



# BAFFLE DATA PROTECTION FOR ANALYTICS

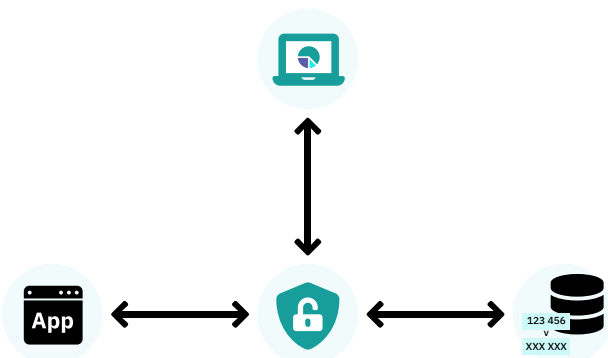
image: Freepik.com

## The easiest and fastest way to data-centric protection

Baffle's no-code column-level protection implements controls on regulated data to meet compliance. Get secure analytics without high deployment costs or management overhead.

### Key Benefits

- **Secure:** Regulated Data is anonymized on ingest and is protected in analytics projects
- **Easy:** The data is protected everywhere it flows, without changes to analytics
- **Performant:** There is no perceived impact on analytics or data science performance
- **Compliant:** Ensure compliance with privacy regulations and data protection standards



# Key Capabilities

## Cryptographically-enforced Protection

- Baffle's fine-grained access control ensures no unauthorized users, including cloud or database administrators, can access sensitive data in clear text
- The data is kept in a “fail safe” security posture, minimizing the risk of data breaches
- Data is protected even when it is loaded into another database or data warehouse
- Additional capabilities for completing analytic operations on encrypted data

### Encryption Policies

Name	Description
AES_CTR_DET	Advanced Encryption Standard using Counter Mode with CMAC initial counter value.
AES_CTR_RND	Advanced Encryption Standard using Counter Mode with random initial counter value.
FPE_ALPHANUM	SQL data types including varchar, char, text, ntext, tinytext.
FPE_CREDIT_CARD	SQL data types associated with varchar, char, text, ntext, tinytext. Encryption that preserves the 16-digit credit card number format.
FPE_DATETIME	SQL data types associated with date, time, timestamp, year.
FPE_DECIMAL	SQL data types including numeric, money, smallmoney. This mode can also encrypt varchar data types.
FPE_EMAIL1	SQL data types associated with varchar, char, text, ntext, tinytext. Encrypts the portion of an email address that precedes the @ symbol.
FPE_EMAIL2	SQL data types associated with varchar, char, text, ntext, tinytext. Encrypts the portion of an email address that precedes the rightmost dot(.).
FPE_HEXADECIMAL	Pertains to uuid data type for PostgreSQL.
FPE_INT	SQL data types associated with tinyint, int, bigint, blob, bytea.
FPE_LATIN1	SQL data types associated with varchar, char, text, ntext, tinytext. Use for alphanumeric data encoded in Latin 1 characters.
FPE_SMALLDATETIME	SQL data type Smalldatetime.

### Database Proxies / AT-DB-Proxy-1

Overview Instances Data Protection Deployments

#### Database Proxies Details

Sync ID		
IyNTSE1FTEQjIzY0MTAwZGV1003ANDVlMTQ200MzRjZjNCRjNjQyNGEwNGY3M2UwMjkxYjFhYTB1NmR5IyNmMjk3YWY1NWZlMDcwOTRzRjVjOTZkMzEyODYxNWQ4YjdwOGU400I2YT1kZDVj		
ID	Name	Database
6424a10f73e1291b1aa0e6c9	AT-DB-Proxy-1	gh-postgres
KEK	Enrolled By	Date Enrolled
baffle-new-master-key	a@baffle.io	Mar 29, 2023 20:35:27 PM

#### Configuration

Config	Value
Debug Level	None

Edit

#### Config Files

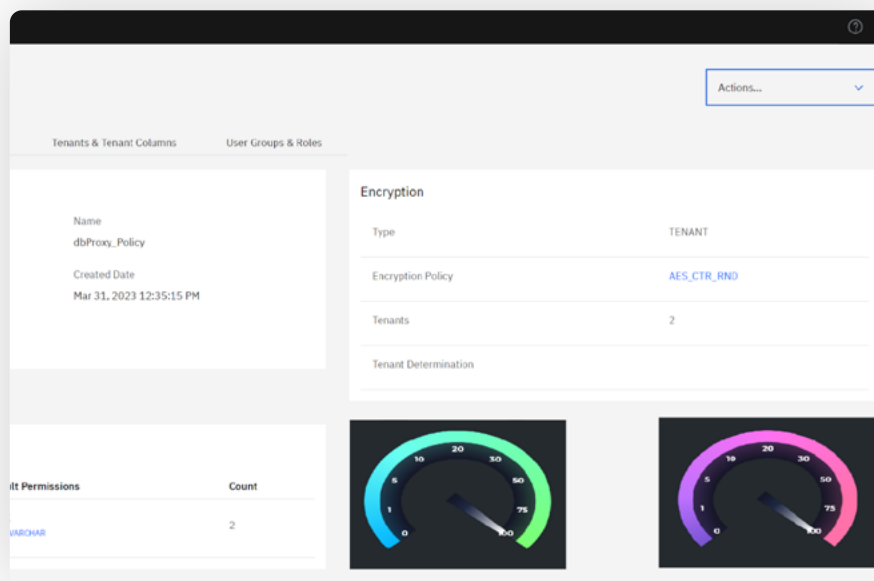
File
baffleshield-keystore.jks
BaffleCommonConfig

## No Code Implementation

- Baffle is easily deployed and configured, without any modifications to applications
- No ongoing maintenance impact to applications
- Changes in data protection policies don't impact application

## High-Performance Architecture

- Baffle has been designed for performance and scalability, minimizing impact on application and database performance
- Architecture enables horizontal scaling, so application continues to meet SLAs
- Non-sensitive data is passed through with minimal overhead



### Key Encryption Keys (KEKs) / SA-master-key

Overview Data Encryption Keys (DEKs) KEK Rotation

#### Key Encryption Key Details

ID	Name	Keystore
6424ab4d73e1291b1aa0e6dd	SA-master-key	hashi-ss
Created By	Created Date	
a@baffle.io	Mar 29, 2023 21:19:09 PM	

## Comprehensive Key Management

- Baffle handles all aspects of key management from creation, use, rotation and retirement of keys used for encryption
- BYOK / KYOK ensures companies control their own keys, which in turn gives them full control over their data, even in cloud data stores
- Destroying the key “shreds” the data making it inoperable no matter where it is located (eg BC/DR/partners)

## Role-Based Access Control

- Baffle’s policy based controls specify which authorized users can access specific fields and columns in a database
- Granular policies determine how much of the data authorized users can see in clear text (their level of anonymization)
- Policies are declarative and auditable

Roles		
Search Table		
Name	API Services Permissions	Associated Data Policies
admin-tenant1	ALLOW_ALL	0
role1	FPE_ENCRYPT, FPE_DECRYPT	0
role999	MASK	0
test_role	ALLOW_ALL	0

## Compatibility

### Cloud Service Providers:



Microsoft Azure

### Databases:



### Key Management / HSM:



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