Release Notes

Cloudera JDBC Driver for Apache Hive 2.5.15

The release notes provide details of enhancements, features, and known issues in Cloudera JDBC Driver for Apache Hive 2.5.15, as well as the version history.

Resolved Issues

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

In some cases, the getTables catalog function returns table types incorrectly

This issue has been resolved.

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.

Known Issues

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

Hive Server 1 and Hive Server 2 drivers cannot run at the same time in the same JVM

HS1Driver and HS2Driver cannot coexist in the same JVM; loading both drivers at the same time causes a Hive Server 2 connection failure. This issue will be addressed in a future release of the driver.

Version History

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 Apache Hive 2.5.14.

Support added for case-insensitive treatment of catalog names, schema names, table names, and column names in catalog function calls

The driver is now able to work with catalogs, schemas, tables, and columns as expected regardless of whether the names are spelled with upper- or lower-case characters.

Optimized metadata retrieval

The driver is now designed to push catalog function restrictions down to the server for processing when possible, which improves driver performance during metadata retrieval.

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Apache Hive 2.5.14.

Driver returns duplicate data for the getColumns JDBC API when the table restriction contains a wildcard

This issue has been resolved.

In some cases, the driver fails to retrieve columns metadata from tables that contain partitioned columns

This issue has been resolved.

Driver sends a separate DESC <table> query for each DECIMAL, VARCHAR, and CHAR column in the queried table

This issue has been resolved. Now, the driver sends only one DESC <table> query for the queried table.

The RowsFetchedPerBlock setting limits the amount of schemas, tables, and columns metadata retrieved from Hive Server 2 instances

This issue has been resolved. The RowsFetchedPerBlock setting now works as expected, and only limits the maximum number of rows retrieved per fetch call.

Version 2.5.13

Resolved Issues

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

Driver does not support the LENGTH scalar function for non-character columns

This issue has been resolved. You can now call the LENGTH function on any data type that can be converted to STRING.

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

This issue has been resolved.

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 2.5.12

Resolved Issues

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

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.

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 2.5.11

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Apache Hive 2.5.11.

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 Apache Hive 2.5.11.

Driver does not report an error when a MapReduce job fails on the server side during query execution

This issue has been resolved. The driver now reports an error if a MapReduce job fails.

Version 2.5.10

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Apache Hive 2.5.10.

Support added for write-back when connected to Hive 0.14 or later

You can now execute INSERT, UPDATE, and DELETE statements when connected to Apache Hive 0.14 or later.

Support added for dynamic service discovery with Apache ZooKeeper

You can now connect to Hive servers that are registered against a ZooKeeper service by connecting to the ZooKeeper service.

Version 2.5.9

Resolved Issues

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

Using Java services to load the driver classes may cause a Hive Server 2 connection failure

When working in Java 6 or later, you have the option of loading the required driver classes using Java services instead of using Class.forName(). Java services sometimes loads HS1Driver before loading HS2Driver, which prevents HS2Driver from operating correctly. As a short-term workaround for this issue, this release of the driver prevents Java services from performing the loading.

Version 2.5.8

Resolved Issues

The following issues were resolved in Cloudera JDBC Driver for Apache Hive 2.5.8.

Driver misinterprets newer version of Hive

This issue has been resolved. Before, the Hive version was being misinterpreted, which caused the driver to establish connections using V3 of the protocol and to apply Hive 0.10 translations to queries. The driver now correctly exhibits updated Hive behavior.

When using Kerberos authentication, the driver returns an error message

This issue has been resolved. Before, the driver did not retrieve the JAAS configuration file from the **KRB5_CONFIG** system property as expected, and attempting to authenticate through Kerberos would return the following error message: "unable to find principal name for authentication". The driver now correctly handles Kerberos authentication.

Version 2.5.6

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Apache Hive 2.5.6.

JDBC 4.1 now supported

The driver now supports JDBC 4.1. To use the driver with JDBC 4.1, use the HiveJDBC41_2.5.14 package.

Support added for Kerberos authentication through AccessControlContext

The driver now provides an alternative method for obtaining Kerberos tickets. Instead of obtaining a ticket-granting ticket (TGT) from the ticket cache, the driver can now check whether there are any Subjects associated with the AccessControlContext and whether those Subjects have a TGT. If so, the driver can use the TGT from the Subject.

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

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 Apache Hive 2.5.6.

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

Fixed an issue where the query cancellation from version 2.5.5 does not work properly if the schema is not defined in the connection string.

Queries that include comments fail to execute

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

Version 2.5.5

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Apache Hive 2.5.5.

Support for Hive 0.13.0 data types added to the Hive Server 1 client

Support for the CHAR(n) and DECIMAL(precision, scale) data types have been added to the Hive Server 1 client. The client now fully supports all the data types in Hive 0.13.0.

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.

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.

Resolved Issues

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

Column metadata fails to be retrieved from Hive 0.9 servers

Fixed an issue where column metadata failed to be retrieved from servers running Hive 0.9.

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.

REPLACE commands that include a meta-character as a parameter are not translated correctly

Fixed an issue where queries that use the REPLACE command "replace(expression, pattern, replacement)" with a meta-character as a parameter are not translated correctly. The solution for the issue enables escaping of all meta-characters, including the following:

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

Version 2.5.4

Resolved Issues

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

Certain known connection string properties could be incorrectly "SET" on the server

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. When this happened, certain combinations of known properties stopped working correctly. This issue has been resolved.

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 Apache Hive 2.5.3.

statement.setMaxRows function implemented

The statement.setMaxRows function has been implemented. This function allows you to limit the number of rows fetched from the result set.

Resolved Issues

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

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 is opened on the client when a ROWCOUNT set is generated.

Version 2.5.2

Enhancements & New Features

The following are highlights of the new features and functionalities that were added to Cloudera JDBC Driver for Apache Hive 2.5.2.

Hive variables supported in connection string

The driver now supports the use of Hive variables in the connection string.

DatabaseMetadata added

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

Resolved Issues

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

USE statement causing memory leaks

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

SET statement causing errors

Fixed an issue where using the SET statement caused errors 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 Apache Hive 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 Apache Hive.

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.