

Simplifying Application Encryption with Baffle Data Protection Manager and Thales CipherTrust Manager



Easy-to-deploy “no-code” application-level encryption backed by enterprise grade encryption key management

Introduction

Encrypting data at the application level offers the greatest security for securing sensitive data at rest. But, it can present clear, insurmountable drawbacks. Often application-level encryption requires organizations to make code changes that are either resource intensive or may be impossible to make. And, encryption can make data unsearchable in structured data stores. While the desire is there for security professionals, the means for application-level encryption may not always be available.

Fortunately, Baffle and Thales are working together to address these challenges.

Baffle’s Data Centric Protection

Baffle’s Data Centric Protection provides a “no code” method for application level encryption that can be configured in four ways:

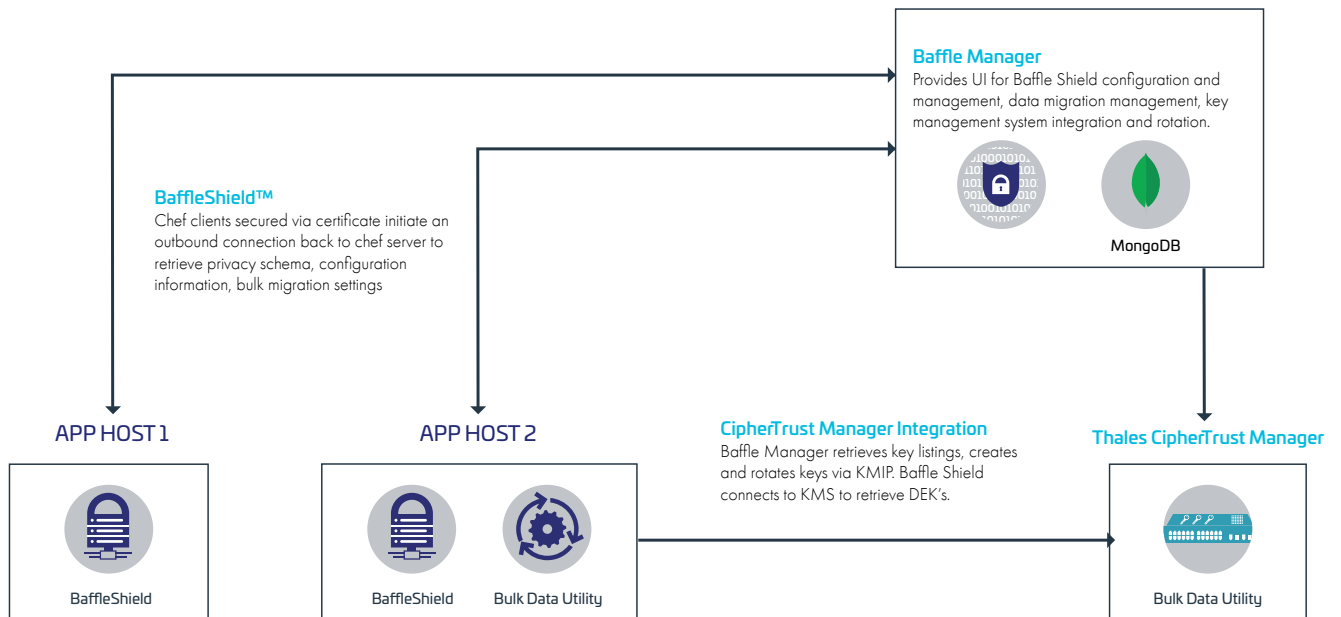
1. Standard Encryption: Baffle functions as an application level encryption (ALE) equivalent that encrypts data on a field-level basis.
2. Record Level Encryption: Baffle encrypts at the record-level with support for multiple keys within a single column that are mapped to respective data owners or entities. This mode is suited for multi-tenant or shared data environments where segmenting data is difficult.

3. Data Masking: Baffle simply masks data to prevent unauthorized data decryption from configuration errors or deleted keys. Data masking minimizes data exposure in test/dev environments and controls data exfiltration to external parties.
4. Advanced Encryption: Baffle lets organizations operate on encrypted data with “homomorphic-like” operations for optimal application functionality and minimal breakage to business processes.

Benefits

- Application level encryption with no code modifications:
 - Field & record level encryption
 - Most applications including off-the-shelf apps
 - API data access models
- Eliminates developer costs associated with modifying applications, and accelerates build and release cycles
- Ensures compliance with data privacy regulations
- FIPS 140-2 Level 1 to FIPS 140-2 Level 3 validated roots of trust to address compliance requirements
- Homomorphic-like functionality to allow mathematical operations, sorting, and searching on encrypted data

Baffle Manager Architecture



Thales CipherTrust Manager

CipherTrust Manager by Thales is an encryption and key management appliance that securely stores Baffle encryption keys.

Organizations use CipherTrust Manager—the industry leading enterprise key management platform—to centrally manage their encryption keys and ultimately own their data. Regardless of its location, be it stored in a database, file server, application, traditional or virtualized data center, CipherTrust Manager keeps sensitive data secure from compromise. CipherTrust Manager’s management tools and capabilities such as key versioning streamline time-consuming tasks, including key rotation.

Organizations can select from flexible options spanning FIPS 140-2 Level 3 or 1 validated hardware appliances and hardened virtual appliances. Supporting a broad encryption ecosystem—encompassing both Thales and a diverse range of third-party products—CipherTrust Manager supports a hardware root of trust using Thales’ Network Hardware Security Modules (HSM) or Microsoft Azure HSM services.

Features

Policy Management and Separation of Duties

With CipherTrust Manager, administrators can set authentication and authorization policies that dictate which data can be accessed in the clear by a particular user or set of users. These controls provide administrators with tighter governance of sensitive data. Policy-driven security using granular access controls provides a vital layer of protection to help organizations comply with the separation of duties between IT and security administrators that is required in many security mandates.

Logging, Auditing, and Reporting

CipherTrust Manager records all key state changes in centralized logs, simplifying auditing and reporting access to data and encryption keys. By tracking this information from one platform, organizations increase security around their data and can readily demonstrate their compliance with industry mandates and government regulations.

About Baffle

The only way to permanently thwart data breaches is to render them irrelevant. Baffle’s approach is to assume that breaches will happen, so we ensure that unprotected data is never available to an attacker. Our mission is to encrypt the data as soon as it is produced and keep it encrypted even when it is being processed. This ensures a powerful, easy-to-use and efficient way to protect the data at all times.

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 amount 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

Contact Us

For more information, visit:

<https://cpl.thalesgroup.com/partners/baffle>