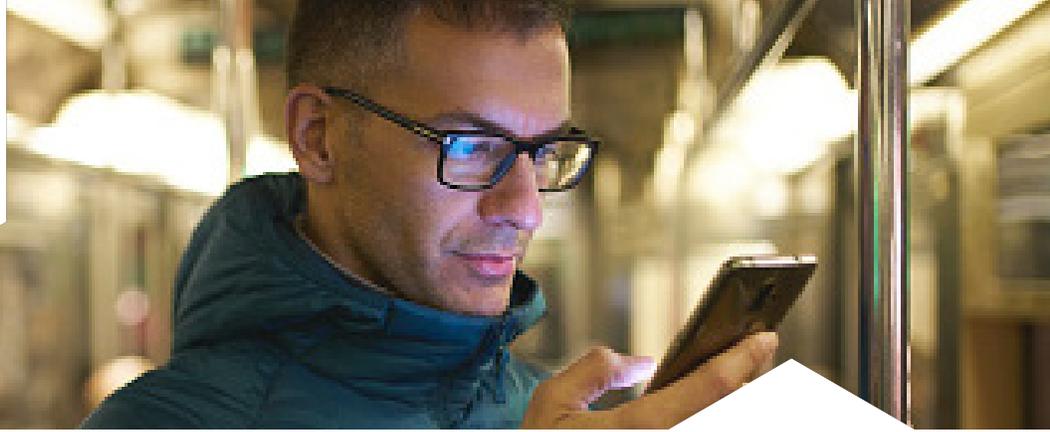




**ENTRUST**



## Entrust nShield HSMs secure Snapper's mobile reload transit solution



How an innovative company added convenience for commuters while delivering iron-clad security.

### **THE CHALLENGE: MAXIMIZE SECURITY FOR MOBILE TRANSIT PURCHASES WITHOUT SLOWING PERFORMANCE**

Snapper, an enterprising New Zealand company, set out to improve public transportation for riders in Dublin, Ireland. The National Transport Authority of Ireland (NTA) wanted to make paying for transit much more convenient for their riders, even letting them load their cards while a bus approaches within sight. Snapper needed to give NTA's customers a way to check their balance and instantaneously re-load their LEAP transit cards using their smart phones. Their solution needed to serve up to 500 people topping up at the same time - and to do so with the utmost security.

### **THE SOLUTION: SMART PHONE PAYMENTS SECURED BY ENTRUST NSHIELD HSMs**

Snapper designed a solution that lets customers load their transit accounts by tapping their LEAP transit smart cards against their phones and making payments through Snapper's app. The phones recognize the contactless chips embedded in the cards, triggering Snapper's app to open. The app authenticates and reads the cards and guides customers through PCI-compliant credit card transactions. Customers then use the transit cards to travel by bus, tram, and rail in Dublin.

**LEARN MORE AT [ENTRUST.COM/HSM](https://www.entrust.com/hsm)**

To help secure their solution, Snapper deployed Entrust nShield® hardware security modules (HSMs). Snapper's app encrypts customer transaction data, and uses Entrust nShield HSMs to manage the encryption keys critical to safeguarding the data. For high assurance security, all encrypted data is stored in the contactless chips in the smart cards.

### **CODESAFE HELPS TO SECURE TRANSACTIONS**

The security of Snapper's solution relies on managing encrypted data, keys, and, to ensure integrity, the mutual authentication between the smart cards and HSMs – all driven by Snapper's custom routines. These sensitive routines and the data they handle would be vulnerable to threats if exposed outside the closed system. Entrust nShield CodeSafe provided the protection Snapper needed by securing the crypto code within the boundaries of their Entrust nShield HSMs.

### **ENTRUST NSHIELD HSMs LET CUSTOMERS CONTROL THEIR KEYS**

The NTA's master keys are their most valuable secrets and the NTA's IT managers follow very strict processes to protect them. Entrust nShield HSMs and associated Security World architecture fully supported these key handling processes and made it easy for the NTA to manage all production key related functions securely and without involvement from Snapper.

### **ENTRUST'S ARCHITECTURE SUPPORTS STRICT POLICY ADHERENCE**

Entrust nShield Security World greatly reduces the risks of non-authorized personnel gaining control of encryption keys by enforcing roles-based controls, thus helping to ensure comprehensive security.

### **ABOUT THE SOLUTION**

#### **Entrust nShield HSMs**

Entrust nShield HSMs provide a tamper-resistant environment for secure cryptographic processing and key management. Entrust nShield HSMs are certified and meet established and emerging security standards for cryptographic systems while staying highly efficient.

Entrust nShield HSMs isolate and protect cryptographic operations and keys for organizations' most critical applications. Entrust nShield HSMs perform encryption, digital signing, and key management for an extensive range of applications including public key infrastructures (PKIs), SSL/TLS, and code signing. Entrust nShield HSMs are high-assurance alternatives to software-based cryptography – supporting all leading algorithms and featuring world-class ECC performance.

With Entrust nShield HSMs and their unique architecture, you buy only the capacity you need and easily scale your solution as your needs evolve.

## Entrust nShield CodeSafe

Entrust nShield CodeSafe hosts and runs sensitive custom applications within nShield HSMs. CodeSafe lets applications decrypt, process, and encrypt data inside the secure environment. As a result, applications, such as Snapper's code used to authenticate smart cards, are well protected from outside threats.

## Entrust professional services

The Entrust team of professional services security consultants delivers customized services to meet specific business needs. Experienced with a variety of applications, the professional services team helps organizations plan integrations, mitigate risks and execute projects through deployment and field testing – quickly and securely.

## WHY ENTRUST?

Snapper started their six-month project, one they viewed as pivotal to expanding outside of New Zealand, with another security solutions vendor. Halfway through, they realized the vendor wouldn't meet their requirements for protecting their crypto code or delivering to the performance specifications demanded by their customer – the National Transport Authority of Ireland.

With three months to go, Snapper asked Entrust to step in. What made Entrust's solutions the right choice?

- **Easy to implement** – Snapper needed a straight-forward solution that would integrate seamlessly with their design. Entrust delivered, helping Snapper succeed in their high profile, time-sensitive project while staying within a fixed budget.
- **Performance** – Entrust nShield HSMs support simultaneous consumer transactions at a rate 6x greater than the project required, and significantly faster than Snapper's original security vendor. This gave Snapper and the National Transport Authority confidence in meeting the consumers' needs – with room to grow.
- **Expert guidance** – The Entrust professional services team gave what Snapper called “frictionless access to their expertise” and worked efficiently with Snapper to align the team around project requirements, helping Snapper quickly and confidently deliver its solution to Dublin's transport authority.

## KEY ENTRUST SOLUTION BENEFITS

- Protect cryptographic keys and operations within tamper-resistant hardware to significantly enhance security over software-only solutions.
- Run sensitive custom applications within HSM boundaries using Entrust nShield CodeSafe.
- Maintain control over your keys and build HSM estates that scale with evolving needs with the unique Entrust nShield Security World architecture.
- Develop your solution efficiently and confidently with the expert guidance of the Entrust professional services team.

## 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](https://entrust.com/HSM)

