Release Notes

Cloudera JDBC Driver for Impala 2.5.32

The release notes provide details of enhancements and features in Cloudera JDBC Driver for Impala 2.5.32, as well as the version history.

Enhancements & New Features

[11605] Support added for optimizing driver performance for INSERT statements

You can now use the new `OptimizedInsert` connection property to optimize driver performance when executing INSERT statements. This optimization is enabled by default.

[13122] Support added for configuring the Thrift transport protocol

You can now use the new `transportMode` connection property to specify the transport protocol that the driver uses in the Thrift layer. The default `AuthMech` value now depends on the `transportMode` setting. For more information, see the *Cloudera JDBC Driver for Impala Installation and Configuration Guide*.

Implemented server version checking for the getTypeInfo() method

When you call the `getTypeInfo()` method, the driver now checks the version of the Impala server that you are connecting to and only returns data types that are supported by that Impala version.

Resolved Issues

The following issues have been resolved in Cloudera JDBC Driver for Impala 2.5.32.

[13209] When using a single statement to insert multiple rows, an OutOfMemory error occurs.

This issue has been resolved.

[12860] In some cases, when assertions are enabled and an error occurs, the driver return an assertion error instead of the appropriate error.

This issue has been resolved.

[13360] Driver incorrectly reports the buffer length and octet length of CHAR and VARCHAR data as 0.

This issue has been resolved.

[13360] In some cases, the driver returns a negative value for column size.

This issue has been resolved.

[13366] The data type names returned by the getTypeInfo() method are inconsistent from the data type names used in Impala.

This issue has been resolved.

Version History

Version 2.5.31

Resolved Issues

The following issues have been resolved in Cloudera JDBC Driver for Impala 2.5.31.

[12898] When translating a query that contains an implicit join, the driver disables the implicit join by using CROSS JOIN syntax

This issue has been resolved.

[13039, 13034, 12980] If an invalid server-side property is specified, the driver fails to connect

The driver now posts a warning for the invalid server-side property and continues the connection process.

[12889] When handling multiple connections at the same time, in some cases the driver returns a conversion error when attempting to convert INT data into Long data

This issue has been resolved.

[12876] Driver removes hints from queries

The driver no longer removes hints from queries. In order to preserve hints, the driver does not translate queries that contain hints even when it is configured to work in translation mode (`UseNativeQuery=0`).

[12860] Driver returns error when casting data to type TIMESTAMP

This issue has been resolved.

[12766] When the Driver.getPropertyInfo() method is called, the driver returns a null pointer exception

This issue has been resolved.

[12890] Driver casts NULL values to type STRING regardless of the return types specified in the searched CASE expression in the query

This issue has been resolved.

Version 2.5.30

Enhancements & New Features

The following are highlights of the new features and functionalities that have been added to Cloudera JDBC Driver for Impala 2.5.30.

Server-side properties now supported

When connecting to a server that is running Impala 2.0 or later, you can now use the driver to apply configuration properties to the Impala server by specifying those properties in the connection URL. For more information, see the *Cloudera JDBC Driver for Impala Installation and Configuration Guide*.

Updated handling of the UNION operator

Before, the driver translated UNION to UNION ALL when query translation was enabled (UseNativeQuery=0). The driver now translates UNION to UNION DISTINCT.

Resolved Issues

The following issues have been resolved in Cloudera JDBC Driver for Impala 2.5.30.

When the setQueryTimeout() method is called and the query processing time exceeds the query timeout value, the driver returns a socket timeout error

The driver now returns the correct error for query timeouts (SqlTimeoutException).

TPC-H queries that contain an EXISTS predicate or a value subquery fail to execute

This issue has been resolved.

When the isValid() method is called, the driver executes multiple SHOW TABLES statements that do not close, causing issues for connection pools

This issue has been resolved.

When attempting to execute a query that contains parentheses, the driver returns an error

This issue has been resolved.

Version 2.5.29

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.29.

When executing a query with parameter in Native query mode, the setObject operation fails

This issue has been resolved.

executeBatch() operation does not work properly when multiple parameter sets are added to the batch; only the first insert is working

This issue has been resolved.

Version 2.5.28

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.28.

Nested data types (ARRAY, MAP, and STRUCT) now supported

The driver now supports ARRAY, MAP, and STRUCT data types. For more information about how the driver translates and works with these data types, see "Data Types" in the *Cloudera ODBC Driver for Impala Installation and Configuration Guide*.

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.28.

When using executeUpdate in a prepared statement to insert more than 2 rows, the driver returns an error

This issue has been resolved.

Version 2.5.24

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.24.

The REMARKS table metadata column does not contain the correct data

This issue has been resolved. Previously, the REMARKS table metadata column was hard-coded, so the data in the column could not be changed. You can now work with the column as expected.

In some cases, driver performance is slow when using catalog functions to retrieve metadata

This issue has been resolved. Previously, the way that the driver retrieved metadata involved retrieving and processing more data than was necessary. Now, the behavior in the driver is optimized and performance has improved significantly.

Driver cannot execute "SET <key>=<value>" statements using executeUpdate()

This issue has been resolved.

Driver does not support the use of subselects in WITH clauses

This issue has been resolved.

Driver returns the wrong error message for queries that use the LENGTH function on non-string values

This issue has been resolved.

Version 2.5.23

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.23.

Driver cannot execute SET statements with leading or trailing spaces

This problem has been resolved. Before, the driver returned an error if a SET statement started or ended with spaces. The driver is now able to parse the statement and execute it successfully.

TCP connections do not close when connection.close() is called

This issue has been resolved. Before, TCP connections did not close when connection.close() was called, and only closed when the client application closed. Now, TCP connections close immediately after connection.close() is called.

When handling multiple connections at the same time, in some cases the driver will retrieve the wrong data

This issue has been resolved. Driver support for multithreading has been fixed, and the driver will now return the correct data when there are multiple connections.

Version 2.5.22

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.22.

The getColumns() function returns an empty result set if it uses both schema and table restrictions, and the table restriction contains an escaped wildcard character

This issue has been resolved. The getColumns() function now returns the correct result set.

Precision and scale for DECIMAL columns are reported incorrectly

This issue has been resolved. The driver now reports the precision and scale for DECIMAL columns correctly.

Query translation does not use the database context specified by a USE <database> query

This issue has been resolved. Now, when you change the database context by executing a USE <database> query, any subsequent query translation will use that database context.

Version 2.5.21

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.21.

SSL now configured separately from authentication

Before, you would enable SSL in the driver by setting the authentication mechanism to "User Name and Password with Secure Sockets Layer" (AuthMech=4) or "No Authentication with Secure Sockets Layer" (AuthMech=5). You can now use the new SSL property to enable or disable SSL connections, and use the AuthMech property solely to configure authentication.

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.21.

The Connection.isValid() JDBC API function returns true regardless of whether the connection is valid

This issue has been resolved. The Connection.isValid() method now correctly reports whether the connection is valid.

The Impala server session does not close properly when the Impala JDBC connection closes

This issue has been resolved. Before, when the connection calls close from the application side, the Impala server session continues to run until the process stops. Now, the session closes as expected.

Version 2.5.20

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.20.

When a query fails on the server side due to a non-syntax error, the driver does not return an error and sometimes enters an infinite loop

This issue has been resolved. Before, the driver did not handle error messages that were returned after the initial server response, so errors that occurred during query execution on the server side were not handled properly. The driver now correctly reports query execution errors.

Version 2.5.19

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.19.

The LowerCaseResultSetColumnName setting does not work during prepared statement execution

This issue has been resolved. The setting now works correctly during prepared statement execution and direct execution.

Version 2.5.18

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.18.

In some cases, INSERT queries are translated incorrectly

This issue has been resolved. Before, during query translation, the driver added the "Value" key word even when it was not needed. The driver now only adds the "Value" key word to INSERT statements in which the user has specified value tuples.

When the driver returns resultSet metadata, the letter case of the column name aliases is inconsistent with what is expected on the server side

This issue has been resolved. The driver is now configured to return column name aliases in lower-case (and match the server-side response) by default. You can configure this behavior by setting the LowerCaseResultSetColumnName key.

Version 2.5.16

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.16.

Driver misinterprets newer version of Impala

This issue has been resolved. Before, the Impala version was being misinterpreted, which caused the driver to establish connections using V1 of the protocol and to apply Impala 1.0 translations to queries. The driver now correctly exhibits Impala 2.0 behavior.

Executing a query after PreparedStatement.setObject(1, null) in Native Query Mode causes a null pointer issue to occur

This issue has been resolved.

Driver does not return an error when a table or column in a query is not found

This issue has been resolved. Before, when a table or column in a query cannot be found, the driver will try to re-execute the query in Native Query Mode. Now, the driver will return an error.

Version 2.5.15

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.15.

Queries that do not contain a FROM clause are not closed properly during the prepare stage

This issue has been resolved.

Queries that contain cross joins with predicates fail to execute

This issue has been resolved. The issue was caused by a difference in the query syntax used in different versions of CDH. The driver now checks the CDH version more thoroughly and translates the query as needed.

Version 2.5.14

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.14.

JDBC 4.1 now supported

The driver now supports JDBC 4.1. To use the driver with JDBC 4.1, use the ImpalaJDBC41_2.5.14 package.

Support added for Kerberos authentication on IBM Java 1.6

You can now use Kerberos authentication when running IBM Java 1.6.

Support added for the Connection.isValid() and Connection.getClientInfo() methods for JDBC 4 and JDBC 4.1

The driver now supports the Connection.isValid() and Connection.getClientInfo() methods.

Support added for connection pooling

The driver now supports the JDBC ConnectionPoolDataSource interface via the following classes:

- com.cloudera.impala.jdbc3.DataSource
- com.cloudera.impala.jdbc4.DataSource
- com.cloudera.impala.jdbc41.DataSource

Version 2.5.13

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.13.

Support added for CHAR and VARCHAR data types

The driver now supports the CHAR and VARCHAR data types.

Support added for new Impala 2.0 protocol

The driver now supports the V6 protocol, which uses columnar result sets.

When authenticating through Kerberos, the driver now checks for a Subject with a TGT before obtaining a TGT through other mechanisms

When authenticating through Kerberos, the driver now checks whether there are any Subjects associated with the AccessControlContext and whether those Subjects have a TGT. If so, the driver uses the Subject to authenticate with the database server instead of obtaining a TGT from the Key Distribution Center (KDC) or ticket cache.

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.13.

When setting the string parameter in the PreparedStatement, single quotation marks (') cannot be escaped

Fixed an issue where single quotation marks (') in the string parameter of the PreparedStatement could not be escaped. The driver is now able to escape all meta characters in the string parameter of the PreparedStatement, including the following characters:

' . [] {} () * + ? | ^ $ \

Query cancellation requests fail when schema is not defined in the connection string

Fixed an issue where the query cancellation from version 2.5.12 does not work properly if the schema is not defined in the connection string.

Version 2.5.12

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.12.

SSLTrustStore and SSLTrustStorePwd configuration parameters implemented

The SSLTrustStore and SSLTrustStorePwd parameters are optional parameters that you can use in the connection string. Use these parameters to configure the driver to use a specific TrustStore when connecting through SSL. If these parameters are not set, then the driver uses the default TrustStore located in jre\lib\security\cacerts

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.12.

Query cancellation request fails to stop queries from the client side and the server side

Fixed an issue where the solution from version 2.5.6 does not work properly. Now, client-side and server-side queries are both canceled correctly.

Prepared statement parsing cannot handle commas (,) or braces ({}) after a parameter declaration

Fixed an issue where only spaces could be used after a parameter declaration. Now, all characters are supported.

Queries that include comments fail to execute

This issue has been resolved. Now, queries that contain comments can be processed.

Version 2.5.10

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.10.

INSERT statement does not work properly

Fixed an issue where the driver was not able to insert data into tables properly.

Documentation mentions connection property that is not implemented

The connection property CAIssuedCertNamesMismatch has been removed from the installation guide. This feature will be added to the driver in future releases.

Version 2.5.9

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.9.

Driver unable to connect to Impala servers on CDH 5.2.0

Fixed an issue where the driver was not able to analyze the server version number for CDH 5.2.0. The driver is now able to connect to Impala 2.0.0 on CDH 5.2.0.

Version 2.5.8

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.8.

Support added for PreparedStatements with parameters

Previously, the driver did not support the use of PreparedStatements with parameters because the Thrift API did not support this functionality. You can now use parameters in PreparedStatements. However, the workaround for supporting this feature is not a typical method for doing PreparedStatements. The driver replaces the question mark (?) in the query with the actual parameter value and executes the query during the execution stage. It is not recommended that you use prepareStatement.getParameterMetadata or prepareStatement.getResultSetMetadata before prepareStatement.executeQuery, because the PreparedStatement does not return the expected values.

Version 2.5.7

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.7.

Direct integration with Kerberos Key Distribution Center added

You can now configure the driver to get a ticket from your Key Distribution Center directly. To do this, in the JVM environment, configure a JAAS configuration file that directs the driver to use a generated keytab file as the credentials.

Version 2.5.6

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.6.

Query cancellation request fails to stop queries

Fixed an issue where the driver ignores query cancellation requests from the application and continues to execute the query. Now, when the application sends a query cancellation request, the query stops executing and the server stops processing the query.

Version 2.5.5

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.5.

Queries that fail to parse are not being attempted in Native Query mode

When a query fails to translate, the expected behavior is that the driver will attempt to execute it in Native Query mode. Doing so allows Impala itself to attempt to handle the query. Previously, an error handling block prevented this step from happening. This issue

has been resolved, so now when a query fails to translate, the driver will attempt to execute it in Native Query mode.

Version 2.5.4

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.4.

Automatic execution of "SET" commands

In order to support server property configuration in Hive at startup, any unrecognized properties specified in the connection string would cause a "SET" command to be executed automatically on the server side. The "SET" command is not supported in Impala, so this feature has been removed.

Version 2.5.3

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.3.

DatabaseMetadata added

DatabaseMetadata information has been added for DBMS name and DBMS version.

UNION clause supported in query translations

The driver now supports the use of the UNION clause in query translations.

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.3.

SET statement causing errors

Fixed an issue where using the SET statement caused errors to occur.

statement.setMaxRows function not implemented

Fixed an issue where the statement.setMaxRows function was not implemented. This function is now available for the Cloudera JDBC Driver for Impala.

Wrong class path in MANIFEST file

Fixed an issue where the MANIFEST file contained an incorrect class path caused by branding.

Multiple TCP connections created by ZooKeeper from the server side

Fixed an issue where generating ROWCOUNT set results caused ZooKeeper to open new TCP connections until ZooKeeper reached the maximum number of connections that it can handle.

This issue was fixed by properly closing the operation that gets opened on the client when a ROWCOUNT set is generated.

Version 2.5.2

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Impala 2.5.2.

USE statement causing memory leaks

Fixed an issue where using the USE statement caused server-side memory leaks to occur.

Version 2.5.1

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Impala 2.5.1.

LIMIT ZERO query feature added for prepareStatement

This feature supports queries with LIMIT 0 attached during the query prepare stage, improving the performance of the prepareStatement process.

Version 2.5.0

Version 2.5.0 was the initial release of Cloudera JDBC Driver for Impala.

Contact Us

If you are having difficulties using the driver, our Community Forum may have your solution. In addition to providing user to user support, our forums are a great place to share your questions, comments, and feature requests with us.

If you are a Subscription customer you may also use the Cloudera Support Portal to search the Knowledge Base or file a Case.

Important: To help us assist you, prior to contacting Cloudera Support please prepare a detailed summary of the client and server environment including operating system version, patch level, and configuration.