

# Addressing GDPR with MariaDB TX



Get in compliance today with a secure database solution from MariaDB

## Understanding GDPR compliance

The General Data Protection Regulation (GDPR), one of the most important changes in data privacy regulation in 20 years, will take effect May 25, 2018. The coming regulation includes a number of new policies requiring organizations to protect the data privacy of all individuals within the European Union (EU).

Section 2 (Security of personal data), Article 32 (Security of processing) of GDPR mandates organizations protect personal data by implementing “appropriate technical and organisational measures to ensure a level of security appropriate to the risk” – and cites pseudonymisation and encryption as examples.

With an expanded jurisdiction (any organization processing and holding the personal data of an EU-based individual – regardless of the organization’s location) and significant penalties (4% of global annual revenue or €20 million), organizations must take action to establish appropriate measures for securing personal data and complying with GDPR.

MariaDB TX, a complete database solution for any and every enterprise, includes the security features your organization needs to ensure personal data is protected.

## Securing data with encryption

MariaDB TX supports encryption of data at rest, data in motion, and data in use. It includes a variety of encryption options, so you can design the best strategy for your organization – putting the necessary data privacy measures in place to achieve GDPR compliance. Encryption options include:

- **Encryption of data at rest:** encrypting tables and logs prevents hackers, internal or external, from accessing sensitive data by obtaining privileged and/or physical access to the underlying storage device(s). In addition, MariaDB TX supports multiple encryption keys as well as automatic key rotation.
- **Encryption key management:** To maximize encryption effectiveness, encryption keys should reside on a separate system. In addition to file-based key management, MariaDB TX supports external key management via 1) the AWS Key Management System; and 2) the eperi Gateway.
- **Encryption of data in motion:** TLS encryption protects the data sent between clients and databases, as well as between the databases themselves in a replicated and/or clustered environment. In addition, the database proxy (MariaDB MaxScale) accepts TLS connections while MariaDB connectors enable applications to connect to databases over TLS connections.

## Monitoring security with auditing

MariaDB TX supports auditing of database events, enabling security and compliance monitoring as well as attack forensics. The auditing plugin logs user activities including who connected from where, what queries were executed, and what tables were touched. In addition, the database proxy and its Query Log All (QLA) filter can log all queries on a per-session basis. When personal data is queried without consent and/or permission, this log can be used to investigate who accessed it, when and how.

## Protecting personal data with data masking

The database proxy supports the pseudonymisation of personal data with the data masking filter, configurable on a per-column, per-user basis – masking any personal data before the query results are returned.

## Boosting database security with a firewall

The database proxy enables the blacklisting and whitelisting of queries with the firewall filter. It blocks (or allows) queries based on user and syntax rules.

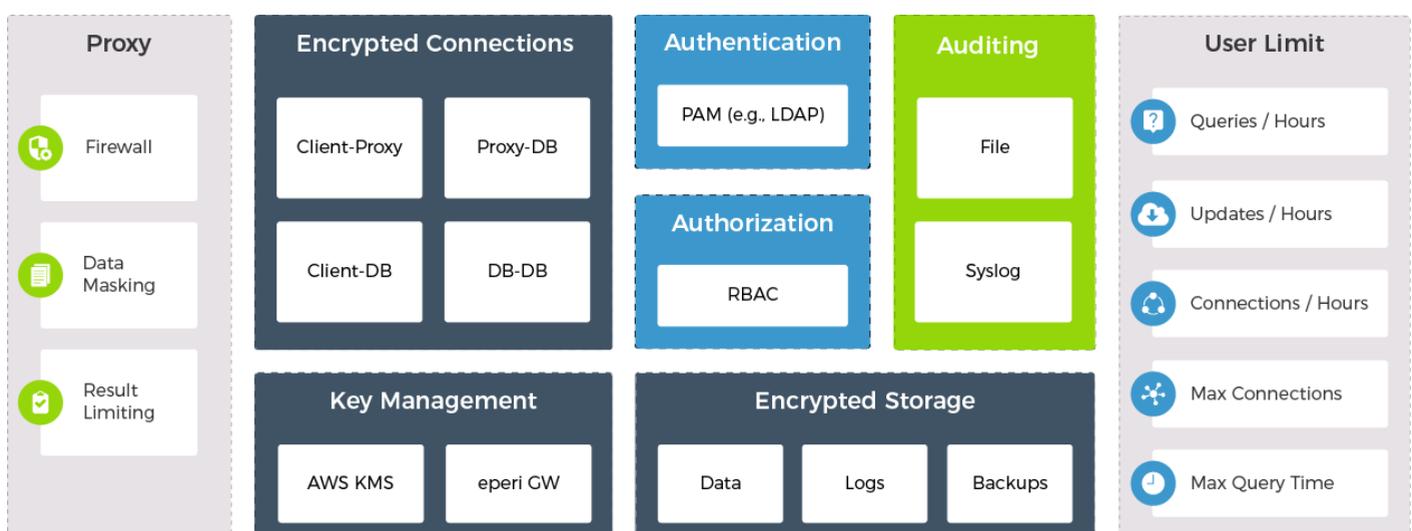
**MariaDB TX is a highly secure, modern database that addresses the GDPR requirement for securing personal data when it is transmitted, stored and processed.**

## Establishing rules and policy

The GDPR requirements for data privacy and security focus on the following three principles:

1. **ASSESSMENT:** Processes, profiles, data sensitivity, risks
2. **PREVENTION:** Encryption, anonymization, access controls, separation of duties
3. **DETECTION:** Auditing, activity monitoring, alerting, reporting

As you prepare for GDPR, MariaDB TX can help you establish effective rules and policies to ensure GDPR readiness and compliance. The graphic below highlights the security features available in MariaDB TX you need to protect personal information and comply with GDPR.



Want to learn more about addressing GDPR with MariaDB? [Contact us](#) today.

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