MySQL Shell 8.1 Release Notes

Abstract

This document contains release notes for the changes in each release of MySQL Shell 8.1.

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: 2023-08-24 (revision: 27143)

Table of Contents

Preface and Legal Notices ................................................................. 1
Changes in MySQL Shell 8.1.1 (2023-07-26, General Availability) ........................................ 3
Changes in MySQL Shell 8.1.0 (2023-07-18, General Availability) ........................................ 4

Preface and Legal Notices

This document contains release notes for the changes in each release of MySQL Shell 8.1.

Legal Notices

Copyright © 1997, 2023, 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.
MySQL Shell 8.1 Release Notes

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 8.1.1 (2023-07-26, General Availability)

- Utilities Added or Changed Functionality
- Utilities Bugs Fixed
- Bugs Fixed

Utilities Added or Changed Functionality

- MySQL Shell dump and load utilities now support the Oracle Cloud Infrastructure Object Storage Dedicated Endpoints format for Pre-Authenticated Request (PAR) URLs:

  namespace.objectstorage.region.oci.customer-oci.com/.../

For more information, see OCI Object Storage Dedicated Endpoints.

MySQL Shell continues to support the legacy PAR URL format:

  objectstorage.region.oraclecloud.com/...

(Bug #35548572)

Utilities Bugs Fixed

- As of MySQL Server 8.1.0, MySQL HeatWave Service contains a schema named mysql_audit. As a result, the dump and load utilities encountered a duplicate object error when copying data from one DB System to another.

  As of this release, with the ocimds option enabled, dumpInstance() automatically excludes the mysql_audit schema. (Bug #35550282)

- If an AWS HEAD request failed with an authorization error, it was not retried. As of this release if such a request fails with a 400 HTTP error, it is retried.

  Additionally, if the refresh process for AWS credentials has a defined expiration time, the refresh process is triggered 5 minutes before the required time. (Bug #35468541)

Bugs Fixed

- Errors generated by stored procedures were not returned over classic MySQL protocol connections. (Bug #35549008)
Changes in MySQL Shell 8.1.0 (2023-07-18, General Availability)

- 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

- **Important Change:** MySQL Shell now supports Read Replicas.

InnoDB Cluster Read Replicas are read-only copies of a Cluster member. Asynchronous replication keeps the replica up to date, enabling you to scale out your workload, offload read requests from your Cluster to one, or more, dedicated read-only instances, and provide additional redundancy to your dataset. In the event of a failure of the source, the Read Replica automatically connects to another Cluster member and resumes replication.

The following methods were added:

- `Cluster.addReplicaInstance()`: Adds a Read Replica to the Cluster.

The following methods were extended to support InnoDB Cluster Read Replicas:

- `Cluster.removeInstance()`
- `Cluster.rejoinInstance()`
- `Cluster.setRoutingOption()`
- `Cluster.status()`
- `Cluster.describe()`
- `Cluster.routingOption()`
- `Cluster.dissolve()`
- `Cluster.forceQuorumUsingPartitionOf()`
- `ClusterSet.removeCluster()`
- `ClusterSet.routingOptions()`
- `Cluster.setInstanceOption()`
- `Cluster.fenceAllTraffic()`

See MySQL InnoDB Cluster Read Replicas. (WL #15056)

- The `status_update_frequency` changes introduced for ClusterSets by Bug#34190956 in MySQL Shell 8.0.31 are extended to apply to Clusters and ReplicaSets.
The following methods were added:

- `ReplicaSet.setRoutingOption()`
- `ReplicaSet.routingOptions()`

The following methods were extended to include `status_update_frequency`:

- `Cluster.setRoutingOption()`
- `Cluster.routingOptions()`

(WL #15601)

References: See also: Bug #34190956.

**AdminAPI Bugs Fixed**

- Rebooting a replica cluster from complete outage could result in the cluster rejoining the ClusterSet, but not the instance members of the replica cluster. This happened only if the primary cluster was under heavy load or the replica cluster was missing transactions from the ClusterSet. (Bug #35444244)

- If a Cluster was rebooted with `dba.rebootClusterFromCompleteOutage()`, and the communication stack was changed to `mysql`, the seed instance was not rebooted with the correct SSL options. (Bug #35416666)

- If the X Protocol port was changed for a cluster member and that member restarted, the AdminAPI did not update the metadata with the new port number, leading to connection errors and so on.

  As of this release, `cluster.status()` checks for port changes and `cluster.rescan()` updates the metadata with the new port number. (Bug #35410360)

- Operations which permitted clone-based recovery, such as `ClusterSet.createReplicaCluster`, did not validate the donor and recipient unless `cloneDonor` was explicitly specified. As a result, under certain circumstances, clone-based recovery could fail due to incompatibilities in the automatically chosen donor. (Bug #35358531)

- Under certain circumstances, `dba.rebootClusterFromCompleteOutage()` failed with malformed GTID errors relating to `GROUP_CONCAT`. `dba.rebootClusterFromCompleteOutage()` must query the complete GTID set of the channel and this query failed if the default `GROUP_CONCAT_MAX_LEN` value was too low.

  As of this release, queries which do not require the `GROUP_CONCAT` function, do not use it and queries which require it, use a `GROUP_CONCAT_MAX_LEN` value of 1GB. (Bug #35356006)

- Running `clusterSet.rejoinCluster()` on a cluster which was ONLINE and a healthy member of the ClusterSet, left the cluster in an invalid state. The following warning was displayed in the `instanceErrors` field of the status message:

  "WARNING: The value of 'group_replication_transaction_size_limit' does not match the Cluster's configured value. Use Cluster.rescan() to repair."

  (Bug #35354749)

- During a failover of a ClusterSet replication channel, the `ClusterSet.status()` value `clusterSetReplicationStatus` reported ERROR and `globalStatus` returned
MySQL Shell 8.1 Release Notes

OK_NOT_REPLICATING. Errors and warnings relating to misconfigured or stopped channels were also returned. These statuses and errors were misleading as the channel was attempting to connect to another source or replica.

As of this release, clusterSetReplicationStatus returns CONNECTING, and globalStatus returns OK while a channel connection attempt is ongoing. If there is an error, it is ignored until the channel state updates to either ON or OFF.

Additionally, the ReplicaSet.status() field, status, also returns CONNECTING. (Bug #34614769)

Utilities Added or Changed Functionality

• It is now possible to dump data to a Bucket or Prefix Pre-Authenticated Request (PAR) using the following utilities:
  - util.dumpInstance(outputUrl[, options])
  - util.dumpSchemas(schemas, outputUrl[, options])
  - util.dumpTables(schema, tables, outputUrl[, options])

  where outputURL now supports PARs. (WL #14646)

• It is now possible to copy an instance, schemas, and tables from one instance to another with the new MySQL Shell copy utilities. The copy utilities enable you to copy DDL and data between MySQL instances, without the need for intermediate storage. The data is stored in memory.

  The following methods were added:
  - util.copyInstance(): Enables copying of an entire instance to another server.
  - util.copySchemas(): Enables copying of one or more schemas to another server.
  - util.copyTables(): Enables copying of one or more tables from a schema to another server.

  See Copy Instance, Schemas, and Tables. (WL #15298)

Utilities Bugs Fixed

• Under certain circumstances, util.loadDump() could fail when retrieving a file from AWS S3, Oracle Cloud Infrastructure Object Storage, or Azure Blob Storage, even though the file was downloadable by other means.

  As of this release, if CURL errors occur, such as 52: CURLE_GOT NOTHING. 56 (CURLE_RECV_ERROR), or 28: CURLE_OPERATION_TIMEDOUT util.loadDump() retries the download. (Bug #35362775, Bug #35392531)

• In previous versions, loading a dump from the previous version resulted in an error, unless the ignoreVersion option was set to true.

  As of this release, migration from a version to the next consecutive version, such as 5.7 to 8.0, no longer results in an error and no longer requires the ignoreVersion option.

Note

The behavior remains unchanged for migration between non-consecutive versions, such as 5.6 to 8.0.
MySQL Shell 8.1 Release Notes

(Bug #35359364)

- If an exception occurred while importing a single, uncompressed file with `util.import_table()`, MySQL Shell crashed. (Bug #35313366)

- `util.loadDump()` did not log warnings about rows replaced during the load. (Bug #35304391)

- Under certain circumstances, loading a dump with `ignoreExistingObjects` enabled to an instance with existing DDL objects could fail with an error similar to the following:

  columns dictionary object is invalid.
  (There are no elements supplied.)

As of this release, DDL for existing tables and views is not processed, if `ignoreExistingObjects` is enabled.

Additionally, duplicate triggers are now reported and excluded routines and events are no longer reported as duplicates. (Bug #35102738)

- The upgrade checker utility did not check stored procedures and routines for the deprecated qualifier syntax `.tbl_name`. (Bug #35046623)

- If chunking was enabled for a dump of tables, but the primary key or unique index used to chunk the table contained an `ENUM` column, some of the tables rows were not exported to the dump. This occurred if the `ENUM` column's values were not ordered alphabetically.

As of this release, primary keys or unique indexes which contain one or more `ENUM` columns, are ignored when selecting an index for chunking. (Bug #110352, Bug #35180061)

**Functionality Added or Changed**

- MySQL Shell now supports the `--loose` prefix.

  For more information on this prefix, see Program Option Modifiers. (Bug #110141, Bug #35112454)

- It is now possible to specify the Kerberos client authentication mode on Microsoft Windows platforms, using a new option `plugin-authentication-kerberos-client-mode=SSPI | GSSAPI`.

  **Note**
  
  This option is only available on Microsoft Windows platforms. Attempting to use it on non-Windows platforms results in an error.

  (WL #15556)

- You can now specify the OCI config file and profile used when connecting to a MySQL HeatWave Service DB System with the OCI Authentication plugin. The following options are available from the command line, options file, and MySQL Shell connection options as attributes in a dictionary or in a connection URI:

  - `oci-config-file`: defines the location of the OCI config file to use with the OCI Authentication Plugin. The value defined here overrides the value defined in the `oci.configFile` option.

  - `authentication-oci-client-config-profile`: defines the profile in the OCI config file to use with the OCI Authentication Plugin. The value defined here overrides the value defined in the `oci.profile` option.
Note

These options are only available for connections with the OCI Authentication Plugin.

(WL #15561)

MySQL Shell now supports setting query attributes. The following commands and API methods were added:

- SQL: `\query_attributes`
- JavaScript: `session.setQueryAttributes()`
- Python: `session.set_query_attributes()`

See MySQL Shell Commands. (WL #15571)

MySQL Shell now supports the `STATEMENT_ID` session tracker. If the server system variable `session_track_system_variables` is set to `*` or `STATEMENT_ID`, the statement ID is returned for statements.

Note

This applies to classic protocol only. The statement ID is not returned over X Protocol.

The following property is added to enable you to retrieve the statement ID:

- `ClassicResult.statementId`: Same behavior as the `getStatementId()` method.

(WL #15574)

Bugs Fixed

- The MySQL configuration utility `mysql_config_editor` was not bundled with MySQL Shell 8.0.33. (Bug #35459202)

  References: This issue is a regression of: Bug #34097411.

- It was not possible to use the Python function `json.dumps` with MySQL Shell dictionaries. (Bug #35450521)

- MySQL Shell command line did not correctly handle missing optional arguments. A NULL value was used instead of a valid value, resulting in an error. (Bug #109827, Bug #35068427)