One such initiative involves the U.K. government's Open Banking initiative. The project provides a mechanism for account owners to share banking details with third-party service suppliers, with stated intentions of making the banking sector more competitive, providing more choice for consumers and boosting innovation.

The exchange of highly sensitive, personally identifiable information across traditionally very autonomous entities was subject to a large number of industry and government data security regulations. Mandates like GDPR added even greater significance to the company-critical imperative of securing the confidential information.

TECHNICAL CHALLENGE

To achieve the project's objectives, the Nationwide team designed an application stack – including advanced API-management tools and third-party load balancing services – built on a foundational security layer utilizing hardware security modules (HSMs) as a key architectural element.

The HSMs needed to provide reliable and standards-compliant digital signing, coupled with resiliency and performance.

The fundamental role of the HSM – generating keys, encrypting and decrypting data, and administering digital signatures – necessitates an exemplary level of trust in the supplier's ability to deliver a flawless solution: Identifying the appropriate

partner was critical for all future innovations involving the transformation of online and digital transactions.

SOLUTION

To assist in the selection of the optimal HSM, the Open Banking project team consulted with an in-house group of subject matter experts (SMEs) tasked with providing technical advice and guidance across the company.

A member of the SME team, Rob Broome, senior infrastructure manager, commented, "Based on long-standing experience, we had already designated Entrust as the de facto HSM supplier for Nationwide. After verifying specific requirements for the Open Banking project, our level of confidence in the Entrust solutions made it an easy decision to recommend the use of Entrust nShield® HSMs."

Broome's colleague, Darren Palmer, infrastructure support specialist, added, "Over time, we've implemented a significant amount of Entrust hardware in key projects throughout Nationwide. Having the flexibility to match an individual HSM model to the exact capabilities we need for a particular application is of significant value to us and they take minimal effort to manage. It's a powerful combination!"

The Nationwide team utilized the Entrust nShield Web Services Option Pack to facilitate conformity with the Open Banking standards for compliant signing and verification. The solution includes the secure nShield Web Services Crypto API to provide easy connection to the full set of Entrust HSM cryptographic services.

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The nShield HSMs and the nShield Web Services Crypto API were complemented by the Entrust Security World key management framework to expose signing and verification interfaces across the full technical ecosystem. The Security World architecture provides a unified experience for administrators and users, coupled with fully scalable interoperability.

BENEFITS

The Open Banking project has been heralded as "unlocking" the banking industry in the U.K. The person seconded by the Government to oversee the country-wide deployment, Imran Gulamhuseinwala, trustee of the independent Open Banking Implementation Entity, commented he was "immensely proud to be leading the revolution in retail and business banking."

With support from the Entrust professional services team, Nationwide was one of the first organizations to meet all regulatory compliance requirements. Use of the Entrust Web Services Option Pack ensured that the U.K. government's mandate for specific digital signing algorithms could be fulfilled by leveraging existing in-house RESTful API modules.

As a result of the project's success, Nationwide has gone on to support the national "Open Banking for Good" (OB4G) initiative, which aims to enhance financial inclusion for the disadvantaged in society. With an estimated one in four UK households experiencing financial hardship, the program's ambitious goal is to convene the brightest minds in fintech, social innovators and debt charities to create applications and services to help people manage their money better.

IT'S A MATTER OF TRUST

HSMs play a significant role in Nationwide being able to deliver on members' expectations for speed, accuracy and security. Palmer stated, "How we handle people's money can obviously be a very emotional topic and we just can't take any chances. Entrust HSMs have proven to be a key contributor to ensuring that we can fulfill this obligation."

Broome concluded, "Entrust HSMs have proven themselves over the course of processing many billions of transactions. We definitely view Entrust as a strategic partner and unquestionably the HSM provider of choice for Nationwide Building Society.

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Business need
- Identify method to secure digital transformation of business
- Meet digital signing compliance standards
- Repeatable security solution, usable across multiple, diverse projects
- Ability to support business objectives relating to security, data integrity and compliance

Technology need
- Exemplary levels of reliability and performance
- HSM with low administrative overhead
- Scalability for cross-enterprise deployments
- Compatibility with existing technology stack

Solution
- Entrust nShield HSMs
- Entrust nShield Web Services Option Pack
- Entrust professional services

Result
- Single vendor sourcing and support for all HSM deployments
- Exceptional scalability, resiliency and throughput
- Proven, trusted and dependable HSM solution relevant to all projects
- Nominal administrative requirements
- Compliance with all relevant regulatory mandates

"Security is at the core of everything we do, and as we're continually innovating to bring more capabilities to market we increasingly rely on encryption to ensure the integrity of every single transaction. Our standardization on Entrust HSMs is a critical element of Nationwide's overall security strategy."

ABOUT ENTRUST

Entrust keeps the world moving safely by enabling trusted identities, payments and data protection. Today more than ever, people demand seamless, secure experiences, whether they're crossing borders, making a purchase, accessing e-government services or logging into corporate networks. Entrust offers an unmatched breadth of digital security and credential issuance solutions at the very heart of all these interactions. With more than 2,500 colleagues, a network of global partners, and customers in over 150 countries, it's no wonder the world's most entrusted organizations trust us.

Learn more at
entrust.com/HSM

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