

---

# MySQL Shell 9.1 Release Notes

## Abstract

This document contains release notes for the changes in MySQL Shell 9.1.

For additional MySQL Shell documentation, see <http://dev.mysql.com/>.

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: 2024-11-05 (revision: 29286)

## Table of Contents

Preface and Legal Notices .....	1
Changes in MySQL Shell 9.1.0 (2024-10-15, Innovation Release) .....	3

## Preface and Legal Notices

This document contains release notes for the changes in MySQL Shell 9.1.

### Legal Notices

Copyright © 1997, 2024, 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 Shell 9.1.0 (2024-10-15, Innovation Release)

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

### AdminAPI Added or Changed Functionality

- AdminAPI now performs version compatibility checks in operations which create or modify replication channels.

See [Replication Compatibility Checks](#). (WL #16408)

### AdminAPI Bugs Fixed

- Running a `rescan()` operation on a Replica Cluster, could result in a warning that `group_replication_view_change_uuid` is required, but not configured. This occurred in a mixed version ClusterSet, where the primary Cluster is on version 8.3.0, or higher, and the replicas were on versions lower than 8.3.0. The check for `group_replication_view_change_uuid` was incorrectly performed on the primary Cluster instead of the target Replica Cluster. (Bug #36657936)
- If clone-based recovery failed while adding an instance, the instance and Cluster could be left in an inconsistent state, returning multiple errors, and unrecoverable by `rescan()`. It was not possible to remove the instance with `remove_instance()`, either.

`add_instance()` did not properly handle clone-related errors and did not stop Group Replication if errors were detected.

As of this release, `add_instance()` handles clone-related errors, reverts the state of the target instance and stops Group Replication on that instance. (Bug #36657628)

- Running AdminAPI operations against MySQL 5.7 instances resulted in an error, due to an attempt to run a query on a non-existent Performance Schema table.

As of this release, error handling is included to account for such issues. (Bug #36652642)

- It was possible to define duplicate instance definitions in the `replicationSources` list of the `Cluster.add_replica_instance()` operation. The operation failed with an error.

As of this release, the `replicationSources` list is validated for such duplicates in all operations which use it. The operation fails with an informative error. (Bug #36614218)

- AdminAPI commands which add or rejoin instances to Clusters using Clone did not check the existing members for compatibility. If no compatible members were available, Group Replication fell back to incremental recovery which can fail if Clone was the only supported provisioning method. An unexpected and unhelpful error was returned.

As of this release, the following commands have been updated to check compatibility and provide appropriate feedback:

- `ReplicaSet.add_instance()`
- `ReplicaSet.rejoin_instance()`
- `Cluster.add_replica_instance()`
- `Cluster.rejoin_instance()`
- `ClusterSet.create_replica_cluster()`

For a donor to be considered compatible for a recipient:

- They must be running on the same operating system.
- They must be running on the same platform.
- The versions must be compatible:
  - Both must be version 8.0.17, or higher.
  - If both are version 8.0.37, or higher, only their major and minor versions need match. For example, 8.4.0 and 8.4.3.
  - For versions 8.0.17, or higher, and lower than 8.0.37, the major, minor, and patch numbers must match.

(Bug #36054619, Bug #36682741)

- The prerequisite checks for `Cluster.add_replica_instance()` did not check the minor and patch version number of the metadata schema. Read Replicas require a minimum metadata schema version of 2.2.0.

As of this release, `Cluster.add_replica_instance()` checks the metadata schema version and displays an error if the metadata schema version is lower than 2.2.0.

The prerequisite checks for `create_cluster()` and `create_replica_set()` are also updated. (Bug #35595811)

## Utilities Added or Changed Functionality

- As of this release, the `MYSQL_OPTION` schema is excluded by the dump utilities when `ocimds: true` and is automatically excluded when loading a dump into a MySQL HeatWave DB System. (Bug #37023079)
- As of this release, MySQL Shell supports the following AWS credential providers:
  - Assume Role Provider
  - Amazon Elastic Container Service (Amazon ECS) credentials
  - Amazon Instance Metadata Service (Amazon IMDS) credentials

See [Cloud Service Configuration](#). (Bug #37000238, Bug #36957811, Bug #36957782, Bug #36947132, WL #15885)

- The compatibility option, `unescape_wildcard_grants`, is added in this release. When enabled, this strips escape characters in grants on schemas, replacing escaped `\_` and `\%` wildcards in schema names with `_` and `%` wildcard characters. When the `partial_revokes` system variable is

enabled, the `\` character is treated as a literal, which could lead to unexpected results. It is strongly recommended to check each such grant before enabling this option. (Bug #36524862)

- A `dropExistingObjects` option was added to the `copyInstance` and `loadDump` utilities. This option enables you to drop existing user accounts and objects in the target before creating them from the dump or copied instance.



#### Note

Schemas are not dropped.

See [Options for Load Control](#) and [Options for Copy Control](#). (Bug #36050341, Bug #36561962)

- The index creation step of a load operation now includes percentage completion information. (Bug #35495220)
- The following utilities now support multipart uploads for prefix pre-authenticated requests:
  - `util.dumpInstance(outputUrl[, options])`
  - `util.dumpSchemas(schemas, outputUrl[, options])`
  - `util.dumpTables(schema, tables, outputUrl[, options])`

In previous releases, the data was written to a local temporary folder before uploading to Object Storage. As of this release, the data is written directly to Object Storage. (WL #16003)

## Utilities Bugs Fixed

- The upgrade checker utility generated a false positive if `secure_file_priv` contained a valid directory. (Bug #36846572)
- Under certain circumstances, using `zstd` compression, the dump utilities could generate corrupted data files. (Bug #36836188)
- Attempting to run the dump or copy utilities from MySQL Shell 8.0.x against a more recent version of the server, such as 8.4.0, could result in a syntax error.

Many breaking changes have been made to MySQL syntax and configuration between 8.0.37 and 8.4.x, and higher, such as replacing `SHOW MASTER STATUS` with `SHOW BINARY LOG STATUS`, for example. There were also many removals. See the release notes for those server versions for more information.

As of this release, the dump and copy utilities raise an error when such incompatibilities are detected and recommend the appropriate MySQL Shell upgrade.



#### Important

It is always recommended to use the latest version of MySQL Shell.

(Bug #36701854)

- Running any of the diagnostics utilities against an instance with binary logging disabled, and using an X Protocol connection, resulted in an error.

As of this release, the diagnostics utilities use classic connections, only. If the user connects to an instance using X Protocol, and runs any of the diagnostics utilities, they automatically establish a classic connection to the instance. (Bug #36613129)

- Mismatched `lower_case_table_names` values could cause dump loading to fail. As of this release, the `lower_case_table_names` value of the source is added to the `@.json` file and is

checked by the load utility for mismatch with the target's value. A warning is displayed if the values do not match. (Bug #36509026)

- Dump process failed if an empty table was encountered and `compression` was set to `none`. (Bug #34891382)
- The upgrade checker utility returned an error claiming that it was not possible to upgrade from MySQL 8.0.x to MySQL 8.4.x. This upgrade path is possible.

See [Upgrade Paths](#) for information. (Bug #115798, Bug #36930714)

- Running the diagnostic utility `util.debug.collectDiagnostics` with the parameter `schemaStats:true` returned MySQL Error 1242 if a table had more than one column of type BLOB. (Bug #115033, Bug #36658194)
- The upgrade checker utility reported Zero Date errors for views using the `NOW()` and `SYSDATE()` functions.

As of this release, views are excluded from the Zero Date check. (Bug #114347, Bug #36403042)

## Functionality Added or Changed

- The MySQL Shell log format has been updated to include the process (PID) and thread ID (TID). (Bug #114343, Bug #36402272, Bug #24678752)
- MySQL Shell now supports OpenID Connect. The `authentication_openid_connect` client plugin is bundled with your MySQL Shell installation.

See [Using OpenID Connect](#).

OpenID Connect authentication is supported by MySQL Enterprise Edition, only. (WL #16470)

## Bugs Fixed

- MySQL Shell failed to start if installed by MSI on Microsoft Windows 11 with Visual Studio Redistributable version 14.3x or lower. On Windows platforms, MySQL Shell requires Visual Studio Redistributable version 14.4x or higher.  
  
See [Microsoft Visual C++ Redistributable latest supported downloads](#). (Bug #37049411)
- The MySQL Shell MSI progress dialogs displayed numbered placeholders instead of the installation values. (Bug #37033676)
- When running MySQL Shell over SSH, if a command was entered on the command line, but not executed, closing the SSH session could result in the command being executed without user input. (Bug #36861912)
- MySQL Shell closed unexpectedly if autocomplete (tab) was used for a `\command` followed by a space. (Bug #36858205)
- MySQL Shell set the environment variable `PYTHONHOME` on all platforms even if Python was not bundled. As of this release, `PYTHONHOME` is no longer set and the bundled Python executable is moved to another directory on Windows platforms, which corresponds to the structure used by a standalone Python installation. (Bug #36836320)
- The Python library `hashlib` could not be imported on MacOS platforms. (Bug #36803237)
- MySQL Shell did not register interactive connections as interactive. As a result, the system variable `interactive_timeout` was not honored.

As of this release, interactive connections are treated as such. You can also define a connection as interactive with the new MySQL Shell connection option, `client-interactive`. (Bug #36339280)

- MySQL Shell error codes were not returned for commands run in CLI mode. (Bug #36156164)
- The URI parser threw an exception if the URI contained an unescaped @ character. (Bug #36105235)
- Corrected a typo in the return value for `ClassicResult.getStatementId`.

Thanks to Mustafa Uzun for the contribution. (Bug #112718, Bug #35912863)

