MySQL Shell 8.3 Release Notes

Abstract

This document contains release notes for the changes in MySQL Shell 8.3.

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: 2024-03-26 (revision: 28128)

Table of Contents

Preface and Legal Notices .......................................................... 1
Changes in MySQL Shell 8.3.0 (2024-01-16, Innovation Release) .................. 3

Preface and Legal Notices

This document contains release notes for the changes in MySQL Shell 8.3.

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
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 8.3.0 (2024-01-16, 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

- `ipWhitelist`, deprecated in MySQL Shell 8.0.22, is removed in this version. Use `ipAllowlist` for MySQL Server and MySQL Shell 8.3.0, or higher. (Bug #35845603)

- AdminAPI supports GTID tags for MySQL 8.3.0, or higher. To use GTID tags, all instances in a Cluster, ClusterSet, or ReplicaSet, must be version 8.3.0, or higher. For example, attempting to add an instance of version 8.3.0 or higher to a Cluster running lower versions will result in a Malformed GTID error on the primary and the operation will fail. (Bug #35605595)

- The following commands were added to AdminAPI for ReplicaSets:
  - `replicaSet.dissolve()`: dissolves the ReplicaSet.
  - `replicaSet.rescan()`: rescans the ReplicaSet.
  - `replicaSet.describe()`: returns a JSON object showing the topology of the ReplicaSet.

  See MySQL InnoDB ReplicaSet. (Bug #33199178, Bug #33516540, WL #14870)

AdminAPI Bugs Fixed

- `Cluster.rescan()` failed to add unmanaged instances to the Cluster if the unmanaged instances used an unsupported recovery account format.

  As of this release, `Cluster.rescan()` checks for such unsupported account formats, creates the required account, assigns it to the recovery channel, and informs the user of the actions taken.

  Also, when using `replicaSet.createReplicaSet()` to adopt an existing channel (adoptFromAR: 1), it now ensures the channel uses the correct account format, creating the account if necessary. `replicaSet.rescan()` performs the same check and also creates the account if necessary. (Bug #35997569, Bug #35992885)

- The server system variable `slave_parallel_workers` and `replica_parallel_workers` are removed in 8.3.0 and can not be set or read by MySQL Shell for MySQL Server 8.3.0 or higher.

  For earlier versions of MySQL Server, the behavior of MySQL Shell is unchanged and `applierWorkerThreads` is still available. (Bug #35918575)
• `replica_parallel_type` is deprecated in MySQL Server 8.3.0. AdminAPI no longer uses that variable if the Server version is 8.3.0 or higher. (Bug #35918518)

• The variables `relay_log_info_repository` and `master_info_repository` are removed in MySQL Server 8.3.0. AdminAPI no longer uses those variables if the target server is version 8.3.0, or higher. (Bug #35913892)

• AdminAPI no longer retrieves the primary member ID from the system variable `group_replication_primary_member`, which was deprecated in MySQL Server 8.0.4 and removed in MySQL 8.3.0. As of this release, for all versions of MySQL Server 8.0.4 or higher, the ID is retrieved from the `MEMBER_ID` column of `performance_schema.replication_group_members` table. (Bug #35913856)

• The system variable `transaction_write_set_extraction` (deprecated in MySQL 8.0.26) is removed in MySQL 8.3.0. This variable was a requirement for InnoDB Cluster and was checked by `dba.checkInstanceConfiguration()` and `dba.createCluster()`, and was set by `dba.configureInstance()`. As of MySQL Shell 8.3.0, `transaction_write_set_extraction` is neither set nor checked by any AdminAPI command. (Bug #35845680)

• As of this release, AdminAPI no longer sets a value for `group_replication_view_change_uuid` on Clusters running MySQL Server 8.3.0 or higher. (Bug #35836245)

• `Cluster.rescan()` did not correctly handle missing recovery account users. If it encountered a user with an unexpected format, and the correct format was missing, it did not attempt to create the correct user.

Errors similar to the following were logged by the `Cluster.status()` command:

```
WARNING: Incorrect recovery account (mysql_innodb_cluster_3337079193) being used. Use Cluster.rescan() to repair.
```

As of this release, `Cluster.rescan()` creates the missing user. (Bug #35828910)

• AdminAPI persisted all variables related to Group Replication or InnoDB Cluster even if the required value was the default. As of this release, the variable is checked to ensure the default value matches the requirement and does not persist it if it does.

For MySQL 5.7 instances, this is done using `dba.configureLocalInstance()`. For MySQL 8.0, or higher, this is done using `dba.createCluster()`. (Bug #35806236)

• Sandbox deployment did not take symlinks into account when generating the start/stop scripts. As a result, for example, if the server was upgraded and the symlink changed, the scripts used the wrong path.

As of this release, the canonical path to the binaries is used, not symlinks. (Bug #35672985)

• `Cluster.forceQuorumUsingPartitionOf()` did not retrieve the admin account credentials from the current session, unlike all other AdminAPI commands, if they were not provided explicitly.

As of this release, `Cluster.forceQuorumUsingPartitionOf()` uses the user credentials of the current session, if not explicitly provided. (Bug #35370180)

• ReplicaSets still used metadata locks, which were deprecated in MySQL Shell 8.0.33. As of this release, ReplicaSets no longer use metadata locks. (Bug #35015556)

• If `dba.createCluster()`, `Cluster.addInstance()`, or `Cluster.rejoinInstance()` failed, they did not change altered system variables back to their original values. (Bug #34969740)

• `Cluster.resetRecoveryAccountsPassword()` did not cycle the automatically-generated passwords for Read Replica channels. (Bug #34858086)
• `Cluster.rescan()` always returned an X protocol-related error for connection failures, even when the issue was not X Protocol-related or the X Protocol was not in use. (Bug #33865464)

References: See also: Bug #35410360.

• It was possible to add an instance to a Cluster although the instance was already a member of the Cluster but was considered **MISSING**. An error was returned stating that the **server_uuid** is already in use by itself.

As of this release, `Cluster.addInstance` checks if the instance is already part of the Cluster and recommends the use of `Cluster.rejoinInstance` instead. (Bug #30896233)

**Utilities Added or Changed Functionality**

• As of this release, `util.loadDump()` and `util.copyInstance()` automatically exclude the `mysql_audit` and `mysql_firewall` schemas if the target is a MySQL HeatWave Service DB System. (Bug #35830920)

• As of this release, all failed connections to AWS S3 are retried three times, with a 1 second delay between retries.

  If a failure occurs 10 minutes after the connection was created, the delay is changed to an exponential back-off strategy:

  • First delay: 3-6 seconds
  • Second delay: 18-36 seconds
  • Third delay: 40-80 seconds

  (Bug #35396788)

• It is now possible to generate a checksum for a dump to enable you to validate your data on import. The option `checksum: [true | false]` is added to the following utilities:

  • `util.dumpInstance()`, `util.dumpSchemas()`, and `util.dumpTables()`: a metadata file, `.checksums.json` is generated containing the details of the dumped data and a checksum for each.
  
  • `util.loadDump()`: validates the checksums after the data is loaded.
  
  • `util.copyInstance()`, `util.copySchemas()`, and `util.copyTables()`: generate the metadata file, `.checksums.json`, and validate the data.

  (WL #15947)

• `util.checkForServerUpgrade()` now checks for deprecated authentication methods and displays advice. (WL #15973)

**Utilities Bugs Fixed**

• `util.loadDump()` ignored leading zeroes (0) in S3 bucket prefix names. (Bug #36041691)

• Interrupting (Ctrl+c) a single-file import by `util.importTable()` did not always result in an interrupted exception. The exception was thrown only if the file was being read at the time the interruption occurred.

  As of this release, the exception is always thrown for an interruption. (Bug #35992658)

• An incorrect import strategy, one-file-per-thread, was used if a single file was imported with the special characters * and ? escaped. (Bug #35895247)
• The metadata displayed by enabling the `showMetadata` option of `util.loadDump()` was not saved to the log file. As of this release, the metadata is logged if `showMetadata` is enabled.

  The metadata generated by the `util.copyInstance()` operation is also logged. (Bug #35883344)

• It was not possible to dump a table which consisted of a single generated column. (Bug #35860654)

• MySQL Shell stopped responding when attempting to load an incomplete dump.

  As of this release, MySQL Shell checks the dump to ensure the expected metadata and data files are present, and generate errors if any are missing. (Bug #35822020)

**Functionality Added or Changed**

• MySQL Shell was updated to support new MySQL language features, such as new keywords, and so on. (Bug #35894915)

• MySQL Shell now supports dollar-quoted strings, `$tag$....$tag$.

  Identifiers which start with `$` and contain another `$` are no longer supported. Identifiers which start with `$` are deprecated. (Bug #35876418)

• As of this version, MySQL Shell supports client-side `webauthn` authentication.

  The following command line options are added:

  ```
  • --register-factor=value
  • --plugin-authentication-webauthn-client-preserve-privacy={true|false}
  ```

  See WebAuthn Pluggable Authentication. (WL #15916)

**Bugs Fixed**

• It was not possible to type the upper-case, Cyrillic letter, И, and several other unicode characters in MySQL Shell (Bug #104795, Bug #33306119)