

NASDAQ OMX relies on Thales HSMs to deliver a cloud offering secure enough for financial services

The inventor of the electronic exchange, The NASDAQ OMX Group provides transformative technologies for the entire lifecycle of a trade—from risk management to trade to surveillance to clearing. In the U.S. and Europe, the company owns and operates 23 markets, three clearinghouses, and five central securities depositories. The company's technology drives more than 70 marketplaces in 50 countries, powering one in ten of the world's securities transactions.

Background

Like other firms in the financial services sector, NASDAQ OMX has to comply with a range of regulatory mandates. Like any organization in any industry, NASDAQ OMX also has to manage costs. Because of these twin demands, NASDAQ OMX had initially set out to develop its own cloud-based platform, one that would provide the security protections required to handle their sensitive information, while enabling reductions in their IT costs. Based on the experience gained through this successful endeavor, the company opted to bring a cloud-based solution to market that its customers would be able to leverage. The result of this effort is FinQCloud, a cloud computing platform designed for the financial services industry.

Challenge

To deliver a cloud solution that is viable for the financial services market, NASDAQ OMX needed to ensure a host of stringent security policies and compliance mandates would be addressed.

Solution

By leveraging Thales Luna Network HSMs, NASDAQ OMX has been able to provide maximum security of the cryptographic keys used to encrypt customer data.

Results

With Luna HSMs, NASDAQ OMX has been able to deliver a successful cloud solution that has been audited and verified to be compliant with relevant regulatory mandates.



“Both within our own internal operations and within our FinQCloud offering, maximizing security of sensitive data is a critical mandate. Thales' data protection capabilities are part of FinQCloud, which helps us meet our industry's stringent security and compliance objectives.”

— Adam Honoré, Managing Director, FinQCloudCompany.

In developing FinQloud, the team at NASDAQ OMX was tasked with enabling customers to leverage the cost and agility benefits of the cloud, while at the same time ensuring that this platform met the security, privacy, and regulatory demands of the industry. Toward this end, the organization needed to leverage data encryption so they could provide FinQloud customers with the persistent control over data access they required. In architecting the FinQloud solution, the team at NASDAQ OMX realized they'd need to apply the highest levels of security to the cryptographic keys associated with this encryption. Consequently, before rolling out FinQloud, NASDAQ OMX sought to leverage robust hardware security modules (HSMs).

The Solution

To identify the optimal HSM platform for the FinQloud offering, several groups within NASDAQ OMX—including security, internal audit, and global infrastructure teams—undertook an analysis of the options available. Through the course of this evaluation, Luna Network HSMs emerged as the logical choice. Following are a few key reasons:

- **Proven vendor.** NASDAQ OMX had previously purchased Thales KeySecure, an encryption appliance used to encrypt sensitive data in the company's internal infrastructure. The NASDAQ OMX team was highly satisfied with Thales Data Protection products, services, and support. Given the expertise and effort of Thales' people during this initial engagement, NASDAQ OMX came to trust and count on the company's expertise in data protection.
- **Experience in securing financial transactions.** Thales has a well-established track record in securing data for financial organizations. In fact, Thales solutions are used to protect over 80% of the world's fund transfers, secure transactions for five of the world's largest central banks, and safeguard the majority of ATM transactions in Europe, the Middle East, and Asia.
- **Certifications.** Luna Network HSMs offer the highest level of tamper resistance and security and have been validated to be compliant with FIPS 140-2 Level 3 and Common Criteria EAL 4+ standards.
- **High availability, cloud-friendly architecture.** NASDAQ OMX needed to ensure their cryptographic infrastructure was capable of delivering the high availability required by the FinQloud service. Luna Network HSMs offer high availability features that enable multiple Luna Network HSM appliances to be grouped together to form one virtual device, providing failover in the event of a system failure. Further, the solution is optimized for virtual platforms and cloud environments, featuring support for vSphere, Microsoft Hyper-V, and Citrix XenServer.

Today, NASDAQ OMX is using Luna HSMs to store and protect cryptographic keys. These keys are used to support the encryption of all the sensitive customer data that gets managed within the FinQloud platform.

Results

Through its implementation of Luna Network HSMs, NASDAQ OMX realized several benefits:

- **Ability to leverage cloud securely.** By encrypting information with secured and well managed encryption keys, NASDAQ OMX was able to meet the security, privacy, and regulatory demands of the financial services industry, while at the same time enabling customers to leverage the cost and agility benefits of the cloud.
- **Robust security.** With Luna HSMs, NASDAQ OMX is able to institute maximum security controls over the cryptographic keys that secure client data. These security controls represent a key requirement for making FinQloud a viable option for customers.
- **Consistent compliance.** FinQloud has been independently audited, and, in part due to its rigorous controls over keys and data, the service has been confirmed compliant with a host of relevant requirements, including Securities and Exchange Commission Rule 17a-4 and Commodity Futures Trading Commission Rule 1.31.s.

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.

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Americas – Arboretum Plaza II, 9442 Capital of Texas Highway North, Suite 100, Austin, TX 78759 USA • Tel: +1 888 343 5773 or +1 512 257 3900 • Fax: +1 954 888 6211 • E-mail: sales@thalessec.com
Asia Pacific – Thales Transport & Security (HK) Lt, Unit 4101-3, 41/F, Sunlight Tower, 248 Queen's Road East, Wanchai, Hong Kong • Tel: +852 2815 8633 • Fax: +852 2815 8141 • E-mail: asia.sales@thales-eseurity.com
Europe, Middle East, Africa – 350 Longwater Ave, Green Park, Reading, Berkshire, UK RG2 6GF • Tel: +44 (0)1844 201800 • Fax: +44 (0)1844 208550 • E-mail: emea.sales@thales-eseurity.com