Solution Brief

CipherTrust Data Masking

Contain Risks and Keep Insights Flowing

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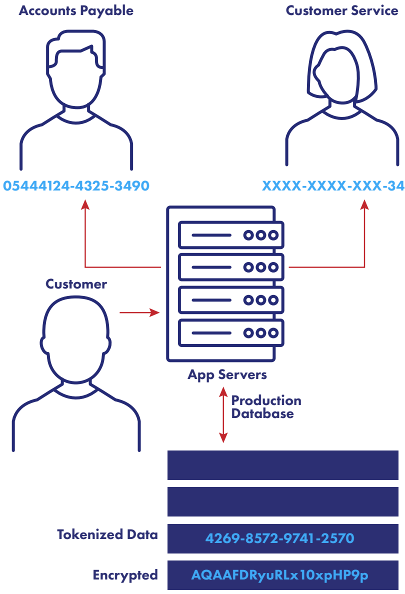
Data masking is a data protection technique that protects sensitive information while maintaining the usability of the data for non-production purposes. Data Masking replaces original data with modified content. In the diagram below, data masking polices enable Accounts Payable staff to access the full credit card number, while Customer Service agents only see the last four digits of a credit card number.

The Challenge

Business leaders want to empower teams to use data—but not at the cost of security or compliance. Analytics, testing, and vendor collaboration are essential—but so is preventing unauthorized access to personal or regulated information.

Without Data Masking or Redaction, teams often work with production data in unsafe environments, exposing the organization to regulatory penalties and reputational damage.



How Thales Can Help

Thales provides Data Masking and Redaction as part of a unified platform that supports Tokenization, Encryption, Data Masking and Redaction so that you have the right data protection for every type of data you have—regardless of where it resides; in an application or a database, on premises or in the cloud.

With CipherTrust Data Masking and Redaction, you can protect sensitive data with tokenization or encryption and preserve its utility. Data Masking and Redaction enable irreversible or reversible data transformations based on user role and context—all managed via the CipherTrust platform.

- Support compliance with GDPR, CCPA, HIPAA, and internal policies
  - Control who sees what, and when (e.g., customer service agents only see the last four digits of a credit card number in the clear)
- Simplify control
  - Apply centrally-managed policies for Static Data Masking, Dynamic Data Masking and Redaction alongside encryption and tokenization
- Enable innovation across analytics, dev/test, and external partners
  - Vary which set of characters will be in the clear. Defining custom formats preserves database structure while protecting sensitive values

CipherTrust Data Masking and Redaction Solutions

CipherTrust offers different masking techniques to control how users can see data.

Static Data Masking

Static Data Masking (SDM) hides sensitive data by creating a copy of the original data and applying specific techniques to generate a new dataset that replaces the sensitive information with fictitious but realistic values. The masked data maintains the same structure and format as the original data, enabling applications and queries to function normally.

SDM is used:

- Prior to third-party data sharing
- In databases shared with development, QA, research or analytics
- Prior to adding a data set to a data lake or big data environment
- In advance of starting big data extract, transform and load (ETL) operations
- To improve performance for massively repeated data queries

Dynamic Data Masking

Dynamic Data Masking (DDM) hides sensitive data in real-time while still allowing users to interact with the original database. DDM does not alter the data stored in the database; instead, it applies role-based masking rules as the data is accessed. For example, a customer support representative might only see the last four digits of a credit card number in the clear while a payment officer would see the full credit card number in the clear.

- DDM is used when different aspects of the customer data are needed by different roles.

Redaction

Redaction is a simplified version of data masking that eliminates or redacts data for unauthorized users. For example, a sensitive field like credit card number could be returned as a blank field OR could return the word "REDACTED."

Redaction is used:

- To protect sensitive data from unauthorized users
- CipherTrust Dynamic Data Masking, Static Data Masking and Redaction can be used with either CipherTrust Tokenization or CipherTrust Encryption solutions
- CipherTrust Batch Data Transformation (BDT) offers high-performance tokenization and encryption for databases and structured files
- CipherTrust Application Data Protection (CADP) offers tokenization and encryption for field-level data protection to developers as a simple-to-integrate library
- CipherTrust RESTful Data Protection (CRDP) offers tokenization and encryption for field-level data protection as a RESTful service
- CipherTrust Data Protection Gateway (DPG) offers tokenization and encryption for transparent field-level data protection to any RESTful web service or microservice leveraging REST APIs
- CipherTrust Database Protection (CDP) offers tokenization and encryption for transparent, column level data protection for a wide range of databases.

CipherTrust Data Security Platform

Data Masking and Redaction are part of the CipherTrust Data Security Platform (CDSP), which unifies data discovery, classification and data protection with unprecedented granular access controls and centralized key management. Protecting your sensitive data with CDSP decreases time to compliance, simplifies data security operations, secures cloud migrations and reduces risk across your business. You can rely on the Thales CipherTrust Data Security Platform to help you discover, protect, control, and monitor your organization's sensitive data, wherever the data resides.

Conclusion

Thales Data Masking and Redaction empower your teams to innovate responsibly. Enable data utility while safeguarding privacy, regulatory compliance, and executive peace of mind—so you can move fast without increasing your risk.

About Thales

Thales is a global leader in cybersecurity, helping the most trusted organizations protect critical applications, data, identities, and software anywhere, at scale. Through Thales' integrated platforms, customers achieve better visibility of risks, defend against cyber threats, close compliance gaps, and deliver trusted digital experiences for billions of consumers every day.

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