Fortinet and Thales CipherTrust Manager Security Solution

Next-Generation Enterprise Key Management for Network Security Solutions

Executive Summary

CipherTrust Manager, developed by Thales, is a central management platform for encryption keys and security policy management. It helps organizations streamline and automate the management of encryption keys across various systems, devices, and applications. By effectively managing encryption keys, organizations can protect sensitive data from unauthorized access and ensure compliance with data privacy regulations.

When integrated with Fortinet security solutions, the Fortinet and Thales CipherTrust Manager Security Solution enables organizations to enhance their security posture. The Fortinet-Thales partnership enables next-generation enterprise key management for network security solutions by centralizing and simplifying data security policies.

The Challenges

Organizations face the risk of data breaches, where sensitive information may be exposed, leading to financial losses, reputational damage, and regulatory penalties. Meeting stringent data protection regulations and industry-specific compliance requirements can also be complex and time-consuming for organizations. Safeguarding personally identifiable information (PII) and maintaining data privacy are significant concerns, especially with the increasing volume of sensitive data being stored and transmitted. Selecting the correct key management solution is essential to mitigate data security and privacy risks across network infrastructures.

Next-Generation Enterprise Key Management for Network Security Solution

Fortinet and Thales have partnered to deliver an industry-leading security solution to address these challenges. Integrating Thales CipherTrust Manager and Fortinet FortiGate Next-Generation Firewall (NGFW), enabled through the Fabric-Ready Program in the Fortinet Open Fabric Ecosystem, delivers next-generation enterprise key management for network security solutions by centralizing and simplifying data security policies. Furthermore, this integration ensures data protection as it moves across networks for on-premises, multi-cloud, hybrid-cloud, and distributed public cloud services.

Thales CipherTrust Manager offers the industry-leading enterprise key management solution, enabling organizations to manage encryption keys centrally, provide granular access control, and configure security policies. CipherTrust Manager is the central management point for the CipherTrust Data Security Platform. It manages critical life-cycle tasks, including generation, rotation, destruction, import and export. It also provides role-based access control to keys management configuration along with support for robust auditing, reporting, and developer-friendly automation interfaces (REST API, CLI, Terraform).

Solution Components

- Fortinet FortiGate Next-Generation Firewall
- Thales CipherTrust Manager

Solution Benefits

- Manages critical life-cycle tasks, including key generation, rotation, destruction, import, and export
- Supports robust auditing and reporting with role-based access control (RBAC) to keys and policies
- Superior essential control with expanded Hardware Security Module (HSM) support
- Flexible form factors available in virtual and physical form factors
- Deployment options quickly scale to provide key management at remote facilities or in cloud infrastructures

FORTINET. FABRIC-READY

CipherTrust Manager is available in virtual and physical appliances that integrate with FIPS 140-2 compliant Thales Luna or third-party HSMs for securely storing keys with the highest root of trust. These appliances can be deployed on-premises in physical or virtualized infrastructures and public cloud environments to efficiently address compliance requirements, regulatory mandates, and industry best practices for data security. A unified management console makes it easy to set policies, discover and classify data, and protect sensitive data wherever it resides using the CipherTrust Data Security Platform Connectors.

Solution Components

Fortinet FortiGate NGFWs deliver industry-leading enterprise security for any edge at any scale with full visibility and threat protection. Organizations can weave security deep into the hybrid IT architecture and build security-driven networks to deliver ultra-fast security end to end, enable consistent real-time defense with AI/ML-powered FortiGuard Services, achieve seamless user experience with security processing units, and improve operational efficiency and automate workflows.
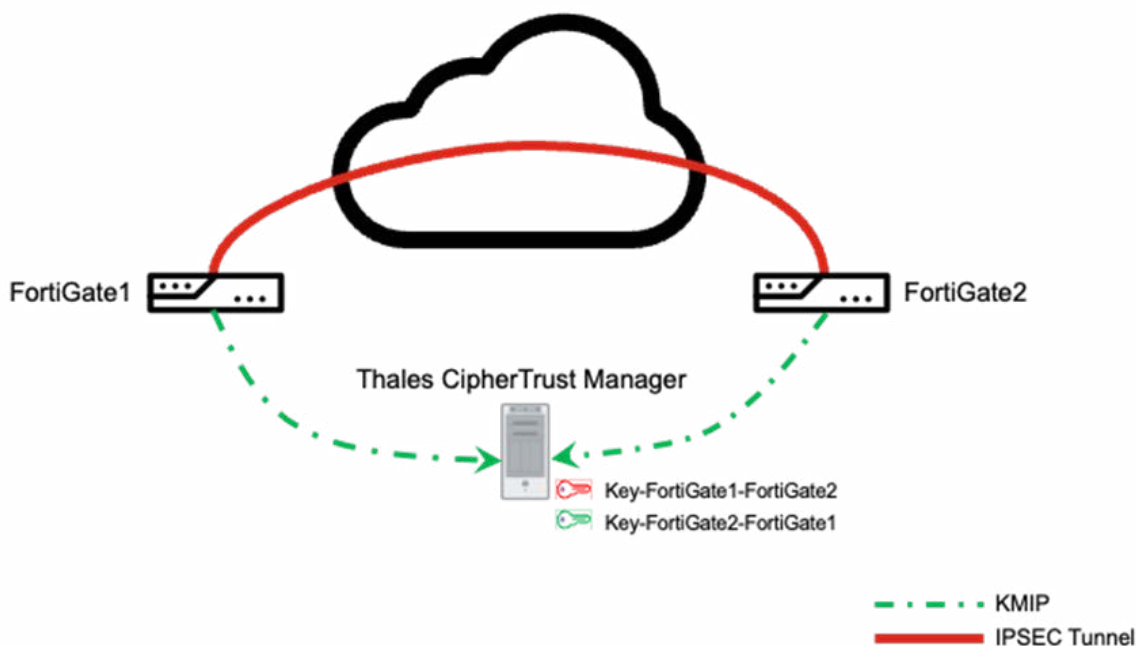
CipherTrust Manager supports the Key Management Interoperability Protocol (KMIP) maintained by OASIS, which defines the standard protocol for any key management server to communicate with clients (for example, storage devices and databases) that utilize the keys for embedded encryption. Key Management Interoperability Protocol improves interoperability for crucial life-cycle management between encryption systems and enterprise applications.

Joint Solution Integration

FortiGate NGFWs can retrieve their encryption keys from CipherTrust Manager through the KMIP protocol. This native integration gives the customer complete control of the encryption essential life cycle.

Advanced features such as SD-WAN overlays and ADVPN are fully supported; the customer can use KMIP for encryption key retrieval for each tunnel.

More information about the configuration can be found here.

Joint Use Cases

Centralize Key Management on KMS Servers

Using Thales CipherTrust Manager enables organizations to better protect keys, meet security requirements and mandates. It also retrieves keys from the KMS server and ensures key IPsec security association (SA) for IKEv2.

Offload Key Generation Tasks

Leveraging Thales CipherTrust Manager can offload the task to securely generate and manage keys on a KMS server. It can also create IPsec SA keys (if they do not already exist) regardless of the specific IPsec VPN topologies.

About Thales

Thales is the worldwide leader in data protection, providing everything an organization needs to protect and manage its data, identities, and intellectual property—encryption, advanced key management, tokenization, and authentication and access management. Whether it is securing the cloud, digital payments, blockchain, or the Internet of Things, security professionals around the globe rely on Thales to confidently accelerate their organization's digital transformation. Thales Cloud Protection & Licensing is part of Thales Group.

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