

# Enterprise Key Management Solutions for KMIP Clients, TDE and LUKS

## Challenges

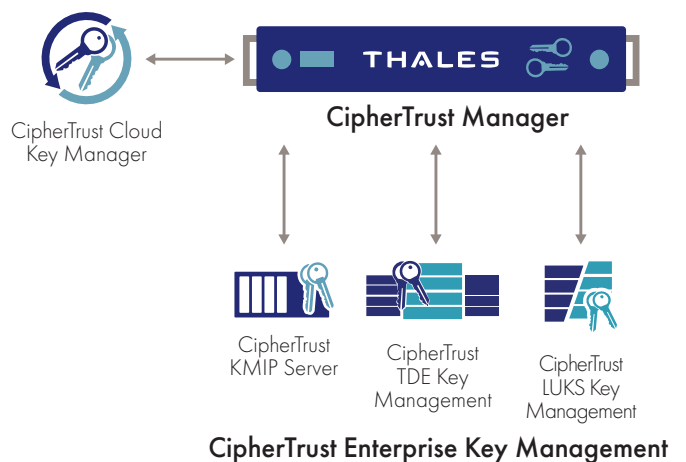
Keeping keys organized and secure is essential to the integrity of any enterprise encryption system. Many organizations operate multiple, independent encryption systems resulting in silos, which complicates key management and erodes security. Managing keys for these silos consumes time and budget. It also risks compromising data, if keys are kept local to the encryption systems they protect.

## Solution: Thales key management solutions

Thales CipherTrust key management products centralize key management for your home-grown encryption, as well as your third-party applications using native encryption such as full-disk encryption and databases. This gives you greater command over your keys while increasing your data security. Thales CipherTrust key management products connect with your applications through standard interfaces and deliver access to robust key management functions.

## Highly secure and efficient centralized key management

- Streamlined operations through centralized key management
- Stronger security by separating keys from applications
- Comprehensive key services delivered by dedicated, FIPS-compliant hardware and software solutions



## CipherTrust Manager: the foundation for Thales key management solutions

The CipherTrust Manager is a high-availability appliance that centralizes encryption key management for the Thales Data Security Products and third-party encryption solutions. The CipherTrust Manager manages key life-cycle tasks including generation, rotation, destruction, import and export.

The CipherTrust Manager additionally enhances key management by providing convenient back-up services and delivering strong separation of duties for increased security. It can be separated into logical entities, or domains, dedicated to unique key management environments, providing additional security and ultimate separation of duties, where no single administrator has access to all domains.

The CipherTrust Manager is available as either a hardware or a virtual appliance. The K470 CipherTrust Manager hardware appliance is FIPS 140-2 Level 2 compliant and the K570 CipherTrust Manager hardware appliance, equipped with a hardware security module (HSM), is FIPS 140-2 Level 3 compliant. The virtual appliance is FIPS 140-2 Level 1.

## Thales key management solutions

Thales key management solutions support a variety of applications, including:

### Key Management Interoperability Protocol (KMIP)

KMIP is an industry-standard protocol for encryption key exchange between clients (key users) and a server (key store). Standardization facilitates external key management for storage solutions including SAN and NAS storage arrays, self-encrypting drives and hyper-converged infrastructure solutions.

The CipherTrust KMIP solution provides a simple interface to the key management functions of the CipherTrust Manager, delivering powerful, centralized key management capabilities for your KMIP-compliant applications.

### Database and Linux Key Management

Thales centralized key management solutions for databases and Linux can provide high security while providing enhanced IT efficiency. For both Transparent Database Encryption (TDE) key management and Linux Unified Key Setup (LUKS), a Thales agent on the database or Linux server requests keys from CipherTrust Manager and serves them to TDE or LUKS.

## Cloud Key Management using CipherTrust Cloud Key Manager

CipherTrust Cloud Key Manager delivers efficient, secure control over the full lifecycle of software as a service (SaaS) and infrastructure as a service (IaaS) encryption keys, including key creation, uploading, updating, storing, revocation and reporting. It is available as a service in the cloud and as an on-premises deployment using the CipherTrust Manager to securely manage keys.

CipherTrust Cloud Key Manager supported clouds include Microsoft Azure and Office 365, Amazon Web Services, Salesforce.com and IBM Cloud.



## CipherTrust Key Management Solutions for Proprietary Applications

For the most convenient integrations into applications that perform encryption but require centralized, secure key management, the CipherTrust Manager offers PKCS#11-based RESTful API's that can be leveraged by any application environment supporting REST. In addition, for the most performance-sensitive applications, CipherTrust Manager provides keys for Thales Application-layer libraries implementing PKCS#11 that can be installed on supported application server environments.

## About Thales Trusted Cyber Technologies

Thales Trusted Cyber Technologies, a business area of Thales Defense & Security, Inc., protects the most vital data from the core to the cloud to the field. We serve as a trusted, U.S. based source for cyber security solutions for the U.S. Federal Government. Our solutions enable agencies to deploy a holistic data protection ecosystem where data and cryptographic keys are secured and managed, and access and distribution are controlled. For more information, visit [www.thalestct.com](http://www.thalestct.com)