# MySQL Connector/ODBC Release Notes

**Abstract**

This document contains release notes for the changes in recent releases of MySQL Connector/ODBC.

For additional Connector/ODBC documentation, see MySQL Connector/ODBC Developer Guide.

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: 2026-11-05 (revision: 31720)

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# Preface and Legal Notices

This document contains release notes for the changes in recent releases of MySQL Connector/ODBC.

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# Changes in MySQL Connector/ODBC Version 26

## Changes in MySQL Connector/ODBC 26.10.0 (2026-10-21)

### Bugs Fixed

- Fixed an issue relating to floating-point parameter handling. (Bug #40010434)
- Fixed an issue relating to connection-string output handling. (Bug #39938996)

## Changes in MySQL Connector/ODBC 26.7.1 (2026-08-19)



**Note**

This release is a Critical Security Patch Update. See Oracle Critical Security Patch Update Advisory - August 2026 for more information.

## Changes in MySQL Connector/ODBC 26.7.0 (2026-07-29)

This release contains no functional changes, and is published to align its version number with that of the MySQL Server 26.7.0 release.

# Changes in MySQL Connector/ODBC Version 9

## Changes in MySQL Connector/ODBC 9.7.0 (2026-04-22)



**Note**

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

### Security Notes

- For platforms on which OpenSSL libraries are bundled, the linked OpenSSL library for MySQL Server has been updated to version 3.5.5. For more information, see OpenSSL 3.5 Series Release Notes and OpenSSL Security Advisory (27th January 2026). (Bug #38906647)

## Changes in MySQL Connector/ODBC 9.6.0 (2026-01-21)



**Note**

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

### Security Notes

- For platforms on which OpenSSL libraries are bundled, the linked OpenSSL library for MySQL Server has been updated to version 3.0.18. For more information, see OpenSSL 3.0 Series Release Notes and OpenSSL Security Advisory (30th September 2025). (Bug #38511583)

## Changes in MySQL Connector/ODBC 9.5.0 (2025-10-21)



**Note**

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

### Bugs Fixed

- Calling `SQLColAttribute()` with `SQL_DESC_TYPE_NAME` for the results of Catalog functions like `SQLColumns()` could cause MySQL Connector/ODBC to close unexpectedly. (Bug #38124528)

## Changes in MySQL Connector/ODBC 9.4.0 (2025-07-22)



**Note**

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

### Bugs Fixed

- .NET applications quit unexpectedly while trying to connect to a MySQL server using Connector/ODBC. This has been fixed by compiling C/ODBC and MySQL (this affects the behaviors of the `libmysql` client library) with the environmental variable `_DISABLE_CONSTEXPR_MUTEX_CONSTRUCTOR` set for CMake. See Build Steps for details. (Bug #37845086)
- The commercial Debian package installed some of the documentation files under the wrong folders. Those files are now put under `./usr/share/doc/mysql-connector-odbc-commercial/` as expected. (Bug #37771319)
- Company name and other pieces of information were missing when the Connector/ODBC DLLs were examined by, for example, choosing its Properties in the Windows Explorer and looking at the Details tab. (Bug #37199170)
- A memory leak occurred when there was an error with `my_pos_update()`. This has been fixed now by proper error handing and statement deallocations. (Bug #18532085)

## Changes in MySQL Connector/ODBC 9.3.0 (2025-04-15)

- Functionality Added or Changed
- Bugs Fixed

### Functionality Added or Changed

- All instances of the deprecated function `mysql_real_escape_string()` in the source code have been replaced by an internal implementation of `myodbc_escape_string()`, which works similarly and can also handle the escaping of wildcard characters ('_' and '%') in `LIKE` expressions. (Bug #116559, Bug #37250400)
- The following Connector/ODBC Connection Parameters can now be configured on the ODBC administrator GUI:
  - readtimeout
  - writetimeout
  - OPENTELEMETRY

  (WL #16587)

### Bugs Fixed

- The MSI installer checked for the wrong version of Visual C++ Redistributable required by Connector/ODBC when installing it on a system. With this fix, it now requires the system to have version 14.40 or higher of the Visual C++ Redistributable 2022. (Bug #37536382)
- Reported errors that occurred while executing multiple statements with a single query were generic and without context. For example, `SQLMoreResults` might return "unhandled error from `mysql_next_result()`" instead of the error reported by MySQL Server. (Bug #37423741)

  References: This issue is a regression of: Bug #49466, Bug #11757423.
- On macOS, Connector/ODBC failed to create connections to servers for accounts that required pluggable authentication. It was due to faulty links to the 3rd-party libraries bundled with Connector/Python, which were corrected by this patch. (Bug #37090584)
- An assertion failure occurred unnecessarily when `SQLBindCol()` attempted to bind data to column 0 without bookmarks being enabled. (Bug #18641803)
- Memory leaks occur with the `SQLCancel()` function, because it failed to free the `MYSQL*` handle in the case of a failed connection. (Bug #18534345)
- When using server-side prepared statements, fetching a time column bound to the `SQL_C_CHAR` type returned an incorrect string if the hour value had 3 digits. (Bug #116087, Bug #37071646)
- If the `SQLCloseCursor()` method was called when no result set was available, no error was returned. With this patch, the method returned `SQL State: 24000` and the error message `Invalid cursor state` in the situation. (Bug #72311, Bug #26474326)

## Changes in MySQL Connector/ODBC 9.2.0 (2025-01-21)


- Functionality Added or Changed
- Bugs Fixed


### Functionality Added or Changed

- Added a new `WEBAUTHN_DEVICE_NUMBER` connection option that is passed to and interpreted by the WebAuthN authentication plugin. It accepts a numeric value that selects the authenticator device to use during WebAuthN authentication. Previously, the first (#0) authentication plugin was always used. (WL #16646)

### Bugs Fixed

- The user defined `traceparent` query attribute in an OpenTelemetry instrumented application was not sent to the server, which resulted in user (or connector) generated OpenTelemetry spans to not associate with the corresponding server spans. (Bug #37188732)

  References: This issue is a regression of: Bug #36841317.
- Retrieving a list of records that contained an empty `BLOB` field could return an unexpected result. (Bug #116657, Bug #37286526)
- For fixed column types, such as `CHAR`, having these fields contain unexpected multi-byte characters could cause a "returned data that does not match expected data length for column" error.

  The connector now enables the `PAD_CHAR_TO_FULL_LENGTH` `sql_mode`. (Bug #114470, Bug #37298936)
- Improved result set handling produced by catalog functions. When `SQLFreeStmt()` with `SQL_UNBIND` or `SQL_RESET_PARAMS` was called after a catalog function (such as `SQLProcedureColumns`), the result set produced by the catalog function was not cleared in

accordance to ODBC API requirements for unbinding result columns and resetting parameters. (Bug #109466, Bug #36906892)

# Changes in MySQL Connector/ODBC 9.1.0 (2024-10-15)


- Functionality Added or Changed
- Bugs Fixed


## Functionality Added or Changed

- Added *OpenID Connect* support leveraging the new `authentication_openid_connect_client` client-side authentication plugin. *OpenID Connect* functionality is supported by MySQL Enterprise Edition Server 9.1.0 and later.

  The new `openid-token-file` connection option defines a path to a file containing the JWT formatted identity token. (WL #16436)

- The RPM and DEB packages now install a copy of the MySQL client library plugins for the connector. The version of these plugins match the version of the statically linked MySQL client library.

  They are installed to `{libdir}/mysql/libmyodbc{ABI}/plugin/` where `{libdir}` is the system location where packages install libraries. `{ABI}` is the connector's ABI version, which is currently 9.

  The connector installed from RPM and DEB packages use the bundled plugins as needed without requiring the `PLUGIN_DIR` connection option, although the `PLUGIN_DIR` connection option is still available to change the plugin location. Runtime dependencies required by the plugins, such as Kerberos and LDAP libraries, are expected on the system and installed from their own packages. (WL #16457)

## Bugs Fixed

- The Generic Linux TGZ package did not bundle all client-side authentication plugins. (Bug #36972449)
- Fixed a potential Out of Bounds (OOB) issue related to escaping large queries. (Bug #36955942)
- Added a plugin caching mechanism. (Bug #36929669)
- Fixed a memory leak that occurred when emitting SQL_DATE errors. (Bug #18531881)
- The internal `mysql_init()` function used for making connections is now thread safe. (Bug #115710, Bug #36894687)
- Having a number of bound parameters greater than the number of placeholders in the corresponding SQL query could emit an error, as the statement had to be prepared and executed more than once. (Bug #115584, Bug #36841317)
- When connected to a MySQL 5.7 server, queries using bound parameters would not succeed and emitted a "No data supplied for parameters in prepared statement" error. (Bug #115531, Bug #36828312)
- With the `prefetch` connection option set to a non-zero value, large queries could cause the connector to unexpectedly halt. (Bug #113554, Bug #36945554)
- Fixed the `SQLBulkOperations()` function's generated `WHERE` clause, which could potentially cause an application to unexpectedly halt. (Bug #69194, Bug #18641963, Bug #26474373)

# Changes in MySQL Connector/ODBC 9.0.0 (2024-07-01)


- Functionality Added or Changed

- Bugs Fixed

### Functionality Added or Changed

- For the ANSI driver, converting to and from the character set specified by the CHARSET connection option is now performed by the MySQL server rather than being done inside the ANSI driver. (WL #16297)
- Added support for the `VECTOR` data type that was introduced in MySQL Enterprise Server 9.0.0. (WL #16171)
- The `charset` connection option is now deprecated for the Unicode driver, and setting it to a non-empty value via `SQLConnect()` or `SQLDriverConnect()` emits a warning. The connection is still successful. (WL #16311)
- As of this release, the base name of the driver modules is changed to `myodbc9`. (WL #16382)

### Bugs Fixed

- On Windows, the MSI installation location now defaults to "C:\Program Files\MySQL\MySQL Connector ODBC X.Y" instead of "C:\Program Files\MySQL\Connector ODBC X.Y" where X.Y is the series number, such as 9.0. This change aligns MySQL Connector/ODBC with other MySQL products. (Bug #36681453)
- Since 8.2.0, the SQLConnect() function's parameter values did not override values defined in the DSN. Now the SQLConnect() values are prioritized except for SQLConnect() values defined as NULL. (Bug #36605973)

# Changes in MySQL Connector/ODBC Version 8.x

## Changes in MySQL Connector/ODBC 8.4.0 (2024-04-30)

- Security Notes
- Functionality Added or Changed
- Bugs Fixed

### Security Notes

- For platforms on which Connector/ODBC utilizes MySQL Server's bundled OpenSSL library (MacOS, Windows, and GenLinux), MySQL Server's linked OpenSSL library was updated to version 3.0.13. Issues fixed in OpenSSL version 3.0.13 are described at https://openssl-library.org/news/openssl-3.0-notes/. (Bug #36278301)

### Functionality Added or Changed

- Expanded the Windows file attributes for packaged executable and DLL files. (Bug #113544, Bug #36153794, WL #16157)
- Removed support for the deprecated `authentication_fido` authentication plugin. Instead, use `authentication_webauthn`. (WL #16155)
- Setting query attributes for executed queries now supports prepared statements in SSPS mode. (WL #15967)
- Known limitation of this release: because the mysql_native_password authentication plugin is disabled by default as of MySQL Server 8.4.0, some unit tests may generate errors unless the plugin is enabled.

### Bugs Fixed

- Unchecking the "Disable schema support" (NO_SCHEMA) option in the ODBC connection editor would remove (unset) the value rather than set it to 0, which meant that reloading the ODBC connector editor would revert it to the default value of 1. Now both NO_SCHEMA and NO_CATALOG are always set to either 0 or 1. (Bug #36238361)
- Fixed build errors to adhere to the C99 standard, which GCC 14 now enforces.

  Our thanks to *Christopher Fore* for this contribution. (Bug #113766, Bug #36228848)
- Not all packaged files contained digital signatures. (Bug #113538, Bug #36150212)
- Could not execute parameterized stored procedures using syntax that contained curly brackets. (Bug #112285, Bug #35790175)
- Changing position in the row set with SQLSetPos() would not update the lengths, which could cause SQLGetData() to retrieve less data than expected. (Bug #61991, Bug #26474471)

## Changes in MySQL Connector/ODBC 8.3.0 (2024-01-16)


- Functionality Added or Changed
- Bugs Fixed


### Functionality Added or Changed

- The AUTO_RECONNECT functionality was removed, and setting it returns SQL_SUCCESS_WITH_INFO with an HY000 error stating that it's no longer supported. The GUI dialog removed the AUTO_RECONNECT option while the `myodbc-installer` command-line tool allows setting it but emits a warning.

  MySQL Server 8.3.0 removed auto-reconnect support after deprecating it in versions 8.0.34 and 8.1.0. (WL #15978)
- Improved OpenTelemetry support to propagate context when executing prepared statements. (WL #15960)

### Bugs Fixed

- ADODB.Recordset.Open() reported a transaction error when a string type was used with prepared statements. The fix was changing the SQL_MAX_CONCURRENT_ACTIVITIES value from 1 to 0 (unlimited). (Bug #36031548)

  References: This issue is a regression of: Bug #34916959.

## Changes in MySQL Connector/ODBC 8.2.0 (2023-10-25)


- Functionality Added or Changed
- Bugs Fixed


### Functionality Added or Changed

- **Packaging:** On Windows, the MSI package definition files were updated to work with the Windows Installer XML (WiX) toolset version 4. Note that they can no longer be used with previous version 3 of the toolset. (WL #15810)
- Improved OpenTelemetry support. This includes adding spans for preparing and executing prepared statements, and adding connection span attributes such as db.user. (WL #15807)
- Connector/ODBC now supports an authentication method that enables users to authenticate to MySQL Server using WebAuthn-aware devices for classic MySQL protocol connections.

WebAuthn authentication is based on the FIDO and FIDO2 standards. For additional information, see Connector/ODBC WebAuthn and FIDO Information (WL #15240)

### Bugs Fixed

- Setting SQL mode to `ANSI_QUOTES` on the MySQL server caused the SQLColumns() method to not function. (Bug #35660375)
- Using the SJIS character set with the ANSI Driver could cause the connection to hang. (Bug #35520983)
- The SQLStatistics() function returned the wrong type for a PRIMARY KEY index. It now returns SQL_INDEX_OTHER instead of 0. (Bug #35504650)
- Selecting the **Character Set** dropdown under **Details** while creating a new Data Source Configuration in the GUI would unexpectedly halt the application if the credential fields were empty or invalid. (Bug #110900, Bug #35356536)

## Changes in MySQL Connector/ODBC 8.1.0 (2023-07-18)

MySQL Connector/ODBC 8.1.0 is a new GA release version that supersedes the 8.0 series, and is recommended for use on production systems. This release can be used with MySQL Server version 5.7 and later. MySQL Connector/ODBC 8.0.x remains available to continue providing 32-bit support.

- Functionality Added or Changed
- Bugs Fixed

### Functionality Added or Changed

- **Important Change:** 32-bit binaries are no longer built as of MySQL 8.1.0.

  Update: Connector/ODBC offers a 32-bit 8.0.x version that also contains bug fixes.
- Added OpenTelemetry support. (WL #15624)

### Bugs Fixed

- Fixed a memory leak generated by reading data. (Bug #111036, Bug #35491247)

## Changes in MySQL Connector/ODBC 8.0.46 (2025-07-22)

This release contains no functional changes, and is published to align its version number with that of the MySQL Server 8.0.46 release.

## Changes in MySQL Connector/ODBC 8.0.45 (Not released)

There was no MySQL Connector/ODBC 8.0.45 release.

## Changes in MySQL Connector/ODBC 8.0.44 (Not released)

There was no MySQL Connector/ODBC 8.0.44 release.

## Changes in MySQL Connector/ODBC 8.0.43 (2025-07-22)

This release contains no functional changes, and is published to align its version number with that of the MySQL Server 8.0.43 release.

## Changes in MySQL Connector/ODBC 8.0.42 (2025-04-15)

This release contains no functional changes, and is published to align its version number with that of the MySQL Server 8.0.42 release.

# Changes in MySQL Connector/ODBC 8.0.41 (Not released)

There was not a MySQL Connector/ODBC 8.0.41 release.

# Changes in MySQL Connector/ODBC 8.0.40 (2024-10-15)

## Bugs Fixed

- Fixed a potential Out of Bounds (OOB) issue related to escaping large queries. (Bug #36955942)
- The internal `mysql_init()` function used for making connections is now thread safe. (Bug #115710, Bug #36894687)
- With the `prefetch` connection option set to a non-zero value, large queries could cause the connector to unexpectedly halt. (Bug #113554, Bug #36945554)
- Fixed the `SQLBulkOperations()` function's generated `WHERE` clause, which could potentially cause an application to unexpectedly halt. (Bug #69194, Bug #18641963, Bug #26474373)

# Changes in MySQL Connector/ODBC 8.0.39 (Not released)

There was not a MySQL Connector/ODBC 8.0.39 release.

# Changes in MySQL Connector/ODBC 8.0.38 (Not released)

There was not a MySQL Connector/ODBC 8.0.38 release.

# Changes in MySQL Connector/ODBC 8.0.37 (2024-04-30)

The Connector/ODBC 8.0 series contains few changes after Connector/ODBC 8.0.33 and remains available for building 32-bit binaries. If you do not require 32-bit binaries, use the latest Connector/ODBC (such as 8.4.0), which also supports MySQL 8.0 and includes all bug fixes and new features.

## Security Notes

- For platforms on which Connector/ODBC utilizes MySQL Server's bundled OpenSSL library (MacOS, Windows, and GenLinux), MySQL Server's linked OpenSSL library was updated to version 3.0.13. Issues fixed in OpenSSL version 3.0.13 are described at https://openssl-library.org/news/openssl-3.0-notes/. (Bug #36278301)

# Changes in MySQL Connector/ODBC 8.0.36 (2024-01-16)

## Bugs Fixed

- ADODB.Recordset.Open() reported a transaction error when a string type was used with prepared statements. The fix was changing the SQL_MAX_CONCURRENT_ACTIVITIES value from 1 to 0 (unlimited). (Bug #36031548)

  References: This issue is a regression of: Bug #34916959.

# Changes in MySQL Connector/ODBC 8.0.35 (2023-10-25)

## Bugs Fixed

- Setting SQL mode to `ANSI_QUOTES` on the MySQL server caused the SQLColumns() method to not function. (Bug #35660375)
- Using the SJIS character set with the ANSI Driver could cause the connection to hang. (Bug #35520983)

- The SQLStatistics() function returned the wrong type for a PRIMARY KEY index. It now returns SQL_INDEX_OTHER instead of 0. (Bug #35504650)
- Fixed a memory leak generated by reading data. (Bug #111036, Bug #35491247)
- Selecting the **Character Set** dropdown under **Details** while creating a new Data Source Configuration in the GUI would unexpectedly halt the application if the credential fields were empty or invalid. (Bug #110900, Bug #35356536)

# Changes in MySQL Connector/ODBC 8.0.34 (Not released)

Version 8.0.34 has no release notes, or they have not been published because the product version has not been released.

# Changes in MySQL Connector/ODBC 8.0.33 (2023-04-18)


- Functionality Added or Changed
- Bugs Fixed


## Functionality Added or Changed

- Added a new `OCI_CONFIG_PROFILE` connection option to define a profile set in `OCI_CONFIG_FILE`; and it defaults to DEFAULT. These options are for the authentication_oci_client plugin used with the Oracle Cloud Infrastructure (OCI) to support ephemeral key pairs and security tokens.

  Also moved "OCI Config File" from the "Connection" tab to the "Authentication" tab in the GUI next to the new "OCI Config Profile" option. (WL #15482)

- Improved JSON data character support by presenting JSON columns as utf8mb4 strings instead of binary data. This change also affected the following ODBC functions:

  `SQLColumns()` result set changes:

  - DATA_TYPE (column #5) and SQL_DATA_TYPE (column #14) are now SQL_LONGVARCHAR or SQL_WLONGVARCHAR depending on the driver type (ANSI or UNICODE); previously it was always SQL_LONGVARCHAR.
  - COLUMN_SIZE (column #7) and BUFFER_LENGTH (column #8) are now 4294967295; previously they were NULL.
  - CHAR_OCTET_LENGTH (column #16) is now 4294967295; previously it was 0.

  `SQLDescribeCol()` result parameter changes:

  - The DataTypePtr parameter returns SQL_LONGVARCHAR or SQL_WLONGVARCHAR depending on the driver type (ANSI or UNICODE); previously it was always SQL_LONGVARCHAR.

  `SQLColAttribute()` return changes:

  - The SQL_DESC_CONCISE_TYPE and SQL_DESC_TYPE field identifiers return SQL_LONGVARCHAR or SQL_WLONGVARCHAR depending on the driver type (ANSI or UNICODE); previously it was always SQL_LONGVARCHAR.
  - The SQL_DESC_DISPLAY_SIZE field identifier returns 1073741823; previously it was -2. It's calculated as 4G/(UTF8MB4_SIZE).
  - The SQL_DESC_LOCAL_TYPE_NAME field identifier returns an empty string; previously it was SQL_ERROR.

- The SQL_DESC_TYPE_NAME field identifier returns the type name as a character string "JSON"; previously it was a garbled string.

(WL #15423)

### Bugs Fixed

- **Packaging:** Improved the MSI installer compatibilities so that driver versions for different architectures are no longer interdependent. All dependency libraries and executables are installed with the driver, a driver can be installed in a non-default directory, and driver architecture and licensing information is now visible in the list of installed applications. (Bug #35084016)
- When using client-side prepared statements (NO_SSPS=1), a _utf8mb4 prefix was added to string data sent from the client side even if utf8mb4 was already defined as the character set. Unnecessary prefixes were removed. (Bug #35075941)
- The SQL_MAX_CONCURRENT_ACTIVITIES value changed from 0 (unlimited) to 1 because Connector/ODBC supports one active statement per connection.

  Note: this change was reverted in Connector/ODBC 8.3.0. (Bug #34916959)
- On macOS, Connector/ODBC now locates iODBC libraries installed via Homebrew. (Bug #34529199)
- JSON column data was not properly translated; the data is now interpreted as UTF8MB4 instead of BINARY. A workaround was to cast the JSON column as CHAR. (Bug #33353465)
- Connector/ODBC now sets the following performance_schema connection attributes, which coincide with how other connectors behave: _connector_version (the connector version, such as 8.0.33), _connector_license (the connector's license type, such as GPL-2.0 or Commercial), _connector_name (always set to mysql-connector-odbc), and _connector_type (the ODBC driver type, either ANSI or Unicode). (Bug #33137632, WL #15417)
- With using ADO/VB6, updating a record set containing a field of type BIT with cursor location adUseServer could emit an error. The connector now marks BIG(N>1) columns as not searchable to exclude them from WHERE clauses produced by ADO/VB6. As before, type BIT is still reported as ODBC type SQL_BINARY to preserve backwards compatibility. (Bug #16590994)
- Improved prepared statement performance by decreasing the frequency of setlocale() calls used to enforce the '.' character as a decimal separator. (Bug #107745, Bug #34350417)
- Renamed compare() to parser_compare() in the parser module to avoid a symbol collision with the XSB ODBC interface. (Bug #70493, Bug #26474343)

## Changes in MySQL Connector/ODBC 8.0.32 (2023-01-17)


- Compilation Notes
- Functionality Added or Changed
- Bugs Fixed


### Compilation Notes

- Connector/ODBC now provides generic Linux packages for ARM architecture (64 bit), in addition to the generic Linux packages for Intel architecture (both 32 and 64 bits). All generic Linux packages are built using the GNU C Library version 2.28. (WL #15478)

### Functionality Added or Changed

- Added an `authentication-kerberos-mode` option that's set to either "SSPI" (default) or "GSSAPI". This allows choosing between SSPI and GSSAPI at runtime for the

`authentication_kerberos_client` authentication plugin on Windows. Previously, only the SSPI mode was supported on Windows. For general usage information, see Kerberos Pluggable Authentication. (WL #15347)

- Added an administrative privileges check to the `Install.bat` and `Uninstall.bat` scripts as installing and uninstalling the ODBC driver requires "run as admin" privileges. (WL #15354)

### Bugs Fixed

- Adding a 64-bit MySQL ODBC ANSI System Data Source via the ODBC Data Source Administrator would yield this error while testing the connection via the GUI: "Connection failed with the following error: [MySQL]ODBC 8.0(a) Driver]String data, right truncated.[010040]." (Bug #34786939)
- Upgraded Cyrus SASL to version 2.1.28, which has been publicly reported as not vulnerable to `CVE-2022-24407`. (Bug #34680978)
- SQLColumns() would use prepared statements with NO_SSPS=1. (Bug #108126, Bug #34643065)
- The MySQL ODBC driver would report the incorrect DATA_TYPE value for DATETIME when calling SQLColumns(). The correct concise type for DATETIME is SQL_TYPE_TIMESTAMP, and this is now used instead of the verbose type SQL_DATETIME. (Bug #107235, Bug #34291904)

## Changes in MySQL Connector/ODBC 8.0.31 (2022-10-11)


- Security Notes
- Functionality Added or Changed
- Bugs Fixed


### Security Notes

- For platforms on which Connector/ODBC utilizes MySQL Server's bundled OpenSSL library (MacOS, Windows, and GenLinux), MySQL Server's linked OpenSSL library was updated to version 1.1.1q. Issues fixed in the new OpenSSL version are described at https://www.openssl.org/news/cl111.txt and https://www.openssl.org/news/vulnerabilities.html. (Bug #34414691)

### Functionality Added or Changed

- **Packaging:** On Windows, the debugging (PDB) files were moved to a separate download. While the regular packages are built with RelWithDebInfo enabled, the associated PDB files are no longer included in the standard downloads. The separate debug package contains PDB files for the regular builds (in lib/), driver files and their associated PDB files built in Debug mode (in Debug/lib/), and unit tests. (WL #15124)
- Removed the deprecated `NO_I_S` connection option; usage is ignored and does not trigger an error or warning. (WL #15150)
- Added the `ssl-crl` and `ssl-crlpath` connection options to configure the Certificate Revocation List (CRL) list. (WL #14880)

### Bugs Fixed

- Converting binary data to binhex with SQLGetData() would unexpectedly halt on the 2nd call to SQLGetData() when the buffer size was smaller than the data size. (Bug #34486645)
- Now the connection collation can now be specified via INITSTMT; when before setting it was overridden by the ODBC driver. (Bug #34020457)
- With the ANSI ODBC driver, a call to SQLColumns returned the Unicode DATA_TYPE equivalent; SQL_WVARCHAR instead of SQL_VARCHAR, SQL_WCHAR instead of SQL_CHAR, and SQL_WLONGVARCHAR instead of SQL_LONGVARCHAR. (Bug #107766, Bug #34355094)

- Improved query parameter support and performance with prepared statements. (Bug #107745, Bug #34350417)
- Added a test case for a Server bug that was fixed in MySQL Server 8.0.31; its release note is as follows:

  A prepared statement with parameters could fail to update a row, but the same statement with the same data did update the row when issued as a query. The fix for the problem is to assign a default data type to the parameters, although this can be inefficient because there is no context available for data type propagation and a character string type is given implicitly. In this case, the best practice is to wrap such parameter declarations in `CAST` clauses that supply the desired data types. (Bug #105013, Bug #33401384)

# Changes in MySQL Connector/ODBC 8.0.30 (2022-07-26)


- Authentication Notes
- Character Set Support
- Compilation Notes
- Functionality Added or Changed
- Bugs Fixed


## Authentication Notes

- Password parameters escaped with curly braces did not escape right curly braces in the password value. (Bug #106631, Bug #33986051)
- Added callback support to the FIDO Pluggable Authentication mechanism. Use by defining a constant, such as `CB_FIDO_GLOBAL` to register a global callback function or `CB_FIDO_CONNETION` if it's connection-specific. These are used by SQLSetConnectAttr(), such as `SQLSetConnectAttr(hdbc, CB_FIDO_GLOBAL, &my_user_callback, SQL_IS_POINTER);`. For additional usage details, see Connector/ODBC WebAuthn and FIDO Information. (WL #14905)

## Character Set Support

- Added support for the new language-specific utf8mb4 collations added in MySQL Server 8.0.30. (Bug #34109678)

  References: See also: Bug #31885256.
- The driver's default character set changed to utf8mb4. Previously it defaulted to utf8, which is an alias to the deprecated utf8mb3. Using utf8mb3 could cause problems, like incorrectly inserting and selecting emojis. (Bug #107698, Bug #34031488, Bug #34350980)

## Compilation Notes

- Improved the RPM/DEB/MSI packages. For RPM/DEB: now either GTK2 or GTK3 are prerequisites (previously it required both), and the -setup package is now set to recommended. For Windows: stopped importing libraries (such as myodbc8a.lib) and only include DLLs, and stopped including PDB debug files. Also improved BUNDLE_DEPENDENCIES and MAINTAINER_MODE CMake options to check if the required bundled plugins and 3rd party libraries are present. (WL #14945)

## Functionality Added or Changed

- Added the tls-versions connection option to define the allowed TLS protocol versions.

  `tls-versions` accepts TLSv1.2 and/or TLSv1.3. Other values generate an error. Example usage: *tls-versions=TLSv1.2,TLSv1.3*. The value is set by libmysqlclient if not set, and has no effect with

*ssl-mode=DISABLED*. The option overrides (disables) the related NO_TLS_X_Y Connector/ODBC connection options, such as NO_TLS_1_2.

Related, TLSv1 and TLSv1.1 support was removed from MySQL Server 8.0.28. (WL #14876)

### Bugs Fixed

- The SQL_C_DOUBLE type could return as an inaccurate result with NO_CACHE enabled. (Bug #107307, Bug #34180568)
- Fixed memory leak caused by ODBC data source reconnects; now mysql_library_end() is called upon the DLL_PROCESS_DETCH event.

  The workaround is to reuse ENV for each new connection. (Bug #106886, Bug #34030930)
- SQLCancel() was not thread safe; it and other ODBC API functions are now thread safe. (Bug #91951, Bug #105606, Bug #33884811)

## Changes in MySQL Connector/ODBC 8.0.29 (2022-04-26)


- Security Notes
- Functionality Added or Changed
- Bugs Fixed


### Security Notes

- For platforms on which Connector/ODBC utilizes MySQL Server's bundled OpenSSL library (MacOS, Windows, and GenLinux), MySQL Server's linked OpenSSL library was updated to version 1.1.1n. Issues fixed in the new OpenSSL version are described at https://www.openssl.org/news/cl111.txt and https://www.openssl.org/news/vulnerabilities.html. (Bug #33987635)

### Functionality Added or Changed

- Added the following TLS/SSL option aliases to align with other MySQL connectors: ssl-mode (SSLMODE), ssl-ca (SSLCA), ssl-capath (SSLCAPATH), ssl-cert (SSLCERT), ssl-cipher (SSLCIPHER), and ssl-key (SSLKEY). The ODBC driver, GUI, and myodbc-installer use these new aliases by default instead of the old option names. For example, setting SSL Key in the GUI now saves it as ssl-key instead of SSLKEY. (WL #14845)
- Added FIDO Pluggable Authentication support, an authentication mechanism added in MySQL Enterprise Edition 8.0.27. For additional details, see Authentication Options. (WL #14877)

### Bugs Fixed

- Extended SQLGetTypeInfo() to return results for Unicode wide character type IDs, such as SQL_WCHAR, when before only their corresponding ANSI character type IDs such as SQL_CHAR returned results. (Bug #33772516)
- On Windows, installing the driver to a custom location made setting PLUGIN_DIR required to find bundled plugins. Now the directory location is used to determine the plugin directory unless PLUGIN_DIR is specified. (Bug #33720924)
- The ODBC driver would unexpectedly halt when connecting to accounts that required client-side authentication plugins if those plugins depended on 3rd-party libraries (such as authentication_fido and libfido2.dll) that could not be found or loaded. Now it reports an error instead. (Bug #33702043)
- The SQLColumns() function result included the length qualifier for some types, such as char(16) instead of char. (Bug #33599093)

- With prepared statements and NO_CACHE=1, having a NULL value in a row column would nullify a value in the same column of the next row. This produced an incorrect value giving NULL where a non-value was expected. (Bug #106683, Bug #33951069)
- When a Catalog or Schema is not specified, and if a table with the same name and set of columns existed in another database, SQLColumns() would return data from multiple databases instead of only the current database. In this case, MS Access would yield an error as the database name was not checked for. Now only data from the current database is returned, unless specifically specified. (Bug #106204, Bug #33788407)
- On Windows, the ODBC GUI dialog did not display all available inputs; so the dialog window size was increased accordingly. (Bug #106013, Bug #33624658)

# Changes in MySQL Connector/ODBC 8.0.28 (2022-01-18)


- Deprecation and Removal Notes
- Functionality Added or Changed
- Bugs Fixed


## Deprecation and Removal Notes

- The TLSv1 and TLSv1.1 connection protocols were previously deprecated in Connector/ODBC 8.0.26 and support for them is removed starting with this release. Instead, use TLSv1.2 or TLSv1.3.

  The associated NO_TLS_1_0 and NO_TLS_1_1 connection parameters were removed. (WL #14817)

## Functionality Added or Changed

- Connector/ODBC can now establish connections using Multi-Factor Authentication (MFA), such that up to three passwords can be specified. The new `PASSWORD1`, `PASSWORD2`, and `PASSWORD3` connection options are available for specifying the first, second, and third MFA passwords, respectively. The `PASSWORD1` option is a synonym for the existing `PASSWORD` option. In addition, `PWD1`, `PWD2`, and `PWD3` aliases were added. (WL #14657)

## Bugs Fixed

- Microsoft Access could unexpectedly halt when browsing MySQL linked tables when columns in the tables had gaps; and for roughly 100+ record tables as the ODBC driver was incorrectly using memory allocating functions from libmysqlclient. (Bug #33557670, Bug #105503)
- For platforms on which Connector/ODBC utilizes MySQL Server's bundled OpenSSL library (MacOS, Windows, and GenLinux), MySQL Server's linked OpenSSL library was updated to version 1.1.1L. Issues fixed in the new OpenSSL version are described at https://www.openssl.org/news/cl111.txt and https://www.openssl.org/news/vulnerabilities.html. (Bug #33309900)
- SQLColumns() now uses INFORMATION_SCHEMA instead of the deprecated COM_FIELD_LIST by default. COM_FIELD_LIST is only used when NO_I_S is set by Connector/ODBC (which disables INFORMATION_SCHEMA usage). (Bug #29476463, Bug #94235)

# Changes in MySQL Connector/ODBC 8.0.27 (2021-10-19)


- Functionality Added or Changed
- Bugs Fixed


## Functionality Added or Changed

- Applications that use legacy MySQL connections can now establish connections without passwords for accounts that use the `authentication_oci` server-side authentication plugin, provided that

the correct configuration entries are available to map to one unique user in a specific Oracle Cloud Infrastructure tenancy.

To ensure correct account mapping, the client-side Oracle Cloud Infrastructure configuration must contain a fingerprint of the API key to use for authentication (`fingerprint` entry) and the location of a PEM file with the private part of the API key (`key_file` entry). Both entries should be specified in the `[DEFAULT]` profile of the configuration file.

Unless an alternative path to the configuration file is specified with the new `OCI_CONFIG_FILE` connection option, the following default locations are used:

- `~/.oci/config` on Linux or Posix host types
- `%HOMEDRIVE%%HOMEPATH%/.oci/config` on Windows host types

If the MySQL user name is not provided as a connection option, then the operating system user name is substituted. Specifically, if the private key and correct Oracle Cloud Infrastructure configuration are present on the client side, then a connection can be made without giving any options. (WL #14709)

- In Connector/ODBC 8.0.26, the capability was introduced for applications that use the classic MySQL connections for accounts that use the `authentication_kerberos` server-side authentication plugin, provided that the correct Kerberos tickets are available or can be obtained from Kerberos. That capability was available on client hosts running Linux only. It is now available on client hosts running Windows.

  For more information about Kerberos authentication, see Kerberos Pluggable Authentication. (WL #14681)

### Bugs Fixed

- Changed the NO_SCHEMA default value from 0 to 1. It's enabled to behave like in the older versions the ODBC driver to not accept schema parameters and not declare support for schema functions. (Bug #33300344, Bug #32925338, WL #14490)
- The MSI installation package did not install plugin libraries present in the Zip package, such as fido_client, kerberos_client, and ldap_sasl_client. (Bug #33269861)
- Fixed the internal character set conversions of string data inside the driver; some UTF8MB4 characters were not properly converted. (Bug #33241697, Bug #104346)
- The ODBC driver can now load plugins from their default location without need to specify the plugins directory using the PLUGIN_DIR connection option. (Bug #33134373)
- Added logic to correctly detect OUT/INOUT parameters from a stored procedure, as a workaround to a libmysqlclient issue. (Bug #30578291)
- The second call to a stored procedure failed if the statement was closed after the results of the first call had been received. (Bug #29042032, Bug #93378)

## Changes in MySQL Connector/ODBC 8.0.26 (2021-07-20)


- Deprecation and Removal Notes
- Functionality Added or Changed
- Bugs Fixed


### Deprecation and Removal Notes

- The TLSv1.0 and TLSv1.1 connection protocols are now deprecated and support for them is subject to removal in a future Connector/ODBC version.

Additionally, a NO_TLS_1_3 connection option was added. (WL #14543)

- Deprecated the `NO_I_S` connection option, an option to get metadata without the information_schema by using SHOW statements. Setting `NO_I_S=1` with SQLConnect() or SQLDriverConnect() now return SQL_SUCCESS_WITH_INFO instead of SQL_SUCCESS, and they a deprecation warning retrievable by SQLGetDiagRec(). (WL #14586)

### Functionality Added or Changed

- Applications that use Connector/ODBC now can define query attribute metadata on a per-query basis, without the use of workarounds such as specially formatted comments included in query strings. (WL #14217)
- Added the ability to connect to MySQL server accounts that use the `authentication_kerberos` plugin, including support for user-less and password-less Kerberos authentications. Connector/ODBC utilizes the MySQL client library for this functionality. (WL #14441)

### Bugs Fixed

- Fixed `help` (documentation) links in the ODBC Driver GUI. (Bug #32880421)
- Improved Access/VB6 query attribute handling. (Bug #32813838)
- Attempting to update a row with an existing unique key would not emit a diagnostic error that reported the problem, such as "Duplicate Entry". (Bug #32763378, Bug #103287)
- Systems with both GTK versions 2 and 3 could cause the UnixGUI to unexpectedly halt when using the MySQL GUI module. Now, separate GTK modules exist for each version as the two can't co-exist in the same process. (Bug #32623180)
- A buffer overrun inside SQLColumns() caused Connector/ODBC to unexpectedly halt; memory management was optimized to prevent this problem.

  A workaround was to either use the `NO_I_S=1` connection option or enable "Don't use INFORMATION_SCHEMA for metadata" from the ODBC Data Source Administrator. (Bug #32612467, Bug #102891)
- Fixed insert_params() code to use the __LOCALE_SET and __LOCALE_RESTORE macros rather than setlocale directly. (Bug #32610685, Bug #102871)
- Setting `NO_CACHE=1` in the ODBC connection string would cause function errors to go undetected. (Bug #27499789, Bug #89542)

## Changes in MySQL Connector/ODBC 8.0.25 (2021-05-11)

This release contains no functional changes, and is published to align its version number with that of the MySQL Server 8.0.25 release.

## Changes in MySQL Connector/ODBC 8.0.24 (2021-04-20)


- Security Notes
- Functionality Added or Changed
- Bugs Fixed


### Security Notes

- For platforms on which Connector/ODBC utilizes MySQL Server's bundled OpenSSL library (MacOS, Windows, and GenLinux), MySQL Server's linked OpenSSL library was updated to version 1.1.1k. Issues fixed in the new OpenSSL version are described at https://www.openssl.org/news/cl111.txt and https://www.openssl.org/news/vulnerabilities.html. (Bug #32719727)

References: See also: Bug #32680637.

### Functionality Added or Changed

- Previously, if the connection to the server was not used within the period specified by the wait_timeout system variable and the server closed the connection, the client received no notification of the reason. Typically, the client would see Lost connection to MySQL server during query (CR_SERVER_LOST) or MySQL server has gone away (CR_SERVER_GONE_ERROR).

  In such cases, the server now writes the reason to the connection before closing it, and the client receives a more informative error message: The client was disconnected by the server because of inactivity. See wait_timeout and interactive_timeout for configuring this behavior. (ER_CLIENT_INTERACTION_TIMEOUT).

  The previous behavior still applies for client connections to older servers and connections to the server by older clients. (WL #14426)

- If a classic MySQL protocol connection experiences a server timeout, Connector/ODBC now reports more precise disconnection information from the server. (WL #14426)

### Bugs Fixed

- Setting PAD_SPACE=1 did not cause CHAR columns to be padded with spaces to their full length, which prevented the MSSQL linked server from working with ENUM and CHAR columns in the MySQL Database. (Bug #32537000)

- The ODBC SQLProcedureColumns function returns incomplete results, fetches after usage would only return the first 40 parameters.

  The workaround was to increase the `group_concat_max_len` size, for example 'group-concat-max-len = 1000000' under [mysqld]. (Bug #32504915, Bug #102589)

- MySQL 8.0.24 added a new ER_CLIENT_INTERACTION_TIMEOUT error code, and it caused the ODBC driver to report the wrong SQLSTATE HY000 instead of 08S01 after the connection is terminated on the server by wait_/_interactive timeout. The ODBC driver is now linked against libmysqlclient 8.0.24 to handle this situation. (Bug #32394545)

- Passing a query without parameters to SQLPrepare() would not prepare anything. In some scenarios it would immediately execute such a query, which would be the same as calling the SQLExecDirect() function. In other scenerios it executed without preparing by the using the SQLExecute() function. This could lead towards abnormally long query times. Now, the driver enforces preparation of the statement by the SQLPrepare() function even if the query has no parameters. (Bug #32079486)

- Connector/ODBC report ENUM columns as SQL_CHAR as the ODBC standard does not support ENUM, and MS SQL Server expects CHAR data to always be the same fixed length as specified in the column definition. This fixes errors related to new line and tab symbols present in the UNICODE version of the driver. The workaround is to enable SSPS (default) by not setting NO_SSPS=1. (Bug #28783266, Bug #92748)

  References: See also: Bug #32537000.

## Changes in MySQL Connector/ODBC 8.0.23 (2021-01-18)


- Functionality Added or Changed
- Bugs Fixed


### Functionality Added or Changed

- Previously, Connector/ODBC added client support for the MySQL Enterprise Edition SASL LDAP authentication plugin with SCRAM-SHA-1 as an authentication method. Connector/ODBC now also

supports SCRAM-SHA-256 as an alternative authentication method for classic MySQL protocol connections. SCRAM-SHA-256 is similar to SCRAM-SHA-1 but is more secure. SASL-based LDAP authentication does not apply to clients running macOS.

The SASL module required for LDAP/SCRAM-SHA256 is provided by the cyrus-sasl-scram RPM package and libsasl2-modules-gssapi-mit DEB package (the same package that provides modules for LDAP/GSSAPI/Kerberos). (WL #14250)

### Bugs Fixed

- Using the commercial glib package (authentication_ldap_sasl) with auth using GSSAPI (authentication_ldap_sasl_auth_method_name='GSSAPI') did not function. Added the missing sasl2 modules package. (Bug #32175842)
- On Debian based systems, the post-installation script uses `dpkg-architecture` ODBC drivers path, so the associated `dpkg-dev` package was added as a runtime dependency. (Bug #32157740)
- Double and Float values could differ depending if the query was standard or utilized server side prepared statements. Standard used MSYSQL_ROW for non-binary data to represent them as character strings, whereas server side prepared statements used the MYSQL_BIND structure and the specific MySQL type which could lead towards inconsistent results. Now this is performed in a uniform way to yield the same results. (Bug #32135124, Bug #98946)
- Microsoft Access halted when opening a linked table with only a JSON column. The JSON column type is now supported, and JSON data is only editable if another column is used as a primary key. Because JSON is a long data type with the maximum length of 4GB, it can't be used as a primary key by Microsoft Access and therefore tables having only JSON columns are only available in read-only mode. (Bug #32114901)
- Removed the mysql-client-plugins dependency. It remains required for connections using commercial MySQL server accounts with LDAP authentication, so must be manually installed for that situation. The mysql-client-plugins package has conflicts with MySQL server versions before 8.0.21, so earlier versions (such as MySQL 5.7) require an 8.0 server upgrade to use it. (Bug #31875490)
- On macOS, Connector/ODBC would not report an error if `SQL_ATTR_PARAMSET_SIZE` was set but not supported; instead the setting was ignored. (Bug #29862441, Bug #95608)

## Changes in MySQL Connector/ODBC 8.0.22 (2020-10-19)


- Functionality Added or Changed
- Bugs Fixed


### Functionality Added or Changed

- For enhanced security of the existing `ENABLE_LOCAL_INFILE` connection string option, the new `ENABLE_LOCAL_DIR` option allows restricting LOCAL data loading to files located in this designated directory. Example usage:

```
// LOAD LOCAL DATA DIR FROM /tmp
    SQLRETURN rc =
    SQLDriverConnect(
      hdbc1,NULL,
      "DSN=myDSN;UID=root;PWD=pwd;DATABASE=test;LOAD_DATA_LOCAL_DIR=/tmp",
      SQL_NTS, conn_out, sizeof(conn_out), &conn_out_len,
      SQL_DRIVER_NOPROMPT);

// LOAD LOCAL DATA FROM EVERYWHERE
    SQLRETURN rc =
    SQLDriverConnect(
      hdbc1,NULL,
      "DSN=myDSN;UID=root;PWD=pwd;DATABASE=test;ENABLE_LOCAL_INFILE=1;",
      SQL_NTS, conn_out, sizeof(conn_out), &conn_out_len,
```

```
      SQL_DRIVER_NOPROMPT);
```

(WL #13883)

- Connections made using the MySQL Enterprise Edition SASL LDAP authentication plugin now are supported on Windows and Linux, but not on macOS. Connector/ODBC implements the `SCRAM-SHA-1` authentication method of the SASL authentication protocol. (WL #14114)

### Bugs Fixed

- Fixed an issue where a parameterized query could cause memory corruption. (Bug #31678876, Bug #100329)
- Under some circumstances when using server-side prepared statements, the first row of a multi-row match was not returned with the result; while it was returned when using client-side prepared statements instead. (Bug #31373948, Bug #95423)
- Inserting binary data (BLOBs) using SQLPutData() would report a syntax error. (Bug #31349038)

## Changes in MySQL Connector/ODBC 8.0.21 (2020-07-13)


- Security Notes
- Bugs Fixed


### Security Notes

- For platforms on which OpenSSL libraries are bundled, the linked OpenSSL library for Connector/ODBC has been updated to version 1.1.1g. Issues fixed in the new OpenSSL version are described at https://www.openssl.org/news/cl111.txt and https://www.openssl.org/news/vulnerabilities.html. (Bug #31296688)

### Bugs Fixed

- The MSI installer now checks for the Visual 2019 C++ runtime, and aborts if this required runtime is not installed.

  This is also the first version that requires Visual 2019 C++ runtime, when before the 2017 version was also supported. (Bug #31102234, WL #13564)
- Only a single value was being inserted instead of the array, with SQLParamOptions. (Bug #30591722)
- The SUM aggregate function did not function with ADO. (Bug #30277891, Bug #96642)
- Added a workaround to account for a limitation in the iODBC SQLGetPrivateProfileString() implementation as previously DSN options could be lost. iODBC is most commonly used on macOS. (Bug #27851681)

## Changes in MySQL Connector/ODBC 8.0.20 (2020-04-27)


- Functionality Added or Changed
- Bugs Fixed


### Functionality Added or Changed

- On Debian, DEB packages are now released instead of TGZ files. The file base names are `mysql-connector-odbc-*` (driver package) and `mysql-connector-odbc-setup` (setup package). The setup package contains the GUI configuration widget library (`libmyodbc8S.so`) and depends on

the driver package. The driver package depends on the unixODBC libraries (libodbc, libodbcinst); and does not conflict with the official Debian package (libmyoodbc). (WL #13565)

### Bugs Fixed

- When using SQL_C_WCHAR with SQLGetData, binary data was not returned correctly as its hexacecimal representation. Related, using SQL_C_CHAR with SQLGetData did return binary data as hex. (Bug #28864788, Bug #92429)
- When binding an SQL_BIT type column to the SQL_C_CHAR type, SQLFetchScroll would return the values as an integer instead of a char. (Bug #28484784, Bug #91904)

## Changes in MySQL Connector/ODBC 8.0.19 (2020-01-13)


- Functionality Added or Changed
- Bugs Fixed


### Functionality Added or Changed

- Added DNS SRV support.

  To automatically resolve any SRV record available in a target DNS server or service discovery endpoint, specify `ENABLE_DNS_SRV=1` in the DSN; the host is passed for SRV lookup without a port and with a full lookup name. For example: *DRIVER={MySQL ODBC 8.0 Driver};SERVER=_mysql._tcp.foo.abc.com;ENABLE_DNS_SRV=1;USER=user;PWD=passwd;* (WL #13403)

- Confirmed support for compiling with VS2019, and for supporting the Visual C++ 2019 redistributable. (WL #13564)

- When creating a new connection using the classic MySQL protocol, multiple hosts can be tried until a successful connection is established. A list of hosts can be given in a connection string, along with passing *MULTI_HOST=1* to to enable this functionality. The connection string looks similar to *SERVER=address1[:port1],address2[:port2]....;MULTI_HOST=1;*.

  Other notes: the default port is used if port is not specified, the connector randomly picks hosts, and if a host fails then a new host is chosen. An error is returned if SERVER contains multiple hosts when MULTI_HOST is not enabled. (WL #13323)

### Bugs Fixed

- With prepared SELECT statements the fixed-length numeric types such as INT were set to 0 instead of their stored value, if a textual field was also part of the SELECT statement. (Bug #30428851, Bug #97191)
- Connector/ODBC failed to compile when dynamically linking to the MySQL client library (MYSQLCLIENT_STATIC_LINKING=0); due to a mismatch between an internal copy of the library headers and the version of code implementing the library internals. (Bug #30292290, Bug #96835)
- Improved handling for stored procedures and the INOUT parameter.

  For example, if a stored procedure had one or more parameters then an incomplete result set could be returned. (Bug #29467224, Bug #94623)

## Changes in MySQL Connector/ODBC 8.0.18 (2019-10-14)

### Bugs Fixed

- Connector/ODBC is now built with MySQL client library 8.0.18, which includes OpenSSL 1.1.1d. Issues fixed in the new OpenSSL version are described at http://www.openssl.org/news/vulnerabilities.html. (Bug #29868815)

- On Linux, memory was leaked on each server connection attempt due to how *mysql_server_end* was implemented and executed. (Bug #26194929)
- On Windows, fixed direct setlocale() usage for multi-threaded applications.

  The workaround was to add *;NO_LOCALE=1* to the connection string.

  Thanks to *Jacques Germishuys* for the patch. (Bug #24814467, Bug #83297)

# Changes in MySQL Connector/ODBC 8.0.17 (2019-07-22)

- Functionality Added or Changed
- Bugs Fixed

## Functionality Added or Changed

- `README.md` and `CONTRIBUTING.md` files were created for the convenience of git users. These files are not distributed with binaries, whereas `README.txt` remains distributed. (WL #12828)

## Bugs Fixed

- The `myodbc-installer` command line utility did not display all DSN options. (Bug #29753227)
- On Windows, building and installing from source could yield a binary that would not execute due to a case-sensitivity issue in the CMake logic. (Bug #29210040)

# Changes in MySQL Connector/ODBC 8.0.16 (2019-04-25)

## Bugs Fixed

- Connector/ODBC 8.0 is now built with OpenSSL 1.0.2R. Issues fixed in the new OpenSSL version are described at http://www.openssl.org/news/vulnerabilities.html. (Bug #29538143)
- An exception was emitted when fetching contents of a BLOB/TEXT records after executing a statement as a server-side prepared statement with a bound parameter.

  The workaround is not using parameters or specifying NO_SSPS=1 in the connection string; this allows the driver to fetch the data. (Bug #29282638, Bug #29512548, Bug #28790708, Bug #93895, Bug #94545, Bug #92078)

# Changes in MySQL Connector/ODBC 8.0.15 (2019-02-01)

This release contains no functional changes, and is published to align its version number with that of the MySQL Server 8.0.15 release.

# Changes in MySQL Connector/ODBC 8.0.14 (2019-01-21)

## Functionality Added or Changed

- A new *ENABLE_LOCAL_INFILE* connection option was added to the connection string, DSN, and GUI. Disabled by default, set ENABLE_LOCAL_INFILE=1 to enable LOAD DATA operations. This toggles the MYSQL_OPT_LOCAL_INFILE mysql_options() option.

  The connection string overrides the DSN value if both are set. (WL #12394, WL #12477)
- MySQL Connector/ODBC is now compatible with MSVC 2017, while retaining compatibility with MSVC 2015:
  - Previously, Connector/ODBC binary distributions were compatible with projects built using MSVC 2015. Binary distributions now are compatible with projects built using MSVC 2017 or 2015.

- Previously, Connector/ODBC source distributions could be built using MSVC 2015. Source distributions now can be built using MSVC 2017 or 2015.
- Previously, the MSI installer accepted the Visual C++ Redistributable for Visual Studio 2015. The MSI installer now accepts the Visual C++ Redistributable for Visual Studio 2017 or 2015.

(WL #12640)

- Two informative text files were added: `INFO_BIN` contains information about the build environment used to produce the distribution, and `INFO_SRC` provides information about the product version and the source repository from which the distribution was produced. Source distributions include the `INFO_SRC` file only. (WL #12373)

# Changes in MySQL Connector/ODBC 8.0.13 (2018-10-22)


- Functionality Added or Changed
- Bugs Fixed


## Functionality Added or Changed

- Added dynamic libmysql linking support via the *-DMYSQLCLIENT_STATIC_LINKING:BOOL=TRUE|FALSE* option; defaults to FALSE to enable dynamic linking. (WL #12369)

## Bugs Fixed

- Fixed column metadata handling with Microsoft Access. (Bug #28670725, Bug #91856)
- The following obsolete options were removed: NO_SCHEMA (use NO_CATALOG instead), DISABLE_SSL_DEFAULT (use SSLMODE instead), and SSL_ENFORCE (use SSLMODE instead). (Bug #28407520)
- The ODBC Driver returned 0 for the SQL_MAX_SCHEMA_NAME_LEN attribute, and now returns 64 as the maximum length for a MySQL schema name. (Bug #28385722)
- Because the MySQL ODBC driver ignored the SQL_RD_OFF value for the SQL_ATTR_RETRIEVE_DATA attribute, it incorrectly kept writing into the data buffers. This led to write access violation errors when data was written into the buffer when the user application explicitly requested not to write there. (Bug #28098219, Bug #91060)

# Changes in MySQL Connector/ODBC 8.0.12 (2018-07-27)


- Functionality Added or Changed
- Bugs Fixed


## Functionality Added or Changed

- Several code issues identified by Fortify were corrected. (WL #11829)
- Refactored codebase to remove legacy code and implement general performance improvements. For example, unused ANSI data conversion code and legacy functions were removed. Example improvements affect bookmark handling for bulk operations, handling of memory buffers for prepared statements, and handling of session variables. (WL #11994)
- On Windows, 32-bit support was added and 32-bit binaries are now available. (WL #12139)
- An RPM package for installing ARM 64-bit (aarch64) binaries of Connector/ODBC on Oracle Linux 7 is now available in the MySQL Yum Repository and for direct download.

**Known Limitation for this ARM release**: You must enable the Oracle Linux 7 Software Collections Repository (ol7_software_collections) to install this package, and must also adjust the libstdc++7 path. See Yum's Platform Specific Notes for additional details.

### Bugs Fixed

- Added checks for unsupported functionality that return SQL_ERROR instead of SQL_SUCCESS, where the error message refers to the unsupported functionality. (Bug #28217387)
- The data source dependent type's name was not always returned. For example, the ODBC driver reported TEXT as the database type for TINYTEXT, MEDIUMTEXT, and LONGTEXT, and reported BLOB for TINYBLOB, MEDIUMBLOB, and LONGBLOB. (Bug #11761407, Bug #53900)

## Changes in MySQL Connector/ODBC 8.0.11 (2018-04-19)

MySQL Connectors and other MySQL client tools and applications now synchronize the first digit of their version number with the (latest) MySQL server version they support. This change makes it easy and intuitive to decide which client version to use for which server version.

Connector/ODBC 8.0.11 is the first release to use the new numbering. It was branched from Connector/ODBC 5.3.10.

The Connector/ODBC 8.0 series also adds full MySQL Server 8.0 support.

### Functionality Added or Changed

- Connector/ODBC now supports a new `GET_SERVER_PUBLIC_KEY` connection option that enables requesting the RSA public key from the server. For accounts that use the `caching_sha2_password` or `sha256_password` authentication plugin, this key can be used during the connection process for RSA key-pair based password exchange with TLS disabled. This capability requires a MySQL 8.0 or higher server, and is supported only for Connector/ODBC built using OpenSSL. (WL #11659)
- A new OpenSSL runtime dependency was added that must be present on the target system where the connector is used. For some platforms it is assumed that a system-wide OpenSSL is available, for others, such as Windows and macOS, these required OpenSSL libraries are bundled in the binary packages. (WL #11099)
- Packaging was modified for the new MySQL Connector/ODBC 8 series. For example, the Connector/ODBC 5.x ODBC driver has a file named `myodbc5w.dll`, whereas this same ODBC driver is named `myodbc8w.dll` for the Connector/ODBC 8.x series. The sample .ini file also references these new file names. (WL #11661)

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