

## HiT JDBC/DB2 Release Notes

Version	Date	Changes
3.90	02/02/15	<ul style="list-style-type: none"> <li>Added support for IBM DB2 LUW V10.1</li> <li>Added support for Sysplex workload balancing (contact HiT Software technical support for details).</li> <li>Verified support for IBM DB2 Version 11 for z/OS</li> </ul>
3.86	07/26/12	<ul style="list-style-type: none"> <li>Added support for IBM DB2 on HP UNIX platforms;</li> <li>Fixed a problem that caused an exception when invoking a second time, a stored procedure that returns a result set with a LOB column;</li> <li>Fixed a problem that can cause an exception when invoking a stored procedure that returns multiple result sets.</li> </ul>
3.85	04/20/12	<ul style="list-style-type: none"> <li>Fixed a problem with XML selection for IBM DB2 LUW;</li> <li>Fixed an issue with output BLOB parameters, on IBM DB2 for z/OSV9 when running in compatibility mode;</li> <li>Modified getTimestamp to handle CHAR defined output parameters;</li> <li>Fixed an issue where correct batch count was not returned for prepared statements in deferred mode;</li> <li>Added support for SQL statements and parameters with length longer than 32K.</li> </ul>
3.80	08/01/11	<ul style="list-style-type: none"> <li>Added support for DB2 Version 10 on z/OS.</li> </ul>
3.70	07/03/09	<ul style="list-style-type: none"> <li>Added support for data encryption, when the database server is configured for it, with the new security mechanism value ENCRYPTED_USER_PASSWORD_AND_DATA_SECURITY;</li> <li>Requirement for an additional jar file to support encryption is not needed for JDK1.50 and higher;</li> <li>Made minor internal changes that do not affect functionality available to users.</li> </ul>
3.64	08/02/07	<ul style="list-style-type: none"> <li>Added support for a new XML datatype in DB2 Version 9;</li> <li>Added support for IBM DB2 v. 9 PureXML technology with a new XML datatype allowing data access via SQL or XQuery statements;</li> <li>Fixed a problem causing the driver to throw an HITDB2EOS exception.</li> </ul>
3.63	05/31/07	<ul style="list-style-type: none"> <li>Added a new connection option "security_mechanism" to allow an encrypted user and password;</li> </ul>

		<ul style="list-style-type: none"> <li>• Fixed conversion issues for codepage 1200 (UTF16);</li> <li>• Fixed an issue with batch update on mainframes when autocommit is off;</li> <li>• Fixed an issue with batch update when "defer_pps" is on.</li> </ul>
3.61	01/30/07	<ul style="list-style-type: none"> <li>• Fixed a very rare synchronization issue with character conversion operations;</li> <li>• Fixed a problem where 0 is incorrectly returned as an update count when there is a LOB parameter;</li> <li>• Fixed an issue with autocommit when a SELECT is a last statement in the connection to be closed;</li> <li>• Modified the driver to recognize DB2 Version 9;</li> <li>• Improved performance of batch operations;</li> <li>• Changed the default value of the option "continue_execute_batch" to YES;</li> <li>• Added support for Statement.Cancel for the database versions that support Interruption Request.</li> </ul>
3.59	04/10/06	<ul style="list-style-type: none"> <li>• Fixed a problem which caused the driver to throw an exception when trying to recover a previously interrupted XA transaction;</li> <li>• Fixed a problem which caused the driver to retrieve output parameters incorrectly under the following condition: when calling stored procedures from DB2 V8 on z/OS with the database default CCSID of 1208, and a driver connection CCSID of 37.</li> </ul>
3.57	02/06/06	<ul style="list-style-type: none"> <li>• Fixed a synchronization problem that occurred when calling commit() or rollback() from a thread while there were statements being executed on the same connection in other threads.</li> </ul>
3.56	12/30/05	<ul style="list-style-type: none"> <li>• Fixed a problem with a truncated warning when calling stored procedures with a returned parameter;</li> <li>• Fixed a problem with retrieving a long result set that includes LOB columns on DB2 V6 and V7 of DB2 running on mainframes.</li> </ul>
3.55	10/21/05	<ul style="list-style-type: none"> <li>• Modified Clob.getSubString to return "" instead of throwing an exception when a clob length of 0 is passed;</li> <li>• Modified Blob.getBytes to return new byte[0] instead of throwing an exception when a blob length of 0 is passed;</li> <li>• Made a change to return new b[0] instead of null when a VARBINARY column's length is 0;</li> <li>• Added connection option "stream_as_clob" to treat a stream as a clob when auto conversion is off;</li> <li>• Modified setString to use the actual string if Time &amp; Timestamp conversion fail in order to allow application to pass native database format (when auto conversion is on);</li> <li>• Fixed an issue with re-executing a stored procedure after a commit;</li> <li>• Added a new option "query_timeout" for setting a default query timeout;</li> <li>• Added "+" as an additional delimiter for specifying an alternate server list.</li> </ul>

3.53	07/06/05	<ul style="list-style-type: none"> <li>Added class hit.db2.Db2WLSV8XADDataSource for use with Weblogic and DB2 Version 8;</li> <li>Fixed a problem where a var/char stored procedure output parameter got treated as BINARY when default database CCSID was different from the parameter's CCSID;</li> <li>Created a special version of the driver to be used with Oracle's JDK 1.3 (Customers interested in this version should contact HiT Software for more information);</li> <li>Fixed a problem that occurred when a CLOB parameter's CCSID was set to 1208;</li> <li>Fixed a problem that occurred when using DB2 UDB V8 with a prepared statement that is reused across commits;</li> <li>Added a "reconnect_sysplex" option to enable the driver to reconnect automatically to another SYSPLEX member when the current connection fails.</li> </ul>
3.50	01/14/05	<ul style="list-style-type: none"> <li>This version requires a new license jar file. Contact HiT Software for the license file.</li> <li>Fixed a connection problem that occurred when connecting to older databases;</li> <li>Fixed problems with some database metadata calls against DB2 running on Solaris;</li> <li>Fixed problems with STATIC SQL and added support for STATIC SQL on V8 databases;</li> <li>Modified support for TMJOIN to allow TMJOIN to resume an ended transaction (to support a Weblogic behavior).</li> </ul>
3.30	10/07/04	<ul style="list-style-type: none"> <li>Added support for DB2 Version 8 running on LINUX390;</li> <li>Added support for DB2 Version 8 running on Z/OS;</li> <li>Added XA support for DB2 Version 8 on all platforms;</li> <li>Added support for CCSID 923;</li> <li>Fixed a problem in method setTransactionIsolation() when the connection is an XA connection;</li> <li>Fixed a problem with result sets containing LOBs from stored procedures;</li> <li>Fixed a problem with LOB output parameters from stored procedures;</li> <li>Fixed a problem with UNICODE datatype columns on DB2 on OS/390;</li> <li>Fixed a problem with retrieving parameters from stored procedures that have more than 84 parameters.</li> </ul>
3.21	06/01/04	<ul style="list-style-type: none"> <li>fixed a problem with setXXX() for BIGINT datatype when auto_type_conversion=yes;</li> <li>fixed a problem with re-execution of a prepared statement on DB2 Version 8.1;</li> <li>fixed some problems with database metadata functions on DB2 Version 8.1 on AIX;</li> <li>provided support for DB2 Version 8.1 with 64-bit on AIX;</li> <li>changed getXXX methods in ParameterMetaData to return null instead of "" if auto_type_conversion is off.</li> </ul>
3.20	05/07/04	<ul style="list-style-type: none"> <li>SSL libraries are now FIPS-validated;</li> <li>SSL classes have been removed from the main driver's jar file and will be loaded dynamically when used;</li> </ul>

		<ul style="list-style-type: none"> <li>• Fixed a bug when setFetchSize(0) is called;</li> <li>• Added support for Polish CCSID 912;</li> <li>• Allowed prepared statements to be re-used across XA transactions;</li> <li>• Added the connection option "job_name" that can be used to specify the job name/ID for JDBC connections. If not specified, the default value "DB2JDBC" is used;</li> <li>• Added the option "alternate_servers" that can be used to specify a list of alternate servers to be used when the driver cannot connect to the primary server;</li> <li>• Made modifications to further enhance overall database queries performance.</li> </ul>
3.11	12/18/03	<ul style="list-style-type: none"> <li>• Added: The connection option "append_create_table" that can be used to tell the driver to append the specified value to CREATE TABLE statements that do not have an IN DATABASE clause;</li> <li>• Fixed: Minor fixes to database metadata methods;</li> <li>• Fixed: The problem of incorrect error-code returned when a bad SQL statement is executed;</li> <li>• Enhanced: Extend connection URL syntax to allow the rdbname to be specified without using the "rdbname" option. Example: "jdbc:db2://mysrv:446/S390LOC" can be specified;</li> <li>• Added: Support for XA calls on a transaction using a resource manager that is not the one the transaction was started on (this is done to work around a problem with Weblogic Server 6.1).</li> </ul>
3.10	06/06/03	<ul style="list-style-type: none"> <li>• Implemented JDBC 3.0 APIs. This driver version is backward compatible with JDBC 2.0. However, JDK 1.4 or higher is required to use JDBC 3.0 APIs. JDK 1.2 or higher is required to use JDBC 2.0 APIs;</li> <li>• Added support for Savepoint (for databases that support savepoint);</li> <li>• Added support for the retrieval of ParameterMetaData (when auto_type_conversion=yes and only on databases that support the return of parameters: UDB DB2 Version 8.1 and higher; OS/390 DB2 Version 6 and higher);</li> <li>• Added support for passing parameters to CallableStatement objects by name (only supported under the same conditions as ParameterMetaData);</li> <li>• Added support for new statement constructors with result set "holdability" indicator;</li> <li>• Added support for BOOLEAN datatype;</li> <li>• Added support for new methods to make internal updates to data in Blob and Clob objects;</li> <li>• Added updateBlob and updateClob to ResultSet interface;</li> <li>• Added support for the reuse of prepared statements with connection pooling datasource as specified by JDBC 3.0 specifications. Four new standard properties setting methods are provided by Db2PooledDataSource: <ul style="list-style-type: none"> <li>• setMinPoolSize(int n)</li> <li>• setMaxPoolSize(int n)</li> <li>• setInitialPoolSize(int n)</li> <li>• setMaxStatements(int n)</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>• In Db2PooledDataSource, the methods setMaxConnections and setOptimalConnections are replaced by the standard methods setMaxPoolSize and setMinPoolSize. The replaced methods still work but we recommend using the new methods;</li> <li>• Added support for updateable ResultSets for UDB Version 8.1 on Windows, Linux, UNIX (Because this database version does not support the scroll type to be insensitive when the result set is updatable, the scroll type will be automatically mapped to sensitive in that case);</li> <li>• Added support for BIGINT datatype on databases that support it;</li> <li>• Modified the driver to work around a bug, in the JVM server on Solaris, that has caused intermittent synchronization problem;</li> <li>• From this version on, the default value for the option "defer_pps" to defer the preparation step for prepared statements will be "yes". Previously, the default had been set to "no".</li> </ul>
2.80	01/21/03	<ul style="list-style-type: none"> <li>• Added support for DB2 UDB Version 8.1 on Windows, Linux, UNIX. Also, added support for stored procedures and LOB data types to this new database version;</li> <li>• Enhanced JDBC trace output and added a new connection option named trace_level that can be used to specify the level of information written to the trace file. The default level is 5 and will include all information. If 0 is specified, no information will be written to the trace;</li> <li>• Added a new connection option named remove_sql_white_spaces that can be used to tell the driver to remove white spaces such as tabs and new lines from SQL statements before sending them to the database. By default, the driver does not remove any white spaces from the SQL statements;</li> <li>• Added support for remote monitoring of connection activities and the execution of statements. A new java utility application, hit.db2.RemoteMonitor, is used to monitor when connections are created and closed. The new connection option remote_monitor_address is used to enable remote monitoring and to specify the IP address and port number where the remote monitoring application is running and listening. When a connection is created or closed, the driver sends a message to the remote monitoring application to identify the connection and update the total number of connections;</li> <li>• Added a new connection option named current_sqlid that can be used to set the current SQL ID for the connection. When this option is specified, the driver internally executes a SET CURRENT SQLID command with the specified value;</li> <li>• Added a new connection option name current_function_path that can be used to set the schema path list for calling functions and stored procedures. When this option is specified, the driver internally executes a SET CURRENT FUNCTION PATH command with the specified list;</li> <li>• Fixed a bug when setting a decimal column, on UDB DB2 databases only, with the value 0.00 using setBigDecimal();</li> <li>• Added support for Arabic, ccsid value 420.</li> </ul>

2.71	09/27/02	<ul style="list-style-type: none"> <li>• Fixed a bug that caused an error when calling stored procedures that don't have parameters on DB2 6.0 and higher;</li> <li>• Fixed a bug in method setLong() that truncated the parameter value to int;</li> <li>• Fixed a bug introduced in 2.70 that caused a cursor error under some conditions.</li> </ul>
2.70	09/10/02	<ul style="list-style-type: none"> <li>• Added a new connection option named defer_pps that can be used to defer the compilation of prepared statements until the statements are executed. Turning on this option may improve driver performance under some network conditions as the network flows of a statement's preparation and execution are combined into one. This option is ignored if the auto_type_conversion option is set to yes;</li> <li>• Database data type names are now returned as standard names instead of DRDA data type names;</li> <li>• Fixed a bug that had previously limited applications from calling more than 10 stored procedures simultaneously in one connection;</li> <li>• Both methods, executeQuery() and executeUpdate(), of the CallableStatement interface can now invoked even if a result set is returned by the stored procedure;</li> <li>• Added a new connection option named auto_create_packages that can be used to tell the driver not to check and create packages automatically. By default, the driver now checks for the existence of the packages that it uses and creates them if they don't exist. The driver does the check by executing a simple DECLARE statement and examining the returned SQL code. However, this check always logs an error message with the database. Setting auto_create_packages to no now tells the driver to assume that packages have been created by the driver before and not to check when the connection is made. We recommend that this option be set to no after the application has been tested;</li> <li>• Provided a new configuration class that users can modify and compile to customize default connection setting values for their own system;</li> <li>• Added a new connection option named config_class that can be used to specify a compiled Java class which contains custom default connection setting values;</li> <li>• Added support for recording, binding and using DB2 Static SQL statements. The new option record_static_sql is used to turn on Static SQL recording. A new java utility application hit.db2.BindStaticSql is used for binding the recorded Static SQL statements to the database. The new option use_static_sql is used to specify the java class that contains the recorded and bound Static SQL statements;</li> <li>• Users can now specify the location and name of the binding files used by hit.jndi.jdbccontext.JDBCNameContextFactory by defining a full filepath for the hit.jndi.jdbccontext.binding_file property</li> </ul>
2.61	05/21/02	<ul style="list-style-type: none"> <li>• Added a work-around for a conversion problem caused by IBM's JDK 1.2 when calling setFloat();</li> </ul>

		<ul style="list-style-type: none"> <li>Added a new connection option named "application_server" that can be used to specify the type of application server the driver is being used from. This option is required when using IBM WebSphere Application Server Version 4.0.2 or higher and hit.db2.Db2XADataSource. The value is "WAS". For example: application_server=WAS. Please see the online help section that describes how to configure our driver with WebSphere Application Server for more information.</li> </ul>
2.60	03/29/02	<ul style="list-style-type: none"> <li>Implemented XA support for DB2 Version 6.1 or higher on OS/390.</li> </ul>
2.52	01/10/02	<ul style="list-style-type: none"> <li>Added a "continue_execute_batch" option. The default behavior when an exception is encountered while executing a batch statement is to stop the execution. With the "continue_execute_batch" option set to "yes", the driver will continue executing all statements and return any failed status as specified in the JDBC 3.0 specs;</li> <li>Allowed BLOB columns to be set with setBinaryStream() and setBytes() methods;</li> <li>Allowed CLOB columns to be set with SetCharacterStream() and setString() methods;</li> <li>Fixed a bug where 83 columns were selected;</li> <li>Allowed statements to execute after rollback is called;</li> <li>Allowed statements to execute when transaction isolation level is changed;</li> <li>Now retrieves correct cursor names for result sets returned by stored procedures;</li> <li>Fixed a bug where some database warnings were treated as exceptions;</li> <li>Fixed a bug where calling Statement.close() after rollback() raised exceptions;</li> <li>Fixed a bug in getProcedures() and getProcedureColumn() for 390 and DB2 version 6 and up;</li> <li>Fixed getLong() so that some data will not be truncated;</li> <li>Metadata schema, catalog and table column names are now returned as empty strings instead of nulls;</li> <li>Fixed DECIMAL and ZONE datatype conversion problem when running on JVMs that use non-standard encoding such as OS390.</li> </ul>
2.51	05/14/01	<ul style="list-style-type: none"> <li>This version of the driver will require a new license key which will be provided to all existing customers with maintenance and support contract - simply contact us to get your new license key.</li> <li>Starting from this version, the JDBC driver will be distributed in a jar file and the license key will also be included in a separate jar file. The CLASSPATH must include these two jar files.</li> <li>Fix the problem where EXECUTE privilege was not granted to a newly created package when auto commit is disabled.</li> <li>Trailing spaces and semicolons are removed from SQL statements.</li> <li>Fix problems with calling store procedures on non OS/390 platforms (However, because these platforms - including Windows - do not provide complete support for calling store</li> </ul>

		<p>procedures via DRDA - the protocol that the HiT driver uses - we recommend our customers to contact us if they wish to do this).</p> <ul style="list-style-type: none"> <li>• Add support for DatabaseMetadata's getImportedKeys, getExportedKey and getCrossReference on Windows platforms.</li> <li>• Fix a problem when valid licenses were not recognized when running under IBM built JVMs.</li> <li>• Fix a problem introduced in version 2.50 that gave a bind error when connecting to Solaris platform</li> </ul>
2.50	03/22/01	<ul style="list-style-type: none"> <li>• Added support for JDBC 2.0 Optional Package DataSource interface, including a connection pooling implementation. hit.db2.Db2DataSource provides normal connection objects. hit.db2.Db2PooledDataSource provides connection pooling management. See sample applications in samples/DataSources for examples of using these classes.</li> <li>• Added a JNDI service provider to use with the JDBC driver. The context factory name is hit.jndi.jdbccontext.JDBCNameContextFactory. See sample applications in samples/DataSources for examples of using the JNDI service provider with HiT data sources.</li> <li>• Added support for LOB data types (large binary objects) on DB2 databases that support LOB via DRDA.</li> <li>• Fixed a rounding problem in ResultSet.getDouble() when the data type is decimal.</li> </ul>
2.4.2	08/28/00	<ul style="list-style-type: none"> <li>• Add password change capability on databases that support the feature.</li> <li>• Return different messages for invalid user and invalid password on databases that support the feature.</li> <li>• Some performance improvement for reading from database.</li> <li>• Fix a synchronization problem when driver is used with very fast systems.</li> <li>• Add support for VALUES statement.</li> <li>• Add support for Japanese code pages 943 and 954.</li> <li>• Fix ResultSet.getObject() problem that returned null instead of an empty String.</li> <li>• Fix a problem in some DatabaseMetaData methods when using DB2 on LINUX.</li> <li>• Fix a problem when calling store procedures on systems with v4r4 or higher.</li> <li>• Fix a connection error that was introduced by IBM on v4r5 and a patch on v4r4.</li> </ul>
2.4.1	07/12/00	<ul style="list-style-type: none"> <li>• Fixed a code page conversion problem.</li> </ul>
2.4.0	06/01/00	<ul style="list-style-type: none"> <li>• Added support for SilverStream Application Server 3.0</li> </ul>
2.3.0	03/28/00	<ul style="list-style-type: none"> <li>• Added support for double-byte character sets</li> </ul>



2.2.2		<ul style="list-style-type: none"> <li>Fixed a setDate() bug where dates with a year values less than 1000 caused an error</li> <li>Added code pages 1027 (Japanese Latin Host SBCS) and 290 (Japanese Katakana Host SBCS)</li> </ul>
2.2.1	02/25/00	<ul style="list-style-type: none"> <li>Fixed a floating point conversion bug in setFloat() and setDouble() which caused some large values to be written to the database incorrectly</li> <li>Write operating systems and Java environment information into the trace if it's to be generated</li> </ul>
2.2.0	12/10/99	<ul style="list-style-type: none"> <li>Implemented JDBC 2.0 Core API</li> <li>Added support for connecting to DB2/400 via SSL Server for data encryption and server authentication</li> <li>Added support to enable SilverStream Application Server to access DB2 data using HiT JDBC/DB2</li> <li>Cryptography classes no longer available-replaced by HiT SSL Server</li> <li>Added "trace_file" connection option. This option can be used by applications to direct detailed JDBC trace into a file</li> <li>Added "catalog_qualifier" connection option. This option is used to override the default catalog used to retrieve database metadata (the default catalog is SYSTEM or SYSIBM depending on the OS)</li> <li>Added "search_schema" connection option. This option should be used for applications that make database metadata calls to large databases. This option is used to limit the metadata searches to the specified schema when a null schema was specified by an application. If this option is not used then all schemas are searched by default</li> </ul>
1.1.1	06/06/99	<ul style="list-style-type: none"> <li>Removed JDK 1.0.2 version of driver. The JDK 1.0.2 version will still be available upon request</li> <li>Fixed problem related to maximum number of connections reached in an applet.</li> <li>Hold cursors on commit option added called: "hold_cursor". This option will hold the cursor after a commit when set to "yes". Normally, when a commit occurs, all cursors are closed. Some applications do not function appropriately if cursors are closed. In such cases you use this option to keep cursors open. For example, if "hold_cursor=yes", and you fetch rows from a result set, then commit, cursors remain open so you can continue to fetch additional row from the result set. The default value for this option is "no". Example url: "jdbc:db2://1.1.1.1;rdbname=FOO;hold_cursor=yes"</li> </ul>
1.1.0	04/06/99	<ul style="list-style-type: none"> <li>Fixed problem with setString(n,string) method of PreparedStatement &amp; CallableStatement. Version 1.1.0 incorrectly required the string parameter to have the same length</li> <li>Fixed problem where driver returned a null string instead of an empty string for blank columns</li> </ul>

		<ul style="list-style-type: none"> <li>• All SQLException exceptions are thrown with a non null SQLState</li> <li>• Added option "naming" which allows the use of system naming convention by setting "naming=system" in the connection options. The alternative to "naming+system" is "naming+sql", which is the default. NOTE: If a library name contains a period ('.'), it is still necessary to put the library name in double quotes (ie: SELECT * FROM "A.LIB"/AFILE)</li> </ul>
1.0.7	02/12/99	<ul style="list-style-type: none"> <li>• Fixed problem with driver hanging or misleading exception when invalid username or password specified</li> <li>• Fixed problems with driver returning a null string instead of an empty string for blank columns</li> <li>• Fixed problem with calling registerOutParameter() before calling setXXX() methods</li> <li>• Improved performance for Statement.executeUpdate() method.</li> </ul>
1.0.6	02/02/99	<ul style="list-style-type: none"> <li>• Fixed problem with methods larger than 64K causing verify error with certain browsers (especially Netscape)</li> <li>• Fixed problems with DatabaseMetaData.getColumns</li> </ul>
1.0.5	01/25/99	<ul style="list-style-type: none"> <li>• Updated obfuscation</li> </ul>
1.0.4	01/19/99	<ul style="list-style-type: none"> <li>• Addition of DDM parameter (CRRTKN) required for some databases</li> <li>• Correction of floating point value handling</li> </ul>
1.0.3	12/27/98	<ul style="list-style-type: none"> <li>• Added Euro character to conversion tables</li> <li>• Made minor changes to PreparedStatement interface</li> </ul>
1.0.2	10/26/98	<ul style="list-style-type: none"> <li>• Stored procedures with result sets are now supported</li> </ul>
1.0.0	08/12/98	<ul style="list-style-type: none"> <li>• DatabaseMetaData methods have been completed</li> <li>• Added conversion tables for CCSID 277 (Norwegian)</li> </ul>