THALES

Chinese O2O local life services company solidifies customer data security withThales Luna HSMs

This Chinese company provides an O2O (online-to-offline) local life service platform, connecting over 240 million consumers and five million local merchants via a comprehensive array of e-commerce services and products. It has 600 million users and almost 4.5 million business partners that cover nearly all of China. About 35 million people use their service every day.

Business Challenges

With customers covering a wide range of services including restaurant/hotel reservations, train/flight/cinema ticket bookings, food delivery, and bicycle sharing, the company runs many applications that generate huge amounts of sensitive customer data on a daily basis. Additionally, the company also exchanges vast amounts of data with other business partners.

As this company deals with a lot of personal customer information including addresses and phone numbers, it recognized that its sensitive data needed to be protected appropriately with a central encryption and key management system (KMS). The company had previously developed its own encryption solution to

protect this sensitive data, but it was isolated and inconsistent. The implementation of a new solution improved its sensitive data security levels and helped meet local regulations, offering strong encryption keys and certificates and the relevant key lifecycle management for various business applications, including internal and 3rd parties, as well as standardized APIs for internal and external invocation.

Technical Challenge

Working with a small internal IT group, the company needed secure and efficient key storage which could generate random numbers and cryptographic operations, acting as a root of trust for the entire KMS. Specifically, the following was required:

- **Utmost security:** The security of the entire system was the primary and most important focus for this project, which would have been hard to realize with a pure software-based solution. The security team was in search of a high-assurance, well trusted Hardware Security Module (HSM) that would form the foundation of digital trust for their crucial KMS.
- **Performance:** Next to security, performance was the second concern. The HSM needed to handle thousands of operations per second during peak times.
- **Scalable key storage and provisioning:** Once the company implemented the new solution and encrypted all of its data, the KMS provided the high assurance protection for over ten thousand keys, for both internal and external applications.
- **Support for Chinese SM algorithms:** SM algorithm support was also necessary, as it is mandatory in China for data encryption.
- **Remote management:** The operations team preferred working in their offices remotely managing their appliances.
- **In-time partner support:** Receiving instant support with local language was incredibly helpful and efficient.

Solution

Thales Luna S750

The company deployed a Luna S750 in their Beijing data center, and synchronized keys with a second Luna HSM in Shanghai for high availability. An additional Luna HSM is used for backup and in case of emergency. The Luna Universal Client enabled the integration with KMS and CA through Luna JSP.

Results

Thales met the requirements for robust security and the availability required. Luna HSMs gave them the much-needed ability to backup data securely and quickly, as well as manage security keys to maintain their integrity.

Since deploying Luna HSMs, this company revamped its key management capabilities by storing, protecting and managing its cryptographic keys in a high-assurance, tamper-resistant, FIPS 140-2 Level 3 appliances. Luna HSMs also boosted this company's cryptographic processing capabilities by offloading it from application servers and storing the cryptographic keys in a centralized hardened device; thereby eliminating the risks associated with having these assets housed on poorly secured platforms. Using Luna HSMs also allowed them to significantly streamline security administration and the ability to meet regional compliance mandates.

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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