

## NetMove Corporation: Acquiring P2PE Certification with Thales Payment HSM

### Reliable cashless payment service with a rapidly increasing transaction volume

#### Summary

The market for cashless payments is quickly expanding inside Japan, and the Spayd cashless payment service provided by NetMove Corporation (hereinafter "NetMove") is a major player in the market, reaching an annual transaction amount of 560 billion yen with more than several hundreds of thousands of devices used on the platforms provided by the company.

The reason many businesses and shops use Spayd is because of the three Ss: simplicity, safety, and speed. Spayd provides mobile POS payments that are commonly used by street-front shops. However, the advantages over conventional large POS systems designed for stores are that it does not require special wires if you have a smartphone or tablet, and it provides extremely robust security including the ability to be deployed quickly at low cost. Security is clearly demonstrated by the fact that NetMove is the first provider to receive PCI P2PE certification in Japan.

PCI P2PE is a high-security standard for cashless payments that uses end-to-end encryption to send card data from card readers to a payment processing center for decoding. This ensures zero retention/zero passage of cleartext credit card information at shops and over networks.

The robust end-to-end encryption and decryption of the Spayd service is handled by Luna EFT Payment HSMs, which are part of the Thales payment HSM family.

In addition to face-to-face payments in stores, Spayd provides a variety of other sales formats, such as EC orders or subscription content. There are two types of payment devices. The photo on the left shows a Miura Systems device, which is used in combination with a smartphone. The photo on the right shows a Pax Technology all-in-one device that runs on the Android operating system.

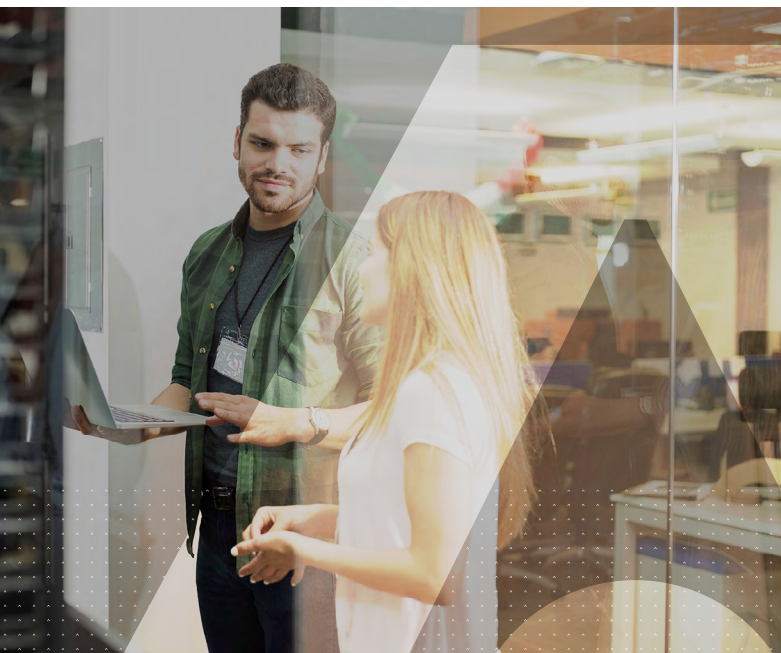


# netmove

#### Business Need

NetMove was established as a company in 2000 under the two major pillars of payment services and security services. Even while working to develop new cashless payment services in 2013, the company considered the pursuit of security to be an important requirement because NetMove actively pursued compliance with the security standards established by PCI SSC, the credit card industry's security standards council, to be one of the development objectives.

At first, as the mobile point of sale (mPOS) used for mobile payment services, they searched the world for products with PCI PTS certification, as well as products with the best development in terms of simplicity, safety, and speed, and they chose the devices of Miura Systems in England. Moreover, Miura Systems devices



require the use of HSMs (hardware security modules), which are special hardware used for managing encryption key lifecycles, and they selected the Thales HSM devices as the next step.

The reasons for selecting the Luna EFT Payment HSM was because the total compliance with PCI HSM security standards for HSM established by PCI SSC made it easy to acquire PCI P2PE and because a flexible support system could be provided. At the beginning of the development project, Luna EFT Payment HSM could not provide the encryption key injection function to the Miura Systems devices; however, Thales responded to the request of NetMove. Through the cooperation of development teams in four countries, including England and Japan, Thales developed an API within a short period of time, and the headquarters in Japan started providing a robust deployment assistance service. In 2014, NetMove started a new cashless payment service as planned.

## Solutions

The Spayd service incorporates Luna EFT Payment HSM as core components to become the first service in Japan to be a certified PCI P2PE provider in 2017. Moreover, NetMove received attention both inside and outside Japan as a front-runner amongst payment service providers.

Spayd uses the DUKPT protocol, which uses different encryption keys for each payment transaction. While providing the Luna EFT Payment HSM DUKPT interface and safely registering and protecting each key, they will continue providing stable encryption key lifecycle management.

From April to October 2023, they plan to switch from the Luna EFT Payment HSM to Thales payShield 10K, the latest payment HSM. As with conventional HSM, they are used to encrypt the communication of credit card payment data using DUKPT. The newest machines offer further improved processing speeds, stability, and other characteristics and will make up the core, so they would like to renew our certification in preparation for the next P2EE audit, which are conducted every three years.

**“ Payment services are part of our social infrastructure, and sustainable services are in strong demand. We would also like the vendors who provide the core components that support these services to be sustainable businesses. Acquiring, maintaining, and updating PCI HSM require a great deal of corporate strength and obligations. However, Thales have faithfully fulfilled such responsibilities over many years. We would like to work together with Thales, equipped with the elements of a sustainable company, as our business partners to create situations where we all benefit.”**

– NetMove Corporation Corporate Executive Officer  
Director of Payment Business, Masami Takada

## Challenges

- Recognition that enhancement of security is a crucial business requirement in the development of new cashless payment services
- The important development goal of complying with PCI DSS and then PCI P2PE

## Solutions

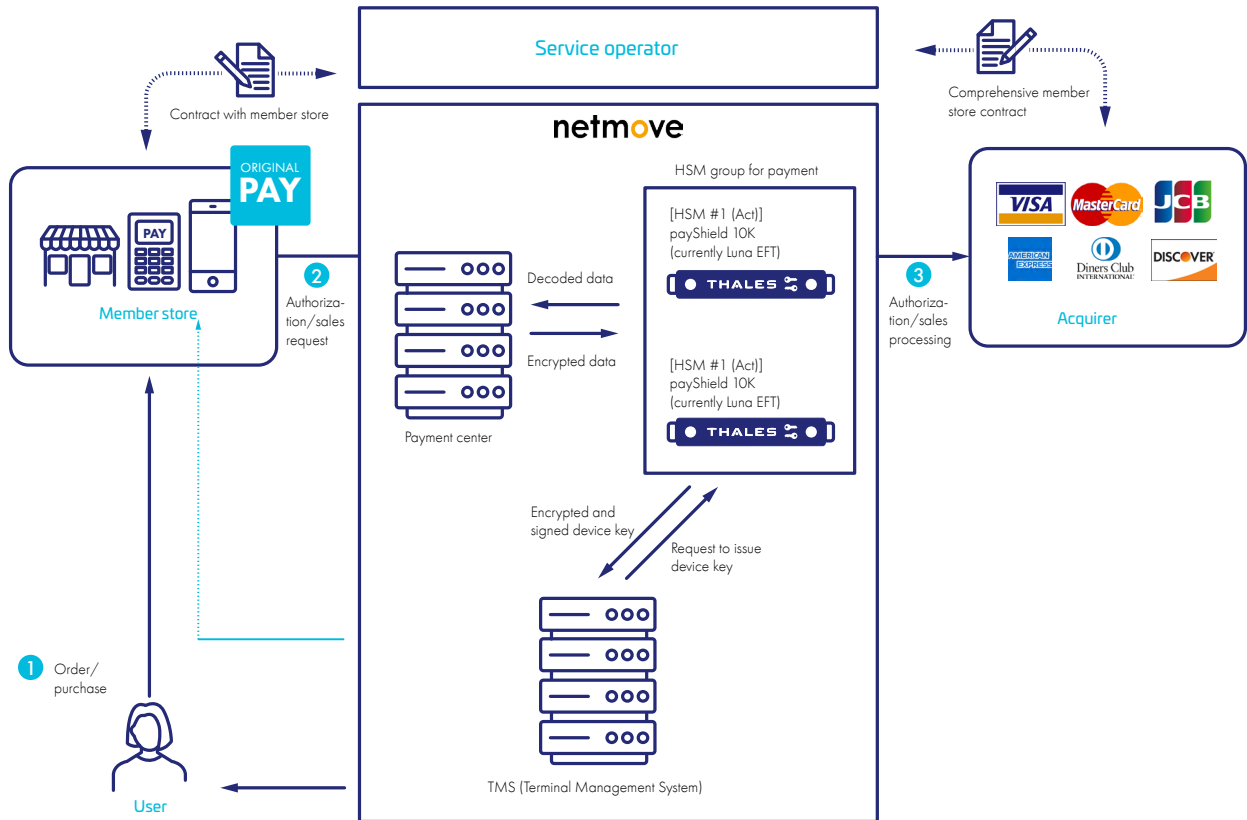
- First, as mPOS devices, which are used for mobile payment services, the devices of Miura Systems in England were selected. A major requirement of Miura Systems is that hardware security is used, so the HSM devices were selected.
- Started using Luna EFT Payment HSM. Complete compliance with PCI HSM is achieved, thereby making it easier to be in compliance with PCI DSS and PCI P2PE.

## Benefits

- Thales developed an API to connect the Luna EFT Payment HSM and Miura Systems devices. They were able to deploy the API within a short period of time with a deployment assistance service started by the Japanese headquarters.
- Systems using the Luna EFT Payment HSM as the core components were the first to obtain PCI P2PE in Japan. They established their position as the frontrunner of payment solution providers.
- Despite steady business expansion and a sharp increase in the number of devices to several hundreds of thousands, they maintained stable encryption key lifecycle management of the Luna EFT Payment HSM at a sufficient capacity.
- Thales payShield 10K with further advanced processing speed and stability was released. The next PCI P2PE audit, in 2023, plans for a renewal to the certification in anticipation of a transfer to this next generation product.
- They will make proactive efforts to acquire a security infrastructure with reliable diversification and segmentation of business and further business expansion.

The types of services in the cashless payment market continue to diversify according to the latest trends, such as providing mobile solutions and creating service components. The more the services diversify and segment, the greater the need for comprehensive security increases. NetMove, which has established a highly secure infrastructure with Luna EFT Payment HSM and the successor, Thales payShield 10K, will continue to proactively work to expand services.

Structure of PCI P2PE for Spayd service that is supported by Thales payShield 10K (currently Luna Payment HSM)



## About Thales payShield 10K

payShield 10K, the fifth generation of payment HSMs from Thales, delivers a suite of payment security functionality proven in critical environments including transaction processing, sensitive data protection, payment credential issuing, mobile card acceptance and payment tokenization. Like its predecessors over the past 30+ years, payShield 10K can be used throughout the global payment ecosystem by issuers, service providers, acquirers, processors and payment networks.

## About Thales

The people you rely on to protect your privacy rely on Thales to protect their data. When it comes to data security, organizations are faced with an increasing number of decisive moments. Whether the moment is building an encryption strategy, moving to the cloud, or meeting compliance mandates, you can rely on Thales to secure your digital transformation.

Decisive technology for decisive moments.

All company names, product names, and logos in this article are trademarks or registered trademarks of their respective companies.



**Contact us**

For all office locations and contact information, please visit

[cpl.thalesgroup.com/contact-us](https://cpl.thalesgroup.com/contact-us)

> [cpl.thalesgroup.com](https://cpl.thalesgroup.com) <

