Release Notes

Amazon Redshift ODBC Driver 1.4.27

Released March 2021

These release notes provide details of enhancements, features, known issues, and workflow changes in Amazon Redshift ODBC Driver 1.4.27, as well as the version history.

Enhancements & New Features

JWT authentication

The driver can now authenticate the connection using a JSON Web Token (JWT). For more information, see the *Installation and Configuration Guide*.

Updated OpenSSL library

The driver has been updated to use version 1.1.1i of the OpenSSL library. Previously, the driver used 1.1.1g.

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.27.

- When SQL_ATTR_ACCESS_MODE is set to SQL_MODE_READ_ONLY before the connection, the driver log incorrectly shows "Failed to execute query before connecting to the server: SET readonly = true" where the query is not executed.

  This issue has been resolved. The log now shows "Query is not executed because connection has not been established: SET readonly = true" in this case, and "Query executed: SET readonly = true" when the query is executed.
- On Linux, when calling ODBC API such as SQLGetCursorName(), the driver returns a bad_alloc exception.

  This issue has been resolved. This is caused by an overflow when computing the buffer size. The driver now returns a warning if the buffer size is not appropriate.
- In some cases, when multiple threads are creating and destroying the connection handle, the driver becomes unresponsive or terminates unexpectedly.
- In some cases, if SQLColumns() for external tables is called after SQLColumns() for internal tables, the driver does not return SQLColumns() metadata for external tables.
- When executing multiple concurrent queries in the same connection, the driver terminates unexpectedly.

- When calling SQLDescribeCol() for columns with the PRIMARY KEY constraint, the driver returns incorrect values for NullablePtr.

  This issue has been resolved. The driver now returns SQL_NO_NULLS for NullablePtr to indicate that a column with the PRIMARY KEY constraint does not support NULL values.

- When calling SQLDescribeCol() for columns with the NOT NULL constraint, the driver returns incorrect values for NullablePtr.

  This issue has been resolved. The driver now returns SQL_NO_NULLS for NullablePtr to indicate that a column with the NOT NULL constraint does not support NULL values.

- When calling SQL_DESC_BASE_TABLE_NAME and SQL_DESC_TABLE_NAME, the driver returns an empty string.

  This issue has been resolved. The driver now returns the base table name.

- When calling SQL_DESC_NAME, the driver returns the base column name.

  This issue has been resolved. The driver now returns the alias column name.

- When calling SQLColAttribute() for SQL_DESC_NULLABLE and the columns contain the PRIMARY KEY or NOT NULL constraint, the driver returns an incorrect value.

- When autocommit is disabled and the query fails after execution, the driver executes ROLLBACK.

  This issue has been resolved. The driver now returns a "current transaction is aborted, commands ignored until end of transaction block" error. The application must explicitly commit or roll back transactions with SQLEndTran.

- `ODBCMessages.xml` contains a duplicate error message key.

- When using Power Pivot to query the server, the driver returns a "Requested property not supported" error.

- When calling SQLExtendedFetch() and different sizes of SQL_ROWSET_SIZE is used, the driver returns incorrect data.

- When calling SQLProcedureColumns() for variable length data types, the driver returns NULL for the COLUMN_SIZE and BUFFER_LENGTH columns.

  This issue has been resolved. The driver now returns the correct values according to the ODBC specifications.

- When calling SQLColumns() with a percentage sign (`%`) as the schema filter, the driver does not return any rows.

  This issue has been resolved. The driver now, when using a percentage sign (`%`) as the schema filter, returns the same rows as using null as the schema filter.

Known Issues

The following are known issues that you may encounter due to limitations in the data source, the driver, or an application.

- Limited support for stored procedures.

  The driver does not support parameterized procedure call queries if there is more than one procedure of different argument types that share the same name in the server.

- Timestamps do not accept negative values.

  The driver does not support the use of negative values in timestamps.

Workflow Changes

The following changes may disrupt established workflows for the driver.

Version 1.4.27

Updated EnforceSingleStatement and UseMultipleStatements description

The description of the `EnforceSingleStatement` and `UseMultipleStatements` options have been changed to reflect the actual behaviour. For more information, see the *Installation and Configuration Guide*.

Updated query processing modes behavior

The driver's behavior for the query processing modes have been updated. For more information, see the *Installation and Configuration Guide*.

Removed support for CentOS 6 and RHEL 6

Beginning with this release, support for CentOS 6 and RHEL 6 have been removed. For a list of supported Linux versions, see the *Installation and Configuration Guide*.

Version 1.4.18

Removing support for earlier versions of operating systems

Beginning with this release, the driver no longer supports the following operating systems:

- Windows 7 SP1

- Windows Server 2008 R2 SP1
- SUSE Linux Enterprise Server (SLES) 11
- Debian 7
- Ubuntu 14.04

For a list of supported operating systems, see the Installation and Configuration Guide.

Version 1.4.17

New default value for Bytea As LongVarBinary

The default value of the Bytea As LongVarBinary option (`ByteaAsLongVarBinary` connection property) is now Enabled (`1`). Previously, the default value was Disabled (`0`). For more information, see the *Installation and Configuration Guide*.

Version 1.4.11

Removed support for the Visual C++ Redistributable for Visual Studio 2013

Beginning with this release, the driver now requires the 2015 version of this dependency instead of the 2013 version.

To download the installation packages for the Visual C++ Redistributable for Visual Studio 2015, go to https://www.microsoft.com/en-ca/download/details.aspx?id=48145.

Version History

Version 1.4.20

Released November 2020

Enhancements & New Features

Return metadata from multiple data stores

The driver can now return metadata from multiple Redshift databases and clusters. To enable this, clear the Database Metadata Current Database Only

check box (set the `DatabaseMetadataCurrentDbOnly` property to `0`). For more information, see the *Installation and Configuration Guide*.

Updated root certificate file

The `root.crt` file has been updated to support Amazon Root CA 2, 3, and 4.

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.20.

- In some cases, when multiple threads are creating and destroying the environment handle, the driver hangs or terminates unexpectedly.
- When SQLPutData() is called multiple times for the same parameter, the parameter value is incorrectly truncated.
- When SQLProcedureColumns() is called for a stored procedure with multiple OUT parameters, only one OUT parameter is returned.
- SQL_DATA_TYPE and SQL_DATETIME_SUB in SQLProcedureColumns() return incorrect values for date and time data types.

  This issue has been resolved. The driver now returns SQL_DATETIME for all date and time types in SQL_DATA_TYPE for SQLProcedureColumns(). Additionally, the driver now returns SQL_CODE_DATE, SQL_CODE_TIME, or SQL_CODE_TIMESTAMP, depending on the type of date or time column, or null otherwise, in SQL_DATETIME_SUB for SQLProcedureColumns().
- CHAR_OCTET_LENGTH in SQLProcedureColumns returns NULL for character types.

  This issue has been resolved. The driver now returns the correct length.

Version 1.4.18

Released October 2020

Enhancements & New Features

Updated logging configurations

You can now configure logging for the current connection by setting the logging configuration properties in the DSN or in a connection string. For more information, see the *Installation and Configuration Guide*.

Updated third-party libraries

The driver has been updated to use the following libraries:

- OpenSSL 1.1.1g (previously 1.1.1d)
- ICU 58.3 (previously 58.2)

Additional operating system support

The driver now supports the following additional operating systems:

- Windows Server 2019
- Red Hat Enterprise Linux (RHEL) 8
- CentOS 8
- SUSE Linux Enterprise Server (SLES) 15
- Ubuntu 18.04

For a complete list of supported operating systems, see the Installation and Configuration Guide.

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.18.

- If autocommit is disabled and the query fails after execution, the driver returns a "current transaction is aborted, commands ignored until end of transaction block" error.
- Inserting multiple rows using SQLPutData() results in duplicate rows.
- Before the connection, when SQL_ATTR_ACCESS_MODE is set to read-only, and logging is enabled, the driver terminates unexpectedly.
- When using SQLSetDescRec () with SQL_TYPE_DATE and SQL_TYPE_TIMESTAMP, the driver returns an error.
- When the connection object's destructor calls SQLDisconnect(), the driver terminates unexpectedly.

  This issue has been resolved. When using the driver with an object that has static storage duration (such as a global), you may run into destruction order issues during application termination. The driver now returns SQL_SUCCESS when SQLDisconnect() is called in this case.
- The TIMESTAMPDIFF function behaves differently than the DATEDIFF function.
- In some cases, when using BrowserAzureAD with multiple connections in PowerBI, the connection fails.

This issue has been resolved. Now, when using BrowserAzureAD, you can no longer set a value for `Listen_Port`.

- In some cases, when using authentication with browser plugins, Chrome opens two connections and the driver does not retrieve from the IdP.
- When using a column filter, SQLProcedureColumns() returns incorrect columns.
- The driver does not return an error message of missing required settings and escapes iodbctest when the key-value pair of a required setting is missing in `odbc.ini`.

Version 1.4.17

Released September 2020

Enhancements & New Features

Rename OMNI datatype to SUPER

Data of type OMNI is now known as SUPER. For more information, see the *Installation and Configuration Guide*.

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.17.

- SQL_DATA_TYPE and SQL_DATETIME_SUB in SQLColumns return incorrect values for date and time data types.

  This issue has been resolved. The driver now returns SQL_DATETIME for all date and time types in SQL_DATA_TYPE for SQLColumns. Additionally, the driver now returns SQL_CODE_DATE, SQL_CODE_TIME, or SQL_CODE_TIMESTAMP, depending on the type of date or time column, or null otherwise, in SQL_DATETIME_SUB for SQLColumns.
- When SQLColumns is called for NUMERIC and DECIMAL columns in late binding view, the driver returns an error.

Version 1.4.16

Released July 2020

Enhancements & New Features

Support for TIME data

The driver now supports data of types TIME and TIMETZ. For more information, see the *Installation and Configuration Guide*.

Support for OMNI data

The driver now supports data of type OMNI. For more information, see the *Installation and Configuration Guide*.

Specify relying party trusts

You can now configure the driver to allow different relying party trusts for AD FS authentication. To do this, when the authentication type is AD FS, type the relying party in the loginToRp field (specify the relying party with the `loginToRp` connection property). For more information, see the *Installation and Configuration Guide*.

Support for read-only mode

You can now configure the driver to enable read-only mode. To do this, select the Enable Read Only check box (set the `ReadOnly` connection property to `1`). For more information, see the *Installation and Configuration Guide*.

Additionally, you can change the read-only settings by setting SQL_ATTR_ACCESS_MODE to SQL_MODE_READ_WRITE or SQL_MODE_READ_ONLY.

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.16.

- When you are missing required connection settings in SQLBrowseConnect(), the driver returns an error.

  This issue has been resolved. The driver now returns the appropriate output connection string with required and optional keys.
- When selecting and inserting using SQLParamData and SQLPutData, the driver returns an error.
- When using PingFederate authentication, the driver incorrectly sends the password to the passwordReset field and the authentication fails.
- The getColumns() metadata for external tables returns inconsistent type names.
- When using SQLPrimaryKeys with a schema name, the driver returns incorrect results.
- When using Browser SAML authentication, the driver can not parse SAML responses containing newlines.

- When using numeric data in late binding views, the driver returns incorrect DECIMAL_DIGITS values in SQLColumns.

Version 1.4.14

Released May 2020

Enhancements & New Features

Support for GEOMETRY data type

The driver now supports data of type GEOMETRY. For more information, see the *Installation and Configuration Guide*.

Lowercase DbGroups

You can now configure the driver to lowercase all DbGroups that are received from the identity provider. To do this, select the Force Lowercase check box (set the `ForceLowercase` connection property to `True`). For more information, see the *Installation and Configuration Guide*.

Filter DbGroups

You can now configure the driver to filter all DbGroups that are received from the SAML response in the Azure, Browser Azure, and Browser SAML authentication types. To do this, type the regular expression in the DbGroups Filter field (specify the filter with the `dbgroups_filter` connection property). For more information, see the *Installation and Configuration Guide*.

Preferred role

You can now configure the driver to use preferred role in the Azure, Browser Azure, and Browser SAML authentication types. To do this, type the role in the Preferred Role field (specify the role with the `Preferred_Role` connection property). For more information, see the *Installation and Configuration Guide*.

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.14.

- When the date, time, or timestamp escape sequences are applied, the SQLBindParameter function returns an error.
- When the driver uses SSO authentication, it sends duplicate parameters and the authentication request fails.

- When the ColumnName filter is applied, the SQLProcedureColumns function returns the incorrect column.
- In some cases, the driver returns an error when arrays of parameters are bound.

Version 1.4.13

Released May 2020

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.13.

- Fix issue with Import/Link table in Microsoft Access.

  The driver can now query tables and views in Microsoft Access.

Version 1.4.11

Released February 2020

Enhancements & New Features

IAM authentication with browser plugin

You can now use a browser plugin to authenticate your connection through your identity provider's website. For more information, see the *Installation and Configuration Guide*.

Improved Azure AD error messages

The driver now provides more comprehensive error messages for the Azure AD plugin.

Support for notarization

The driver now supports notarization on macOS systems, enabling it to be run on macOS versions 10.14.6 and 10.15.

Updated Expat library

The driver has been updated to use Expat 2.2.9. Previously, the driver used Expat 2.2.0.

Version 1.4.10

Released November 2019

Enhancements & New Features

Azure AD authentication

The driver now supports authentication through Azure AD. For more information, see the *Installation and Configuration Guide*.

Updated libcurl library

The driver has been updated to use libcURL 7.66.0.

Updated OpenSSL library

The driver has been updated to use version 1.1.1d of the OpenSSL library.

Updated driver version information in Linux binary

You can now check the Linux driver's version from the driver binary file. To do this, open the `.so` file in a text editor, and search for the text `$driver_version_sb$:`. The driver's version number is listed after this text.

Improved driver security

The driver's implementation of SQLTables and SQLColumns has been updated to provide stronger protection against SQL injections.

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.10:

- The driver terminates unexpectedly when both of the following occur:
  - Multiple database drivers are loaded to the same process.
  - One driver unloads and calls ICU's `u_cleanup()` function, while another driver continues to run and tries to access the memory space that has been cleaned up.
- In some cases, when SQLForeignKeys is called, the returned data is not correctly filtered.
- When you use the driver in Power BI to connect through DirectQuery mode, the driver fails to load late-binding views that contain Char, Varchar, or Numeric columns.

This issue has been resolved. As part of this update, when SQLColumns is called, the driver no longer includes column sizes when returning TYPE_NAME values for late-binding views.

Version 1.4.8

Released September 2019

Enhancements & New Features

Updated third-party library linking for Linux

The Linux driver now statically links to the OpenSSL and ICU libraries by default.

Oracle Linux support

The driver now supports Oracle Linux 7.5.

Resolved Issues

The following issues have been resolved in Amazon Redshift ODBC Driver 1.4.8.

- When an input parameter value is indicated as SQL_NULL_DATA during the SQLBindParameter call, the driver incorrectly binds the parameter using the SQL data type of the parameter specified in SQLBindParameter.

  This issue is resolved. The driver now binds the parameter value based on the data type of the column.

- The `MaxLongVarChar` connection property has a maximum length of 8190.

Version 1.4.7

Released June 2019

Enhancements & New Features

Improved driver performance

Enhancements have been made to improve insertion performance when arrays of parameters are bound.

Updated OpenSSL

The driver has been updated to use OpenSSL version 1.1.0j. Previously the driver was using version 1.1.0i.

Resolved Issues

The following issues were resolved in Amazon Redshift ODBC Driver 1.4.7.

- Some registry entries are hard-coded to point to C:\Program Files.
- In some cases, when the `UseUnicode` option is enabled and the CONVERT function is called, errors occur when converting between character types.
- Variables set in `.ini` files on Windows are not read correctly.

Contact Us

For support, check the Amazon Redshift Forum at https://forums.aws.amazon.com/forum.jspa?forumID=155 or open a support case using the AWS Support Center at https://aws.amazon.com/support.