



# MariaDB MaxScale

The digital economy continues to impact all areas of business. For IT, the digital economy means that developers not only need to worry about building applications that meet continually advancing requirements, but also having an infrastructure that can scale without impacting the user experience. While applications need quick and fast feature updates, databases require security and data integrity through a structured development plan. MariaDB MaxScale™ is a next-generation database proxy that makes it possible for IT to meet both these needs. MariaDB MaxScale allows databases and applications to be fully decoupled, enabling admin processes like security, scalability and high availability to run without affecting applications and for applications to evolve without hampering underlying databases.

## MANAGE YOUR SCALE-OUT ENVIRONMENT

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In order to support business growth, you need a scale-out environment that can provide reliability and availability. However, it can bring complexity and security threats when it is not properly managed. MaxScale helps you manage and grow your scale-out environment with no application-level impact. Unlike standard proxies that merely route a request, MaxScale is aware of the content of the request as well as the configuration and state of the server to which requests are routed. By knowing the content, MaxScale can split the read and write queries, while also sending queries to the right database to optimize the scale-out performance. For businesses supporting very large numbers of users, with large-scale master-slave clusters, MaxScale's Binlog Server provides high-performance replication between master and slave for read scaling.

## DATA STREAMING

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To get the most value out of your data assets, you need to leverage real-time intelligence from the data generated by the transactional applications. With MaxScale data streaming, you can build new applications and services, as well as add real-time intelligence to your existing transactional applications. By capturing and streaming all the changes on the transactional data, you can make the transactional data easily available to a data lake for real-time analytics. With this you can offer new services and applications that unite transactional and analytical capabilities.

## HIGH AVAILABILITY

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MaxScale's high-availability solution allows your application to be 100 percent operational without any single point of failure.

### [Ensure Uptime](#)

For your end user's satisfaction, your application services need to be available without disruption. In case of slave node failure, MaxScale ensures uptime by automatically launching a failover script and continuously routing the read transaction to minimize the failover impact.

### [Minimize Downtime](#)

Whether it is scheduled or not scheduled, downtime negatively impacts the business. No matter what the administrative activity – migration or upgrade – MaxScale ensures that database traffic is always routed to database nodes in service without impacting your applications. During an upgrade, queries can be duplicated to current versions of production databases, as well as new staging versions. This feature allows you to compare query performance and test new environments without impacting the current production system. Similarly, MaxScale eases the migration process. When the newer version of the database expects new query syntax, MaxScale can change the existing query of the application to the new query syntax.

*“With MariaDB MaxScale, there is no technical limit for scalability through sharding, and we were able to deploy quickly without having to modify our applications. MariaDB is the best in town for cloud database solutions and this is why we chose MaxScale over others.” - Olli Nokso-Koivisto CEO of LeadDesk*

## SECURE YOUR DATABASE

Databases are always under serious threat, especially relational databases which run mission-critical applications and may store extremely sensitive information such as credit card numbers or identification data.

### Data in Motion

When data is in motion, data can be exposed to threats at every network point. MaxScale provides end-to-end SSL support so that data can be securely moved from applications to server.

### Data in Use

When data is in use, access control is the key concern. MaxScale only allows local access so that attackers may not gain access to and damage MaxScale’s configuration or get hold of database server access information.

### Data at Rest

When data is at rest, it must be secured from potential attack. SQL injection attacks are a leading cause of web application and data breaches. Flaws in applications that dynamically generate SQL leave databases susceptible to such attacks, which expose companies to financial risk and brand damage. MaxScale’s database firewall filter allows you to whitelist and blacklist queries. MaxScale can also limit the incoming client connections to protect server against DDoS attacks and occasional connection surge.

## PLUG-IN ARCHITECTURE

MaxScale’s plug-in architecture is designed to increase flexibility and aid customization. MaxScale is built upon a lightweight, high-speed networking core designed to facilitate throughput.

Based on this core, users can build flexible and easy-to-write plugins for protocol support, authentication, monitoring, load balancing, query transformation and logging. The plug-in architecture allows new plugins to be created by community members as well as MariaDB Enterprise users for specific use cases. For example:

- **Geo-replication: Multiple high-availability clusters with replication across geographically distributed data centers using MaxScale**
- **New client interfaces for protocols such as PL/SQL, T-SQL, PostgreSQL®, JSON and HTTP**
- **New server protocols such as Hadoop®, MongoDB®, Apache Cassandra™ and Couchbase™**

### DATABASE AND OS

Cluster	MariaDB Galera, MariaDB/MySQL Replication, MySQL Cluster NDB
Database	MySQL 5.1 and higher, MariaDB all versions, Percona Server® all versions
OS on x86	RHEL 5, RHEL 6, RHEL 7, CentOS 5, CentOS 6, CentOS 7, Ubuntu 12.04, Ubuntu 14.04, Ubuntu 15.10, Ubuntu 16.04, Debian 7, Debian 8, openSUSE 13.1, SLES 11, SLES 12

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