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Major Mobile Network Operator Protects Privacy of Millions of Subscribers with CipherTrust Transparent Encryption and Luna HSMs

Introduction

A major mobile network operator (MNO) in Brazil with operations in multiple countries experienced a continuous increase in the number of attempted cyber-attacks, especially ransomware, on its IT infrastructure. The MNO wanted to implement a comprehensive data security solution to protect the sensitive data of millions of subscribers across its systems and comply with new privacy and data security regulations.

Challenge

This MNO had a complex hybrid IT infrastructure with sensitive data flowing through numerous repositories and hundreds of database servers. They were using multiple point solutions to protect data in different systems, but they had no centralized management panel to understand the disposition of sensitive data, how each data set was protected, and who had access to the data sets.

In addition, the enactment and enforcement of the General Data Protection Law of Brazil (LGPD) in 2020 increased the risk of penalties if a data breach would occur and increased the urgency to deploy an effective solution.

However, the company wanted to ensure the data security technology would not affect operations, performance, or business analytics. The solution needed to balance security enforcement and usability of data by revenue generation and customer retention processes and applications.

Solution

After considerable research and proof of concept (PoC) tests measuring ease of implementation, impact on operations, and centralized management of security policies, the MNO chose Thales CipherTrust Transparent Encryption with Luna Hardware Security Modules (HSMs).

CipherTrust Transparent Encryption

CipherTrust Transparent Encryption was implemented to protect multiple file systems and databases, including hundreds of Oracle database servers.

CipherTrust Transparent Encryption delivers data-at-rest encryption with centralized key management, privileged user access control, and detailed data access audit logging. This protects data wherever it resides, on-premises, across multiple clouds, and within big data and container environments.

Thales CipherTrust Transparent Encryption provides complete separation of administrative roles. With role-based access control, only authorized users and processes can view encrypted data as plain text, affording a fundamental level of security that ensures the privacy of sensitive data.

Agents are installed at the operating file system or device layers, and encryption and decryption are transparent to all applications that run above the agents. CipherTrust Transparent Encryption is designed to meet worldwide data security compliance and best practice requirements with minimal disruption, effort, and cost.

CipherTrust Transparent Encryption with granular security policies enforces separation of duties and prevents unauthorized access to data by administrators or other privileged users. Luna HSMs provide flexibility, scalability, and easy manageability throughout the lifecycle of the keys it protects.

Luna HSM

Thales Luna HSMs were deployed to provide a secure root-of-trust for encryption keys used by CipherTrust. Thales Luna HSMs are dedicated crypto processors specifically designed to protect the crypto key lifecycle. HSMs act as trust anchors and protect the cryptographic infrastructure of some of the most security-conscious organizations in the world by securely managing, processing, and storing cryptographic keys inside a hardened, tamper-resistant device.

Luna HSMs also help organizations simplify integration and deployment with a wide variety of APIs and have the largest and broadest partner ecosystem in the market. Luna HSMs offered flexible deployment options, and can be deployed on-premises, in the cloud, as a service, or across multiple environments to support hybrid infrastructures.

Results

The MNO reduced the risk of a data breach by protecting all the most important file systems and databases that store sensitive data across the enterprise. The quick and seamless implementation of CipherTrust Transparent Encryption and Luna HSMs enabled a quick time-to-compliance with regulations such as LGPD and minimized the risk of ransomware attacks.

CipherTrust Transparent Encryption with granular security policies enforces separation of duties and prevents unauthorized access to data by administrators or other privileged users, reducing the risk of internal threats. The solution's access logs and detailed reports allowed the enterprise to identify and stop a number of employees from accessing sensitive datasets without authorization or a clear business need.

CipherTrust Transparent Encryption and Luna HSMs had minimal impact on the company's operation, with no impact on performance of protected systems and permitting authorized users and processes to continue to leverage data for essential operations. Additionally, no headcount had to be added to manage the solution.

Quick time-to-compliance

- **Seamless implementation of CipherTrust Transparent Encryption and Luna HSMs was essential for quick compliance with LGPD.**

Reduced risk of data breach

- **Reduced the risk of a data breach and ransomware attacks by protecting all the most important systems that store or process sensitive data across the enterprise.**

Single panel of glass for sensitive data protection

- **Centralized management panel enabled the MNO to understand the disposition of sensitive data, how each data set was protected, and who had access to the data sets.**

No impact on operations

- **There was no reduction on performance of protected systems, authorized users and processes continue to leverage data for essential operations.**

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.