

---

# MySQL Router 9 Release Notes

## Abstract

This document contains release notes for the changes in MySQL Router 9 through 9.4.0.

For additional MySQL Router documentation, see <https://dev.mysql.com/doc/mysql-router/en/>.

Updates to these notes occur as new product features are added, so that everybody can follow the development process. If a recent version is listed here that you cannot find on the download page (<https://dev.mysql.com/downloads/>), the version has not yet been released.

The documentation included in source and binary distributions may not be fully up to date with respect to release note entries because integration of the documentation occurs at release build time. For the most up-to-date release notes, please refer to the online documentation instead.

For legal information, see the [Legal Notices](#).

For help with using MySQL, please visit the [MySQL Forums](#), where you can discuss your issues with other MySQL users.

Document generated on: 2025-07-23 (revision: 30390)

## Table of Contents

Preface and Legal Notices .....	1
Changes in MySQL Router 9.4.0 (2025-07-22, Innovation Release) .....	3
Changes in MySQL Router 9.2.0 (2025-01-21, Innovation Release) .....	4
Changes in MySQL Router 9.1.0 (2024-10-15, Innovation Release) .....	5
Changes in MySQL Router 9.0.1 (2024-07-23, Innovation Release) .....	6
Changes in MySQL Router 9.0.0 (2024-07-01, Innovation Release) .....	6

## Preface and Legal Notices

This document contains release notes for the changes in MySQL Router 9.

### Legal Notices

Copyright © 2006, 2025, Oracle and/or its affiliates.

#### License Restrictions

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

#### Warranty Disclaimer

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

### **Restricted Rights Notice**

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

### **Hazardous Applications Notice**

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

### **Trademark Notice**

Oracle, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

### **Third-Party Content, Products, and Services Disclaimer**

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

### **Use of This Documentation**

This documentation is NOT distributed under a GPL license. Use of this documentation is subject to the following terms:

You may create a printed copy of this documentation solely for your own personal use. Conversion to other formats is allowed as long as the actual content is not altered or edited in any way. You shall not publish or distribute this documentation in any form or on any media, except if you distribute the documentation in

a manner similar to how Oracle disseminates it (that is, electronically for download on a Web site with the software) or on a CD-ROM or similar medium, provided however that the documentation is disseminated together with the software on the same medium. Any other use, such as any dissemination of printed copies or use of this documentation, in whole or in part, in another publication, requires the prior written consent from an authorized representative of Oracle. Oracle and/or its affiliates reserve any and all rights to this documentation not expressly granted above.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

## Access to Oracle Support for Accessibility

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Changes in MySQL Router 9.4.0 (2025-07-22, Innovation Release)



### Note

These release notes were created with the assistance of HeatWave GenAI.



### Important

MySQL Router now features full support for MySQL REST Service in on-premise configurations. See the announcement blog post [HeatWave REST Service](#) and the [Quick Start Guide](#) for details about MySQL REST Service.

- [Deprecation and Removal Notes](#)
- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

## Deprecation and Removal Notes

- As of this version, MySQL Router's HTTP/2 feature is disabled, to allow for future refactoring. (Bug #38055103)

## Functionality Added or Changed

- MySQL Router now generates SSL certificates with a validity period of one year, aligning with best practices that recommend a validity period of no more than 397 days. This change affects the auto-generated certificates created during the bootstrap process. Error messages related to certificate validity may be encountered if using previously generated certificates with longer validity periods. (Bug #37936725)

## Bugs Fixed

- MySQL Router's logger created a lock on every log call, even if logging was disabled.

As of this release, the logger now acquires locks only when logging is enabled. (Bug #38044378)

- Fixed an issue related to debug logging. (Bug #38009073)
- Users created with a comment in their definition were unable to connect using MySQL Router. Error messages were returned similar to the following:

```
ERROR 1045 (28000): Access denied
```

(Bug #37903358)

- Routing Guidelines, introduced in 9.2.0, did not treat `bind_address=localhost` as a valid target when generated from the MySQL Router configuration. (Bug #37844427)
- It was not possible to build MySQL Router with GCC 15 on Fedora 42 due to missing includes. (Bug #37769606)
- After a DNS failure, the destination was not added to quarantine and could not be checked for availability after the connection was restored. Errors were returned similar to the following:

```
resolve(host) failed: Name or service not known
```

(Bug #37617712)

- Under certain circumstances, with Connection Sharing enabled, MySQL Router could crash due to a race condition in the connection pool. MySQL Router tried to close a connection while also making that connection available to another thread. Errors were returned similar to the following:

```
Process Core Dump (PID XXXXXX/UID 0)  
Resource limits disable core dumping for process XXXXXX (mysqlrouter)
```

(Bug #37303055)

## Changes in MySQL Router 9.2.0 (2025-01-21, Innovation Release)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- Added a new `close_connection_after_refresh` `metadata_cache` option to control whether a connection remains open for future metadata refresh operations. If set to 0 (default), the `metadata_cache` keeps the connection open if the refresh succeeded and if the next refresh is to the same MySQL server. Setting it to 1 is similar to previous behavior, in that the connection is closed after each metadata refresh operation. (WL #16652)
- The `destinations` option now supports Unix domain sockets. (WL #16582)
- This release introduces Routing Guidelines, a flexible and unified configuration interface enabling users to customize routing behavior. Routing Guidelines are defined as a JSON document, stored in the metadata schema.

Use the MySQL Shell AdminAPI `RoutingGuideline` class to interact with these guidelines, and see the [MySQL Shell 9.2.0 release notes](#) for additional information. (WL #14119)

## Bugs Fixed

- **Important Change:** MySQL Router no longer supports MySQL Server versions from a newer series. The metadata is checked and discarded for servers from a newer series, a check that executes during bootstrap and during periodic metadata refresh operations. A newer version in the same series is supported. For example, MySQL Router 8.4.4 supports MySQL Server 8.4.5 but not MySQL Server 9.0.0. (Bug #36041256)
- Because building with `CMAKE_BUILD_TYPE=Debug` disables optimizations, `std::vector.resize()` attempted to initialize every byte before each read from an encrypted socket. Memory usage was improved to account for this. (Bug #37385923)
- Accessing the `/routes/{name}/connections` REST API endpoint while also benchmarking queries through the router could cause the router to unexpectedly halt. (Bug #37251508)
- OpenID Connect authentication stopped functioning for a connection with the following scenario: the default authentication plugin was set to `openid_connect`, the MySQL Router connection pool was enabled, and the connection was in the pool ready for reuse. (Bug #37190332)
- When `stats_updates_frequency` was set to an unexpected value, MySQL Router would log a warning during each metadata refresh thus clogging the logs. Now the warning is logged just once, unless the value changed. (Bug #116951, Bug #37391164)

## Changes in MySQL Router 9.1.0 (2024-10-15, Innovation Release)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- Added *OpenID Connect* support, which is available as of MySQL Enterprise Edition Server 9.1.0. (WL #16466)

### Bugs Fixed

- With connection sharing enabled, changing the password of an active connection yielded a vague "Lost connection" error instead of indicating that reauthentication failed. (Bug #36981282)
- Updated `<cstring>` and `<iostream>` header usage by adding or removing their inclusion as needed, and annotated the functions utilized from each. (Bug #36946579, Bug #36951336)
- Replaced most uses of `std::enable_if<>` and `std::enable_if_t<>` with the `requires` keyword introduced in C++20, to limit the visibility of methods. This improves the error messages and stack traces. (Bug #36939919)
- On macOS, AddressSanitizer (ASan) discovered a potential issue with connection pooling that could cause Router to unexpectedly halt. (Bug #36935988)
- Bootstrapping against a MySQL account that used the `mysql_native_password` authentication plugin with MySQL Router 9.0 from a standalone (zip or tar.gz) package would exit with an error indicating that the plugin was not available. (Bug #36915646)
- Improved the dependency injection mechanism (DIM) to increase performance in a multithreaded environment. DIM is no longer controlled by a single mutex. (Bug #36846616)

- In some cases, the LogFilter would execute when a log message wasn't logged. (Bug #36841009)
- Improved HTTP request handling performance by using the ICU regex implementation instead of std::regex. (Bug #36797250)
- Improved HTTP request handling to better scale for a large number of parallel connections. (Bug #36796808)
- Building with the MSVC "Build Solution" target now excludes building mysqlxmessages\_shared, which was already defined as EXCLUDE\_FROM\_ALL. (Bug #36719728)
- A TLS shutdown was not executed when Read-Write splitting was used and a prepared statement needed to be prepared on the Write node but the current connection was on the Read node. (Bug #36715733)
- Connections in the connection pool were closed without waiting for the server to close the connection which affected the TLS session reuse cache. This affected connection sharing and Read-Write splitting as both let the connection pool close their connections. (Bug #36715372)
- Greatly improved HTTP/2 compatibility for the REST API. (Bug #36697876)
- With Read-Write splitting enabled and after the PRIMARY switched its role to SECONDARY, all write statements would fail with an error indicating that the MySQL server is running in super\_read\_only mode. Now it drops the client connection like it does without Read-Write splitting. (Bug #114594, Bug #36591958)

## Changes in MySQL Router 9.0.1 (2024-07-23, Innovation Release)

This release contains no functional changes and is published to align its version number with that of the MySQL Server 9.0.1 release.

## Changes in MySQL Router 9.0.0 (2024-07-01, Innovation Release)



### Important

This release is no longer available for download. It was removed due to a dependency on a version of the server which is also no longer available for download. See [MySQL 9.0.0 Release Notes](#). Please upgrade to MySQL Router 9.0.1 instead.

## Bugs Fixed

- System variable changes were not propagated when read-write splitting was enabled. (Bug #36674083)
- Current schema changes were not propagated to shared connections when both read-write splitting and connection sharing were enabled. (Bug #36663727)
- Increased the maximum `router_id` value from 999999 to 4294967295 ( $2^{32}-1$ ). This also affects how the internal metadata\_cache `user` name is defined. (Bug #36393211)