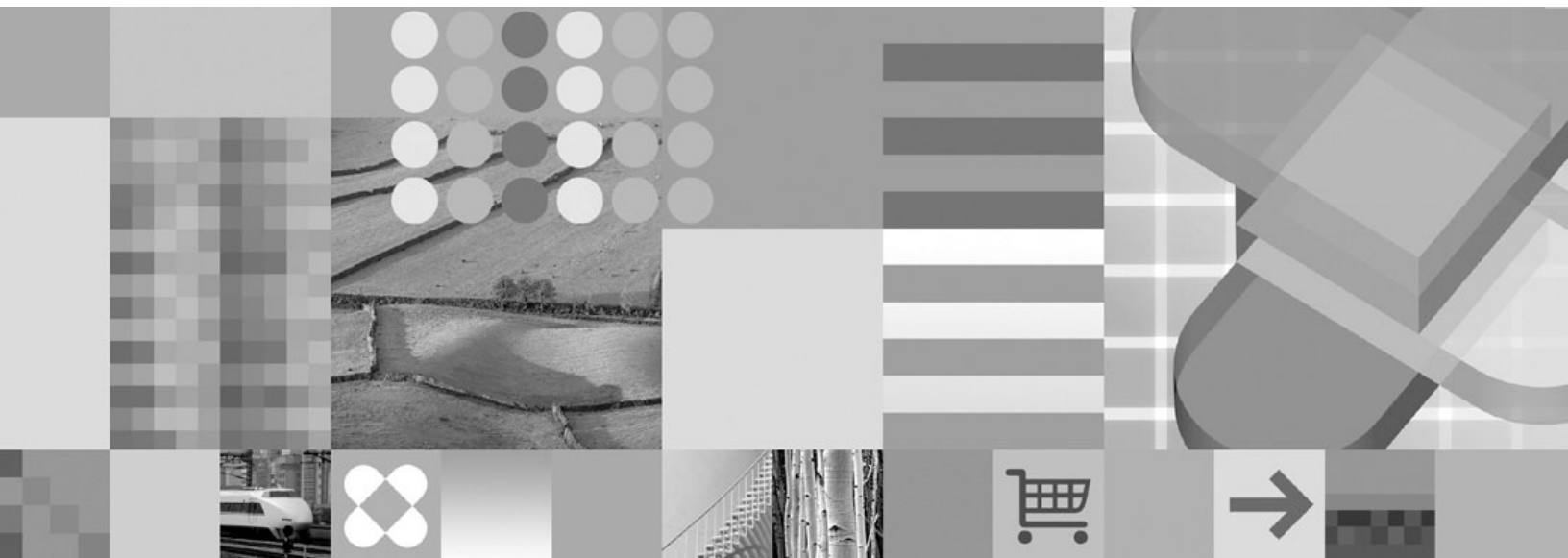




Release Notes



Release Notes

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 69.

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About the release notes

The release notes contain the latest information about IBM® DB2® Information Integrator Version 8.1 Fix Pack 11.

The release notes are in three parts. The first part contains high-level information about the new functions and features of the product. The second part contains the details of the problems, limitations, and workarounds that were known at the time of publication and apply to the latest version of the product. The third part contains corrections and updates to previously released HTML, PDF, and printed documentation.

Changes since the previous edition are marked with a pipe symbol (|) in the margin.

DB2 Information Integrator support on the Web

For more information about DB2 Information Integrator and the latest support issues, see the main DB2 Information Integrator support Web page at www.ibm.com/software/data/integration/db2ii/support.html.

Support for DB2 Universal Database for Linux, UNIX, and Windows

For information about known issues with DB2 Universal Database™ for Linux®, UNIX®, and Windows® Version 8 products, see the DB2 Technical Support Web page at www.ibm.com/software/data/db2/udb/winos2unix/support.

New in this release

The following features and changes are new in fix pack 11:

Data source support

- You can use the equality operator (=) in joins or literals with the BioRS wrapper, subject to certain limitations. See new documentation for this feature in “Equality operations on the BioRS wrapper” on page 31.
- Fix pack 11 includes updated support for the high2key and low2key values that are collected for nickname statistics for the following data sources: DB2 UDB for Linux, UNIX, Windows, DB2 UDB for z/OS[®] and OS/390[®], Informix[®], Microsoft[®] SQL Server, Teradata, and Oracle.
- The Entrez wrapper adds support to access the Online Mendelian Inheritance in Man (OMIM) database in this release. Information about accessing the OMIM database is documented in “Nicknames for the OMIM database” on page 33.

Q replication and event publishing enhancements

- The Q Replication Live Monitor is a lightweight tool that graphically displays real-time latency and throughput information. You can see at a glance the current latency and throughput for a Q Capture or Q Apply program. You can also see whether the Q Capture or Q Apply programs are active. The tool works with any version of Q replication, and requires no changes to the Q replication programs. Read about the tool and download it from the IBM developerWorks[®] Web site, www.ibm.com/developerworks/db2/library/techarticle/dm-0509jacopi/.
- You can now download a dynamic PDF file that creates customized MQSC scripts to set up WebSphere[®] MQ for Q replication or event publishing. You can type names of queue managers, queues, and channels directly into the PDF file and create setup scripts and customized procedures for running the scripts. Download the tool from www.ibm.com/support/docview.wss?uid=swg27006473
- In SQL replication, you can now use the DB2 EXPORT and IMPORT utilities to load data into non-DB2 target tables that are associated with nicknames on a federated server. If you use the IMPORT utility, the non-DB2 target tables must be empty. For details about customizing the ASNLOAD exit routine to use the EXPORT and IMPORT utilities, see “Customizing ASNLOAD exit behavior (Linux, UNIX, Windows, z/OS)” in the DB2 Information Center topic, Operating the Apply program.
- Both Q replication and SQL replication now support DB2 UDB for z/OS source tables that are defined with an edit routine (EDITPROC) to provide additional data security. To use these tables as sources for replication, ensure that the DB2 subsystem that contains the tables is upgraded to Version 8 with APAR PK13542.
- You can now download a DB2 stored procedure that enables the Replication Center to display and validate WebSphere MQ queue managers and queues and send test messages. After you run this stored procedure, you can select from lists of queue managers and queues when you need to specify these objects for Q replication and event publishing. You can also use the Replication Center to send messages to test your WebSphere MQ configuration. Download the stored procedure from www.ibm.com/support/docview.wss?uid=swg24010281.

Known problems, limitations, and workarounds

Previous known problems, limitations, and workarounds that were resolved in this release

The following known problems, limitations, and workarounds existed in fix pack 10 but were resolved or corrected in the fix pack 11 version of the product. These issues no longer apply to fix pack 11.

SQL0901N occurs when creating data type mapping

This problem was resolved in fix pack 11. The issue no longer applies.

If you create a data type mapping for something other than a specific server, SQL0901N can occur. For example, if you create a mapping for a server type, using the CREATE SERVER statement to define a server, the CREATE SERVER statement may cause the following error:

```
SQL0901N The SQL statement failed because of a non-severe system error.  
Subsequent SQL statements can be processed. (Reason "sqlqgGetRemoteTypeInfo:  
Failed to create server object".) SQLSTATE=58004
```

Use single agent for Q replication of LONG VARCHAR data types to Microsoft SQL Server

This problem was resolved in fix pack 11. The issue no longer applies.

When you use Q replication to replicate LONG VARCHAR data types to Microsoft SQL Server targets, you might receive a SQLCODE -1822 error with the following associated text: "Could not find prepared statement with handle 0."

Microsoft SQL Server 2000 Service Pack 3 error might affect Q replication

This problem was resolved in fix pack 11. The issue no longer applies.

If you run Q replication with Microsoft SQL Server 2000 Service Pack 3 as a target, you might receive an error from the Q Apply program that indicates insufficient memory to run a query. This is a problem in Microsoft SQL Server 2000 Service Pack 3. Try upgrading to Service Pack 4.

The following information describes the currently known limitations, problems, and workarounds for DB2 Information Integrator Version 8.2. Any limitations and restrictions might or might not apply to other releases of the product.

Q replication and event publishing

Deadlocks occur when using Q replication to update or delete from large Informix tables

When using Q replication to Informix targets, a SQLCODE -911 error may occur when the Q Apply program updates or deletes from a target table that is large. This problem can potentially affect the Q Apply program's performance.

Workaround:

Fewer deadlocks will occur if you create or alter tables by using LOCK MODE ROW on the Informix server.

Two Q replication control tables are created without indexes on Informix

When you use Q replication to Informix targets, the IBMQREP_DONEMSG and IBMQREP_SPILLEDROW control tables are created without an index. The column MQMSGID that is normally used for an index in these tables is defined as CHAR(24) FOR BIT DATA (a BYTE data type), and Informix does not allow creating an index on BYTE data types. This problem can impact Q Apply program performance in some situations.

Lock escalation when using Q Replication to copy a high volume of updates to Sybase targets

When using Q Replication to copy a high volume of updates to Sybase targets, lock escalation can occur at the federated target server. In this case, it may be necessary to change the locking scheme of target tables to lock data rows. It may also be necessary to increase the maximum locks per server.

Data type restrictions for replication to Oracle and Sybase targets (Q replication only)

The following data type limitations apply when you are using Q replication to replicate data to Oracle and Sybase targets.

Required configuration to replicate GRAPHIC, VARGRAPHIC, and DBCLOB data types

To replicate GRAPHIC, VARGRAPHIC, or DBCLOB data types, your Oracle server and client must be Version 9 or newer. Your server mapping must also be Version 9 or newer.

Replication of LONG VARGRAPHIC data types not supported

Replication of LONG VARGRAPHIC data types to Oracle and Sybase targets is not supported in fix pack 9.

DB2 Information Integrator installation

The DB2 Information Integrator installer fails when the directory name contains a blank character

If you copy the DB2 Information Integrator installer or DB2 Universal Database installer to a directory path that contains a blank character in its name, the installation will fail. To avoid this problem, take one of the following actions:

- Install DB2 Information Integrator installer using the provided CDs.
UNIX systems only: Ensure there are no space characters in the mount point name.
- Ensure that no blank characters are used in the directory path name in which the DB2 Information Integrator installer or the DB2 installer is copied.

The DB2 Information Integrator installer fails when the DB2 administration server and database instance user names are identical

The DB2 administration server provides support services for DB2 Universal Database tools such as the Control Center and Configuration Assistant. Every computer that uses DB2 Universal Database also contains a DB2 administration server.

If DB2 Universal Database is not installed on the computer on which you are installing DB2 Information Integrator, the DB2 Information Integrator Installer will automatically install a DB2 administration server. The DB2 Information Integrator Installer prompts you to specify names for the DB2 administration server user and for the related database instance user. You must specify unique names for the DB2 administration server user and for the related database instance user, or the installation will fail.

To avoid this installation failure, specify a database instance user name that is different from the current DB2 administration server user name during the DB2 Information Integrator installation process.

The DB2 Information Integrator installer fails on Red Hat Enterprise Linux Version 3.0

If you are trying to install DB2 Information Integrator on a computer that runs the Red Hat Enterprise Linux Version 3.0 operating system, the DB2 Information Integrator Installer will fail.

To avoid this problem, enter the following command before you start the DB2 Information Integrator Installer:

```
export LD_ASSUME_KERNEL=2.2.5
```

Required task after installing DB2 Information Integrator upgrades or fix packs on UNIX operating systems

After you install a DB2 Information Integrator upgrade or fix pack on a UNIX operating system, you must run the `djxlink` script for each of the wrappers that you installed and the `db2iupdt` command for each DB2 instance. See the DB2 Information Integrator support site at www.ibm.com/software/data/integration/db2ii/support.html for instructions on installing DB2 Information Integrator fix packs and running the `djxlink` script and the `db2iupdt` command.

DB2 Information Integrator installer Asian fonts limitation (UNIX systems only)

IBM offers additional font packages for UNIX that contain additional double-byte character set support for Asian characters. The font packages that IBM offers are necessary with some versions of UNIX that install only the fonts that are necessary to display the country-specific or region-specific characters.

If characters are missing when you run the `iisetup` program, the necessary fonts are likely not installed on your UNIX system.

To enable the `iisetup` program to properly reference the fonts embedded in the installation CD:

1. Copy the trnmt30.ttf font file to a directory on your system. The file is in the root directory of the DB2 Information Integrator installation software.
2. Export the JAVA_FONT environment variable by running the following command:

```
export JAVA_FONT=<path to font>
```

<path to font> is the path to the directory where you copied the font file.

3. Run the **iisetup** program.
4. Remove the font file from the hard disk.

The fonts that IBM supplies do not replace the system fonts. Use the IBM-supplied fonts with DB2 Information Integrator. You cannot engage in the general or unrestricted sale or distribution of these fonts.

Migration

Error when selecting nicknames after migrating from DB2 UDB Version 7 to DB2 UDB Version 8

Nicknames on DB2 family data sources in DB2 UDB Version 7 might cause an SQL1013 error when you upgrade from DB2 UDB Version 7 to DB2 UDB Version 8.

For example, you create the following nickname in a DB2 UDB Version 7 database:

```
CREATE NICKNAME my_schema.my_nickname FOR  
DB2_SERVER.remote_schema.remote_table.
```

Assume that the server definition DB2_SERVER specifies a database alias for the DBNAME option. If you run a query that uses the nickname my_nickname after you migrate the DB2 UDB Version 7 database to DB2 UDB Version 8, an SQL1013 error occurs. If the database name and the alias name are the same, no error occurs.

DB2 UDB Version 7 uses the NODE option of the server definition to locate the database that is specified by the DBNAME option. DB2 UDB Version 8 ignores the NODE option and uses the local or system database directory to locate the database that is specified by the DBNAME option.

To avoid this problem, alter the server DBNAME option to specify the database name used in the local database directory. For example, the following statement changes the database name to match the database name, MY_DB.

```
ALTER SERVER my_schema OPTIONS (SET DBNAME 'MY_DB').
```

Accessing DB2 family remote data sources after migration

If you need to access a DB2 family remote data source after you migrate to DB2 Information Integrator from either DB2 Universal Database Version 7 or from DataJoiner[®] Version 2.1.1, you must start the bind utility to reestablish a connection from the server to the remote data source. DB2 family remote data sources include databases on DB2 Universal Database for UNIX, Linux, and Windows, DB2 Universal Database for z/OS[™] and OS/390, DB2 Universal Database for iSeries[™], and DB2 Server for VM and VSE.

If you do not reestablish the connection by using the bind utility, you receive an SQL0805N error message.

You must use the bind utility to reestablish a connection from the server to the remote data source for each DB2 family remote database that you want to access. You need to perform this task only one time for each remote database that you want to access.

To reestablish a connection to a remote data source after migration:

1. Access the remote data source with the DB2 CONNECT command.
2. Access the required DB2 Information Integrator directory.

On UNIX systems, issue the following command:

```
cd db2_instance_directory/sql1lib/bnd
```

db2_instance_directory is the directory that contains the database instance that you want to access.

On Windows systems, issue the following command:

```
cd db2_install_directory\sql1lib\bnd
```

db2_install_directory is the directory where DB2 Information Integrator is installed.

3. Access the bind utility by issuing the following command:

```
db2 bind @db2cli.lst grant public
```
4. Disconnect from the remote data source.

Federated function and data source support

Nickname discovery failure for XML files when using the DB2 Control Center

There is a limitation with the XML wrapper when using the DB2 Control Center to discover potential nicknames. When an XML file is specified as the input file, there is no support for NAMESPACES in the XML file. The workaround is to convert the XML file to XSD files. However, this conversion might generate some compatibility errors with previous shredding capability.

Stack overflow can cause a crash when accessing the OMIM database

The Entrez wrapper is used to access the OMIM database. A stack overflow can occur when a large result set is returned to a 32-bit DB2 UDB instance that runs on a 64-bit operating system. On the AIX[®] operating system, this limitation affects AIX Version 5.2 or above. On the Windows operating systems, the Entrez wrapper can crash if a query returns a result set from the OMIM database at NCBI that is larger than approximately 1 MB. This crash occurs because of a stack overflow.

Workaround:

This problem can be solved by increasing the reserved stack size of `db2syscs.exe`. Use the tool `db2hdr` in the `\misc` directory to increase the reserved stack size by issuing the following command: `db2hdr C:\SQLLIB\bin\db2syscs.exe /s:1024,256`. However, you will have to stop and restart DB2 for a change to `db2syscs.exe` to take effect.

Run the Entrez wrapper only in trusted (unfenced) mode on all supported operating systems to avoid stack overflows.

Nickname discovery failure for Table-structured files when using the Create Nicknames dialog in the Control Center Version 8.1 Fix Pack 2 client

You may encounter an error when using the Nickname Discovery feature for Table-structured files available in the Create Nickname dialog in the Version 8.1 Fix Pack 2 Control Center. This error occurs when you attempt to use this discovery feature with a DB2 II Version 8.2 Fix Pack 10 federated database. To be able to use the discovery feature, you must upgrade your client to Version 8.2 or any subsequent Fix Pack.

OUTER JOIN support limitations and workaround for federated relational data sources

Outer join pushdown has been disabled for some data sources due to data source outer join problems that occur under certain conditions. To enable outer join pushdown, set the server options `db2_outer_joins = 'Y'` and `db2_outer_join_syntax = 'D'`.

The following table describes Outer join pushdown support by version for relational data sources:

Table 1. OUTER JOIN pushdown support

Relational data source:	Support for OUTER JOIN pushdown:
DB2 UDB for Linux, UNIX, and Windows	v7 and higher supported
DB2 UDB for z/OS and OS/390	disabled
DB2 UDB for iSeries	disabled
Informix	v9 and higher supported
MSSQL Server	v7 and higher supported
Oracle	v8 and v9 (native Oracle syntax) supported, v10 (ANSI syntax) supported
ODBC	disabled
Sybase CTLIB	v12 and higher supported
Teradata	disabled

Cannot create a server or nickname in a fenced wrapper on SLES9 SP1

To use wrappers in fenced mode, the fenced user ID must be able to access the home directory of the instance owner. On SUSE Linux systems, the default home directory permissions do not allow access for the default DB2 fenced user ID. You can give all users read and run permissions on the home directory of the instance owner by running the following command:

```
chmod o+rx ~/$DB2INSTANCE
```

To prevent other user accounts on the system from reading files under the home directory of the DB2 instance owner, you can change other file or directory permissions and take other security steps, depending on your authentication system and file system configuration. You must be root to update the user permissions.

Performance impact on Teradata nicknames that have multicolumn indexes

Before DB2 Information Integrator Version 8.2 Fix Pack 9, nicknames that were created on Teradata tables with multicolumn indexes did not correctly store the column order for those indexes. With Fix Pack 9, the create nickname process will retrieve the index columns in the correct order. Because the optimizer will have more accurate index information, query performance might improve for those queries that can use the index. To take advantage of this potential performance improvement, drop and recreate any Teradata nicknames that have multicolumn indexes after you install DB2 Information Integrator Version 8.2 Fix Pack 9. After you drop and recreate the Teradata nicknames, performance might improve for some queries because the optimizer will receive accurate index information from the Teradata server.

DB2 for VM nicknames

Inserting or importing binary (FOR BIT DATA) columns is not supported for DB2 for VM nicknames.

Performance impact when altering nickname column types

When you alter the column type of a nickname, you might impact performance. Under certain conditions, Information Integrator can no longer push down SQL that references the column or Information Integrator might need to do additional data conversion. To prevent a possible performance degradation, do not alter the nickname column type.

Unexpected results when altering nickname column length

Do not alter a nickname column length to a value smaller than the original length. If the data doesn't fit, unexpected results or errors can occur.

Requirement for federated server computers (AIX 64-bit systems only)

To use an AIX 64-bit computer as a federated server, you must install AIX APAR fix number IY53887 and APAR fix number IY73932 on that computer.

If you do not install AIX APAR fix number IY53887, your wrappers might not load correctly when you use a CREATE SERVER statement or CREATE NICKNAME statement. If your wrappers do not load correctly, you receive an SQL0901N error that indicates NULL WRAPPER. If you do not install AIX APAR fix number IY78932, the library might not load correctly and fails to report all of the loaded modules

Data type restrictions

DB2 Information Integrator does not support some data types. You cannot create nicknames for data source objects (such as tables and views) that contain any of these unsupported data types. Additionally, DB2 Information Integrator does not allow insert, update, and delete operations on data source objects that contain certain data types.

Unsupported data types

You cannot create nicknames for data source objects that contain the data types listed in the following table:

Table 2. Unsupported data source data types

Data source	Unsupported data types
Extended Search	DECIMAL
Microsoft SQL Server	SQL_VARIANT
Oracle (NET8 wrapper only)	TIMESTAMP (fractional_seconds_precision) WITH TIME ZONE TIMESTAMP (fractional_seconds_precision) WITH LOCAL TIME ZONE INTERVAL YEAR (year_precision) TO MONTH INTERVAL DAY (day_precision) TO SECOND (fractional_seconds_precision) UROWID BFILE XMLTYPE URI Datatypes SPATIAL Datatypes
Oracle (SQLNET wrapper only)	BLOB CLOB NCHAR NVARCHAR2 TIMESTAMP TIMESTAMP (fractional_seconds_precision) WITH TIME ZONE TIMESTAMP (fractional_seconds_precision) WITH LOCAL TIME ZONE NCLOB INTERVAL YEAR (year_precision) TO MONTH INTERVAL DAY (day_precision) TO SECOND (fractional_seconds_precision) UROWID BFILE XMLTYPE URI Datatypes SPATIAL Datatypes
Sybase (CTLIB wrapper only)	DATE TIME
Sybase (DBLIB wrapper only)	DATE TIME UNICHAR UNIVARCHAR

For the data types that DB2 Information Integrator does not support, you can create a view at the data source that is based on the data source object, and create a nickname for the view. The view must not contain any columns that use the unsupported data types. Or you can create a view that is based on the data source object and change the unsupported data types to supported data types.

Insert, update, and delete restrictions on data types

DB2 Information Integrator restricts insert, update, and delete operations on data source objects that contain certain data types. You can perform insert, update, and delete operations on data source objects that contain these data types, but you cannot insert or update the columns that use these data types. For example, if a DB2 family table has a CLOB column, you can insert into and update the other columns that do not contain the CLOB data type. But you cannot insert into or update the CLOB column. You can also delete the entire row.

Where upper and lower length limits are provided in the following table, character data types specify the length in bytes. Graphic data types specify the length in double bytes.

Table 3. Write operation restrictions on data types

Data source	Unsupported data types
DB2 family (DRDA®)	BLOB CLOB DBCLOB
Informix	BLOB CLOB BYTE** TEXT*
	* You can perform insert, update, and delete operations on TEXT data types if you alter the nickname column to the VARCHAR data type. ** You can perform insert, update, and delete operations on BYTE data types if you alter the nickname column to the VARCHAR FOR BIT DATA data type.
Microsoft SQL Server	IMAGE** NTEXT* TEXT* SQL_VARIANT
	* You can perform insert, update, and delete operations on text and ntext data types if you alter the nickname column to the VARCHAR or VARGRAPHIC data type. ** You can perform insert, update, and delete operations on image data types if you alter the nickname column to the VARCHAR FOR BIT DATA data type.
ODBC	SQL_LONGBINARY (length > 32672) SQL_LONGVARCHAR (length > 32672) SQL_WLONGVARCHAR (length > 32672)
Oracle (NET8 wrapper only)	INTERVAL DAY (day_precision) TO SECOND (fractional_seconds_precision) INTERVAL YEAR (year_precision) TO MONTH LONG* LONG RAW** TIMESTAMP (fractional_seconds_precision) WITH TIMEZONE TIMESTAMP (fractional_seconds_precision) WITH LOCAL TIME ZONE INTERVAL YEAR (year_precision) TO MONTH INTERVAL DAY (day_precision) TO SECOND (fractional_seconds_precision) UROWID BFILE XMLTYPE URI Datatypes SPATIAL Datatypes
	* You can perform insert, update, and delete operations on LONG data types if you alter the nickname column to the VARCHAR data type. ** You can perform insert, update, and delete operations on LONG RAW data types if you alter the nickname column to the VARCHAR FOR BIT DATA data type.

Table 3. Write operation restrictions on data types (continued)

Data source	Unsupported data types
Oracle (SQLNET wrapper only)	BLOB CLOB INTERVAL DAY (day_precision) TO SECOND (fractional_seconds_precision) INTERVAL YEAR (year_precision) TO MONTH NCHAR NVARCHAR2 NCLOB TIMESTAMP (fractional_seconds_precision) TIMESTAMP (fractional_seconds_precision) WITH TIMEZONE TIMESTAMP (fractional_seconds_precision) WITH LOCAL TIMEZONENCLOB INTERVAL YEAR (year_precision) TO MONTH INTERVAL DAY (day_precision) TO SECOND (fractional_seconds_precision) UROWID BFILE XMLTYPE URI Datatypes SPATIAL Datatypes
Sybase (CTLIB wrapper only)	DATE TIME TEXT* IMAGE** * You can perform insert, update, and delete operations on text data type if you alter the nickname column to the VARCHAR data type. ** You can perform insert, update, and delete operations on image data types if you alter the nickname column to the VARCHAR FOR BIT DATA data type.
Sybase (DBLIB wrapper only)	All data types. Write operations are not supported by the DBLIB wrapper.
Teradata	CHAR (32673 to 64000) VARCHAR (32673 to 64000) BYTE (32673 to 64000) VARBYTE (32673 to 64000) GRAPHIC (16337 to 32000) VARGRAPHIC (16337 to 32000)

Mapping to the federated GRAPHIC and VARGRAPHIC data types

If the federated database does not use the UTF-8 code page (Unicode), only the DB2 family and Teradata data sources can override the default data type mappings to map remote data types to the federated GRAPHIC and VARGRAPHIC data types. You use either the CREATE TYPE MAPPING statement or the ALTER NICKNAME statement to override the default data type mappings, depending on the circumstances in which you want the mapping to apply.

UTF-8 code page data expansion

If the federated database uses the UTF-8 code page and the data source client converts to the UTF-8 code page, the conversion process might result in data expansion. For example, if you select a character that is stored as 1 byte at the remote data source, the data source might return 2 bytes after converting the selected character to UTF-8. Ensure that the local columns in the catalog are wide enough to contain any expanded data. If the columns are not wide enough, use the ALTER NICKNAME statement to make the columns wider.

Oracle national character set data (NCHAR, NVARCHAR2, NCLOB) might appear distorted in a federated database

Data code conversion for NCHAR, NVARCHAR2, and NCLOB data types in a Unicode federated environment might not be performed correctly if you are using a version of Oracle earlier than Oracle 9i. Data can appear distorted because the national character set has changed from non-Unicode, to Unicode in Oracle9i. DB2 Information Integrator provides NCHAR, NVARCHAR2, and NCLOB data type support that is consistent with Oracle9i specifications.

LIKE predicate applied to a CHAR column

For Informix, Microsoft SQL Server, Oracle, and Sybase data sources, the LIKE predicate that is applied to a CHAR column is not processed at the data source. These data sources use different blank padding rules than DB2 Universal Database. For example, if a CHAR(10) column contains 'a', then the predicate `char_col LIKE 'a'` is false in DB2 Universal Database, but true in the other data sources.

Additionally, for Microsoft SQL Server data sources, the LIKE predicate performs case-insensitive string comparisons, which cannot be processed at the data source.

You can improve performance of LIKE predicates by enabling them to be processed at the data source. To do so, use the following temporary CREATE FUNCTION MAPPING statement syntax to create a function mapping for LIKE(CHAR, *column_type* (*length*)) so that the LIKE predicate is processed at the data source. For example:

```
CREATE FUNCTION MAPPING my_mapping FOR SYSIBM.LIKE(SYSIBM.CHAR(), SYSIBM.VARCHAR())  
  SERVER TYPE INFORMIX OPTIONS(REMOTE_NAME ':1P LIKE :2P');
```

However, if you use this function mapping, LIKE predicates might return different results than DB2 Universal Database returns.

Unexpected results when using a Unicode federated database and a remote database with DBCS codepage

When the federated database uses Unicode and the remote database uses a DBCS codepage, you can get unexpected results because of the different ways spaces are represented:

- In DBCS databases, CHAR and GRAPHIC columns are usually padded with the DBCS space.
- In federated Unicode databases, CHAR and GRAPHIC columns are padded with the Unicode space (U+0020).
- When character data is retrieved from a DBCS database to a federated Unicode database, DBCS spaces are usually converted to Unicode ideographic spaces (U+3000).
- When character data is sent from a federated Unicode database to a remote DBCS database, Unicode spaces (U+0020) are usually converted to the substitute character (because most DBCS codepages have no equivalent to a Unicode space).

As a result of these differences, you might get unexpected results when specifying any of the following:

- Predicates using CHAR columns, GRAPHIC columns, or character data containing Unicode spaces.

- Inserts into CHAR or GRAPHIC columns, or inserts of character data that contain Unicode spaces into a Unicode nickname.
- Updates of CHAR or GRAPHIC columns, or updates using character data that contains Unicode spaces on a Unicode nickname.

To avoid these problems:

- Use only ideographic spaces (U+3000) in the federated Unicode database.
- Avoid padding by casting CHAR and GRAPHIC columns to VARCHAR and VARGRAPHIC. For example: `CAST(my_col AS VARCHAR(x))`.

For additional related information see Japanese or Traditional Chinese EUC, and UCS-2 Considerations in C and C++ in the DB2 Information Center.

Cursor with hold semantics for certain relational wrappers

The Microsoft SQL Server, ODBC, OLE DB, Oracle, Sybase, and Teradata wrappers do not currently support DECLARE CURSOR WITH HOLD semantics.

Limitation on file code page specifications for Unicode support of table-structured file and XML data sources (Windows only)

On Windows operating systems, you can create file names and directory names using any Unicode character. However, the FILE_PATH and DIRECTORY_PATH options of the CREATE NICKNAME and ALTER NICKNAME statements must use characters that the operating system code page supplies. If you specify Unicode characters in either of the PATH nickname options using either the table-structured file wrapper or the XML wrapper, and those Unicode characters are not part of the Windows code page, the wrapper issues an error that indicates that the resource cannot be located.

For example, on an English language Windows-based computer, you cannot specify a FILE_PATH option value that uses Japanese Unicode characters, because the create or alter nickname operation will fail. In this situation, you must specify a FILE_PATH option value that uses only English characters. You can also use ASCII characters for FILE_PATH and DIRECTORY_PATH option values in a Japanese Windows environment. The CREATE or ALTER NICKNAME operation will fail if you use non-ASCII and non-Japanese characters (like Chinese).

Using the CREATE TYPE MAPPING statement with ODBC, Microsoft SQL Server, and Teradata data sources

You cannot omit a remote data type length with a data type that uses parameters. Specify a length or empty parentheses. For example, for Teradata, the default length for the CHAR data type is 1. If you want to map CHAR(1) of Teradata to VARCHAR(1) of DB2 Information Integrator, issue the following CREATE TYPE MAPPING statement:

```
CREATE TYPE MAPPING tm1 from local type varchar(1)
to server type teradata remote type char(1);
```

You cannot use the synonym of the remote data type. You must use the short data type name. For example, in case of Teradata, the following CREATE TYPE MAPPING works correctly:

```
CREATE TYPE MAPPING tm1 from local type varchar()
to server type teradata remote type char();
```

The following CREATE TYPE MAPPING does not work because the synonym, character, is used for the character data type. The short data type name, char, must be used.

```
CREATE TYPE MAPPING tm1 from local type varchar()  
to server type teradata remote type character();
```

Blast data sources

If the BlastSeq column for a BLAST nickname is defined as a CLOB data type, you must create sequence match function templates before you can query BLAST data sources. The SQL statements that you issue on the federated database to create the function templates are documented in “Fix Pack 8 Documentation updates” on page 49.

DRDA wrapper support

Insert, update, and delete operations not allowed on graphic data types for UTF-8 databases

If the federated database uses the UTF-8 code page (Unicode), you cannot perform insert, update, and delete operations on GRAPHIC, VARGRAPHIC, and DBCLOB data types for DB2 Server for VM and VSE data source objects. These operations are not allowed for graphic data types because DB2 Server for VM and VSE does not contain a conversion table for UTF-16 (code page 1200). UTF-8 (Unicode) federated databases require a UTF-16 conversion table for graphic encoding.

Using the DRDA wrapper to connect to partitioned databases

When you use the DRDA wrapper to connect to a DB2 Universal Database system with remote partitions, and that remote system uses different partition numbers than the federated server uses, the connection might fail. The connection failure results in an SQL1822N error message that refers to error SQL1469N. Error SQL1469N is a remote data source error that indicates that node numbers were not specified for a particular database instance.

Before you use the DRDA wrapper to connect to a DB2 Universal Database system with remote partitions, you must ensure that the federated server is aware of the partition number that is associated with logical port 0 on that DB2 Universal Database system.

To determine the partition number that is associated with logical port 0 on a remote DB2 Universal Database system:

1. Open the sqllib/db2nodes.cfg file on the remote system.
2. Look for the partition number that is associated with logical port 0 on that remote system, and record that partition number.

For example, if the host name of the remote system is nori, then look for the partition number that is associated with logical port 0 for host nori.

3. Close the db2nodes.cfg file.

Use one of the following three methods to notify the federated server of the partition number that is associated with logical port 0 on a remote DB2 Universal Database system:

- Edit the db2cli.ini file on the federated server. Set the CONNECTNODE parameter to the partition number that is associated with logical port 0 on the remote DB2 Universal Database system.

This method changes the federated server environment. Using this method can potentially affect your applications.

- Set environment variable DB2NODE on the federated server to the partition number that is associated with logical port 0 on the remote DB2 Universal Database system. You must stop and then restart DB2 Universal Database on the federated server after you set the environment variable.

This method changes the federated server environment. Using this method can potentially affect your applications.

- If you use SQL statements from the DB2 Command Line Processor, issue the following command on the federated server before you connect to the remote DB2 Universal Database system:

```
SET CLIENT CONNECT_DBPARTITIONNUM partition_number
```

partition_number is the partition number that is associated with logical port 0 on the remote DB2 Universal Database system.

This method sets the partition number only for the duration of the Command Line Processor session.

Example:

The host name of the DB2 Universal Database system to which you want to connect is palmetto. In the db2nodes.cfg file on the palmetto system, partition number 10 is associated with logical port 0. To notify the federated server that partition number 10 is associated with logical port 0 on palmetto, you can perform any one of the following actions:

- Specify the value CONNECTNODE=10 in the db2cli.ini file on the federated server.
- Set the DB2NODE environment variable to 10 on the federated server, stop DB2 Universal Database, and start DB2 Universal Database again. For example, on a UNIX system, use the following commands:

```
db2stop
export DB2NODE=10
db2start
```

- Before you connect to palmetto, issue this command:

```
SET CLIENT CONNECT_DBPARTITIONNUM 10
```

Nicknames on DB2 Universal Database tables that contain LONG VARCHAR FOR BIT DATA columns

When you create a nickname on a DB2 Universal Database table that contains a LONG VARCHAR FOR BIT DATA data type column, the corresponding local nickname column is automatically set to the BLOB data type. If you assign a column of data type BLOB from a nickname to a LONG VARCHAR FOR BIT DATA data type column, an SQL0408N error occurs.

To avoid this data type incompatibility, alter the local data type of the BLOB nickname column from BLOB to CLOB.

Example:

You create a nickname, MY_NICK, on a table with column LONG_COL1 of data type LONG VARCHAR FOR BIT DATA. You create a local table, MY_TABLE, with column LONG_COL2 of data type LONG VARCHAR FOR BIT DATA. Then you try to perform the following insert operation:

```
INSERT INTO my_table(long_col2) SELECT long_col1 FROM my_nick;
```


The operation fails with error SQL0408N. The local column data type of LONG_COL1 was automatically set to BLOB, which is not compatible with the data type of LONG_COL2 (LONG VARCHAR FOR BIT DATA).

To avoid the data type incompatibility, alter the local data type of the LONG_COL1 column to CLOB using the ALTER NICKNAME statement:

```
ALTER NICKNAME my_nick ALTER COLUMN long_col1 LOCAL TYPE CLOB(32770);
```

Potential error when using the DRDA wrapper for multiple local database connections on the same computer (AIX only)

If a 32-bit DB2 Universal Database server is run on an AIX system, and an application that is running on the same system has more than one federated database connection through the DRDA wrapper, then the application might get following error:

```
SQL1822N Unexpected error code "-1224" received from data source  
"W3_SERVER2". Associated text and tokens are "func="DriverConnect" msg="  
SQL1224N A database agent". SQLSTATE=560BD
```

There are two potential workarounds for this error:

- Add the entry EXTSHM=ON to the federated configuration file, *INSTHOME*/cfg/db2dj.ini, where *INSTHOME* is the home directory of the instance owner. Setting the EXTSHM variable to ON increases the amount of shared memory segments that can be used.

When you make changes to the federated configuration file, you must stop and then restart DB2 Universal Database to activate the changes.

- Catalog the federated database on a TCP/IP node. For example:

```
CATALOG TCP/IP NODE my_node REMOTE my_host SERVER 123;  
CATALOG DB mydb AT NODE my_node;  
CREATE WRAPPER drda;  
CREATE SERVER my_server TYPE DB2/UDB VERSION 8 WRAPPER drda  
  AUTHORIZATION "my_id" PASSWORD "my_pw"  
  OPTIONS(ADD DBNAME 'MYDB');
```

If the error persists after you try both of the workarounds, contact IBM Support.

Documentum wrapper support

Custom function query limitation

Documentum custom functions must include a column reference as an argument in queries with joins between multiple Documentum nicknames. Some examples of functions of this type are CABINET and FOLDER.

The following example shows a query that will fail:

```
SELECT D.object_name, L.sv_char1  
FROM dmdoc_sr_1 D, lsdoc_sr_1 L  
WHERE DCTM.CABINET('/Cabinet1')=1 AND D.object_name = L.object_name;
```

Use Documentum custom functions that do not have a column reference argument (such as CABINET and FOLDER) only in queries that involve one Documentum nickname.

Microsoft SQL Server wrapper support

Microsoft SQL Server insert, update, and delete restriction on tables with triggers

When you issue an insert, update, or delete statement on a Microsoft SQL Server table through a nickname, and that table has an insert, update, or delete trigger, Microsoft SQL Server will not process any further statements until the current statement has been closed.

To close the insert, update, or delete statement, issue a commit statement immediately after issuing the original insert, update, or delete statement. Issuing a commit statement after issuing the original the insert, update, or delete statement closes the original statement, and enables other statements to process.

ODBC wrapper support

CREATE TABLE restrictions

If you specify an invalid option on the CREATE TABLE statement, DB2 Universal Database ignores the option and does not issue an error message. For example, in the following statement, DB2 Universal Database ignores the option, `invalid_option`:

```
CREATE TABLE my_table(c1 INT) OPTIONS(remote_server 'MY_ODBC_SERVER',
remote_schema 'J15USER1', invalid_option 'non option');
```

The following options are valid CREATE TABLE options:

- REMOTE_SERVER
- REMOTE_SCHEMA
- REMOTE_TABNAME
- SQL_SUFFIX

Problems after migrating wrapper user-defined reverse data type mappings

ODBC wrapper user-defined reverse data type mappings for data types that do not allow parameters (for example, the INTEGER data type) might not work correctly after migration.

If the user-defined data type mappings for data types that do not allow parameters do not work after you migrate, you must drop the problem data type mappings, and then redefine the mappings in DB2 Information Integrator Version 8.2.

Oracle wrapper support

djxlinkOracle script errors

If you use the `djxlinkOracle` script on AIX to link the SQLNET wrapper and the AIX Base Application Development Math Library is not installed, then the script will fail with linkage editor errors.

You can determine if the library is installed by issuing the following AIX command:

```
lsllpp -l bos.adt.libm
```

To avoid linkage editor errors, either install the AIX Base Application Development Math Library or edit the `djxlinkOracle` script and remove all occurrences of option `-lm` from the `ld` (linkage editor) commands.

Using the Oracle wrapper with different code pages (Windows only)

This information applies to both the SQLNET and NET8 versions of the Oracle wrapper.

If you use more than one Oracle wrapper in different federated databases in the same instance at the same time, and each federated database uses a different code page, the Oracle client performs the correct code page conversion for only the first federated database that connects to an Oracle server.

When a wrapper connects to the Oracle server, the wrapper uses the code page of the federated database to determine the setting of the NLS_LANG environment variable. However, Oracle does not allow the code page portion of the NLS_LANG variable setting to be changed after the variable is set in a process. So when wrappers in the other federated databases that have different code pages connect to the Oracle server, those wrappers use the value of NLS_LANG that the first wrapper invocation set.

Place the federated databases with different code pages in different instances so that all of the federated databases in one instance use the same code page.

Sybase wrapper support

Required version of Sybase Adaptive Server Enterprise

If you are using the Sybase wrappers with Sybase Adaptive Server Enterprise 11.9, you must use version 11.9.2.6 or later. If you do not have one of these versions installed, you must install the latest emergency bug fix (EBF) from Sybase on your Sybase server.

Recommendation: Use Sybase Adaptive Server Enterprise version 12.5.0.3 or later. Other versions of Sybase Adaptive Server Enterprise have a known array overrun problem.

Calculations on SMALLINT columns in remote tables

An SQL statement that includes a calculation on a SMALLINT column in a remote table might cause an arithmetic overflow error. To avoid this error, explicitly define the column as an INTEGER data type.

This problem occurs with both the DBLIB and CTLIB wrappers.

Run the CTLIB wrapper in trusted mode to optimize performance (UNIX systems only)

On UNIX systems, the Sybase CTLIB wrapper is not threadsafe, and should be run in trusted mode for best performance.

Update and delete operation limitation (CTLIB wrapper only)

If you create a nickname for a Sybase view, and that Sybase view was created using a Sybase subquery, you might receive error SQL1822N, "unexpected error code 7732", when you use that nickname to perform update or delete operations from the federated server.

To avoid errors when performing update or delete operations, do not use nicknames that are based upon a Sybase view that uses a Sybase subquery. Create a new nickname that directly references the table in the required Sybase view, then create a federated view that uses the new nickname. Run your update or delete operations on that federated view.

For more information about creating and using federated views, see the “Creating and using federated views” topic in the DB2 Information Center.

Using host variables in pass-through sessions (DBLIB wrapper only)

When you use statements that reference a host variable in a pass-through session of the DBLIB wrapper, you must add a trailing space to the host variable. For example, to insert data into remote table, you might issue a statement like this one:

```
INSERT INTO remote_table_name VALUES (:H0 , :H1 );
```

In the previous example, :H0 , :H1 are host variables to which trailing spaces have been added.

Using SELECT statements on LOB columns (DBLIB wrapper only)

To select a LOB column, the data source table must have a unique index and a TIMESTAMP column.

Teradata wrapper support

Run the Teradata wrapper in trusted mode to optimize performance (UNIX systems only)

On UNIX systems, the Teradata wrapper is not threadsafe, and should be run in trusted mode for best performance.

UPDATE or DELETE operation errors on nicknames

By default, rows are not uniquely identified on Teradata data source tables. You might receive an SQL30090N, RC="21" error when you try to update or delete a nickname that is associated with a Teradata table or a Teradata view.

If the SQL30090N, RC="21" error occurs, create at least one unique index on the Teradata table that is being updated or deleted, and then try the operation again.

GRAPHIC and VARGRAPHIC Teradata data types are not allowed for EUC-JP databases (DB2 Universal Database for AIX only)

Teradata uses the EUC-JP encoding in GRAPHIC and VARGRAPHIC data types. If the federated database uses the EUC-JP code page, you cannot create a nickname for a Teradata table that contains GRAPHIC or VARGRAPHIC columns. You also cannot use transparent DDL to create a Teradata table that contains GRAPHIC or VARGRAPHIC columns. DB2 Universal Database uses UCS-2 encoding because some EUC-JP characters are 3 bytes.

If you try to create a nickname on a Teradata table with GRAPHIC or VARGRAPHIC columns or use transparent DDL to create a Teradata table with GRAPHIC or VARGRAPHIC columns, you will get error message SQL3324N.

GRAPHIC and VARGRAPHIC Teradata data types are not allowed for UTF-8 databases

Teradata does not support GRAPHIC and VARGRAPHIC data types for the UTF-8 character set. If the federated database uses the UTF-8 code page, you cannot create a nickname on a Teradata table that contains GRAPHIC or VARGRAPHIC columns. You cannot use transparent DDL to create a Teradata table that contains GRAPHIC or VARGRAPHIC columns.

WebSphere Business Integration wrapper support

Possible exceptions when using the WebSphere Business Integration wrapper to retrieve very large result sets

When using the WebSphere Business Integration Wrapper to retrieve very large result sets, you might encounter the following exception:

Unspecified exception occurred when parsing input document

The WBI wrapper might issue an SQL0901 error with message token: "Unspecified exception occurred when parsing input document." To avoid this error, run the wrapper in fenced mode by altering the wrapper and setting the DB2_FENCED wrapper option value to 'Y.'

New nickname option for detecting business object not found conditions

The WebSphere Business Integration wrapper is including a nickname option for detecting business object not found conditions. Because SAP and PeopleSoft APIs do not follow a standardized error reporting model, it is possible for each API to return a different message for the same error condition. Specifically, SAP and PeopleSoft business application APIs do not issue consistent error messages for a record not found condition.

For example, when a record for a given identifier cannot be located in the SAP application, the getdetail2 BAPI for the CUSTOMER business object might return error code 502, while the getdetail BAPI for the COMPANY business object might return a different error code.

Because of the inconsistent error messages, the WebSphere Business Integration adapters for mySAP.com and PeopleSoft cannot map these errors to the specific BO_NOT_FOUND status flag, which is in the response business object that is returned to the wrapper. The lack of information in the status flag can cause certain types of DB2 Information Integrator application queries to fail, even if a single record is missing or cannot be located in the application data source. The application failure might not be the desired behavior for the DB2 Information Integrator application.

The following example is a join of a WebSphere Business Integration SAP nickname that represents the Customer.get_detail2 BAPI with a local table that contains the customer identifiers:

```
Select name from sap_bapi_customer_getdetail2_NN a,  
local_table b where b.customerid=a.customerno;
```

If the local_table contains a single customer ID that does not exist in the SAP application, the query fails.

As a workaround for this problem, the WebSphere Business Integration wrapper provides an additional nickname option that allows users to specify specific error codes that should be processed as a record not found rather than an error for the nickname. The nickname option is: BO_NOT_FOUND_CODES. The value is a comma delimited list of business application error codes. The following example shows the new nickname option:

```
CREATE NICKNAME sap_bapi_customer_getdetail2_NN  
(  
CUSTOMER VARCHAR(10) OPTIONS  
(XPATH './ns3:sap_customeraddress/  
ns1:sap_customeraddress/ns1:CUSTOMER/text()'),  
...  
)
```

```
FOR SERVER
  sap_server
OPTIONS(XPATH '//ns3:sap_bapi_customer_getdetail2',
  ...
  BO_NOT_FOUND_CODES '502,503,501'
  ...
);
```

DB2 Control Center

db2updv8 command: updating a federated database to use the DB2 Control Center or utility stored procedures like nickname statistics (SYSPROC.NNSTAT)

If you are using a federated database with DB2 Information Integrator, Version 8.2 that was created using DB2 Universal Database, Version 8.1 or later, you must upgrade your federated database to use the DB2 Control Center or utility stored procedures, such as nickname statistics (SYSPROC.NNSTAT), with DB2 Information Integrator, Version 8.2. To update your federated database, use the **db2updv8** command.

An example of this command is:

```
db2updv8 -d testdb -u dbadmin -p dbpasswd
```

For more information about using this command, see the “db2updv8 - Update Database to Version 8 Current Level Command” topic in the DB2 Information Center.

Federated client and server compatibility

If you use DB2 Universal Database, Version 7 or Version 8.1 clients with a DB2 Information Integrator, Version 8.2 server, you must upgrade your clients to DB2 Information Integrator, Version 8.2 to use the new federated function in the DB2 Control Center.

If you use DB2 Information Integrator, Version 8.2 clients and a DB2 Universal Database Version 7 or Version 8.1 server, you must upgrade your server to DB2 Information Integrator, Version 8.2 to use the new federated function in the DB2 Control Center.

HMMER data sources

If the HMMQSEQ column for a HMMER nickname is defined as a CLOB data type, you must create sequence match function templates before you can query HMMER data sources. The SQL statements that you issue on the federated database to create the function templates are documented in “Fix Pack 8 Documentation updates” on page 49.

Web services

The Web services wrapper does not support HTTPS/SSL on Linux 2.4

The Web services wrapper supports HTTPS/SSL encryption on Linux 2.6 and later. The Web services wrapper does not support HTTPS/SSL encryption on Linux 2.4.

If a URL that starts with `https://` is used for a nickname, the wrapper will return an error from the `SELECT` statement on that nickname when you are using Linux 2.4.

WebSphere MQ

WebSphere MQ 5.3 configuration Issues for Solaris

After you install WebSphere MQ Version 5.3 with corrective service diskette 05 (CSD05) on a Solaris Operating Environment system, open a command prompt, and type:`ulimit -n 1024`.

This command sets the limit for the number of files that are opened and will allow you to create a queue manager in the Solaris Operating Environment.

Wrapper development

Workaround for `ClassNotFoundException` error in Java wrappers that use J2EE Application Programming Interfaces

A Java™ wrapper might fail to load a valid class that is specified in the `CLASSPATH`. The error is thrown when the wrapper tries to load the initial class context.

For example, the following exception information was logged from a wrapper that attempted to create a new `javax.naming.InitialContext` instance:

```
Exception :javax.naming.NoInitialContextException: Cannot instantiate class:
org.jnp.interfaces.NamingContextFactory
[Root exception is java.lang.ClassNotFoundException:
org/jnp/interfaces/NamingContextFactory]
javax.naming.NoInitialContextException:
Cannot instantiate class: org.jnp.interfaces.NamingContextFactory.
Root exception is java.lang.ClassNotFoundException:
org/jnp/interfaces/NamingContextFactory
  at java.lang.Class.forName0(Native Method)
  at java.lang.Class.forName(Class.java:256)
  at com.sun.naming.internal.VersionHelper12.loadClass(VersionHelper12.java:59)
  at javax.naming.spi.NamingManager.getInitialContext(NamingManager.java:661)
  at javax.naming.InitialContext.getDefaultInitCtx(InitialContext.java:256)
  at javax.naming.InitialContext.init(InitialContext.java:232)
  at javax.naming.InitialContext.<init> (InitialContext.java:208)
```

In the example, the `org.jnp.interfaces.NamingContextFactory` class is included in the `CLASSPATH`, but the Java Virtual Machine fails to load the class. This error occurs because the `com.sun.naming.internal.VersionHelper12` class loads the application-specific `InitialContext` subclass by using the class loader of the current thread, as returned by the `Thread.currentThread().getContextClassLoader()` method. However, the value that the method returned is null.

A potential workaround for class load failures that have a similar structure to the example error is to explicitly set the class loader for the current thread as a valid non-null `ClassLoader` instance, and to add the following code in the wrapper. Insert the following code immediately before the call that caused the `ClassNotFoundException` to be thrown:

```
final ClassLoader myClassLoader = this.getClass().getClassLoader();
ClassLoader threadClassLoader = (ClassLoader) AccessController.doPrivileged(new PrivilegedAction()
{
    public Object run()
```



```

        {
            return Thread.currentThread().getContextClassLoader();
        }
    }
};

if( myClassLoader != null && threadClassLoader == null)
{
    AccessController.doPrivileged(new PrivilegedAction()
    {
        public Object run()
        {
            Thread.currentThread().setContextClassLoader(myClassLoader);
            return null;
        }
    }
    );
}
}

```

The class to which this code is added might need to import the package `java.security.*` to successfully compile.

XML Metadata Registry

Required TCP/IP ports to enable Web browser access to the XML Metadata Registry

To allow Web browsers to access the XML Metadata Registry, you must enable unrestricted access to the following TCP/IP ports on the computer where the XML Metadata Registry is deployed:

- 20000 (for http)
- 20010 (for https)
- 20020 (for the XSLTLoader utility)

Reset Password utility

The XML Metadata Registry administrator account password on the application server for DB2 is used when you deploy the XML Metadata Registry. If you change the XML Metadata Registry administrator account password on the application server for DB2, you must also immediately register that password change in the XML Metadata Registry program. If you do not register a password change, the XML Metadata Registry program will not function correctly.

To register changes to the XML Metadata Registry administrator account password on the application server for DB2 in the XML Metadata Registry, use the Reset Password utility. The Reset Password utility is in the `uil` directory.

You must stop the Enterprise Application Server before you run the Reset Password utility. You can usually stop the Enterprise Application Server by using the old password. If you cannot stop the Enterprise Application Server with the old password, you can safely terminate the Java process that is associated with the application server for DB2.

To run the Reset Password utility, issue the following command:

```
resetPassword -u <userid> -o <oldpassword> -n <newpassword>
```

- `<userid>` is the XML Metadata Registry administrator account name.
- `<oldpassword>` is the old XML Metadata Registry administrator account password on the application server for DB2.

- `<newpassword>` is the new XML Metadata Registry administrator account password on the application server for DB2.

To help recover in case of failure, the Reset Password utility creates a copy of the security.xml configuration file in the directory where the application server for DB2 is installed.

Scripts to start and stop the XML Metadata Registry

You can now stop and start the XML Metadata Registry after it is deployed without stopping the application server for DB2, and any other application server for DB2 programs. The scripts (for UNIX and Linux™ systems) or batch files (for Windows systems) that enable you to perform these stop and start operations are in the `<eas_install_dir>/xmr/bin` directory. `<eas_install_dir>` is the directory where the application server for DB2 is installed.

The application server for DB2 must be running to use the scripts or batch files.

To stop the XML Metadata Registry, enter the following command:

```
stopXMR -user <userID> -password <password>
```

To start the XML Metadata Registry, enter the following command:

```
startXMR -user <userID> -password <password>
```

`<userID>` and `<password>` is the same user ID and password combination that is used for the **deployXMR** command (the XML Metadata Registry administrator ID and password combination).

Large document storage

To prevent errors when large documents are stored in the XML Metadata Registry, you can use the Jython wsadmin script `nlc.py`. You can also use this script to tune the performance of the XML Metadata Registry program in general.

The `nlc.py` script changes the `noLocalCopies` (pass by reference) setting of the Object Request Broker (ORB) that the XML Metadata Registry uses. The script changes the `noLocalCopies` current setting (true or false) to its opposite setting. The default setting for `noLocalCopies` when the XML Metadata Registry is installed is false. Changing `noLocalCopies` to true can eliminate errors, and can improve performance when large documents are stored in the XML Metadata Registry.

The `nlc.py` script is in the `util` directory. To run the `nlc.py` script on UNIX systems, issue the following command:

```
<application server for DB2 installation directory>/bin/wsadmin
-user <xmradmin>
-password <password>
-lang jython
-f <application server for DB2 installation directory>/xmr/util/nlc.py
```

To run the `nlc.py` script on Windows systems, issue the following command:

```
<application server for DB2 installation directory>\bin\wsadmin
-user <xmradmin>
-password <password>
-lang jython
-f <application server for DB2 installation directory>\xmr\util\nlc.py
```

`<xmradmin>` is the XML Metadata Registry administrator account name.

<password> is the XML Metadata Registry administrator account password.

After you run the nlc.py script, you must restart the application server for DB2 to activate the changes.

Patch required when using Microsoft Internet Explorer browser

Anyone who accesses the XML Metadata Registry by using the Internet Explorer browser must download and apply Microsoft critical update patch Q831167.

The easiest way to notify XML Metadata Registry users about this requirement is to modify the “About This Registry” message that displays on the XML Metadata Registry Log In page.

The XML Metadata Registry administrator can change the “About This Registry” message text from the Welcome page. The Welcome page appears after you successfully log in to the XML Metadata Registry. To change the “About This Registry” message text, go to the appropriate area of the Welcome page, enter the text changes in HTML, then click **Save**. The changed text appears on the XML Metadata Registry Log In page for all users.

The following example shows sample HTML that you can use to document the Microsoft patch requirement in the “About This Registry” message.

If you encounter the following problems when you attempt to register or log in using Microsoft Internet Explorer, you need to download and install a patch from Microsoft.

1. You receive an invalid user ID or password error when you use a valid user ID and password to log in.

2. The Registration page indicates that required fields are empty when they are not.

See the Microsoft Knowledge Base Article 831167 at
<a href "http://support.microsoft.com/default.aspx?kbid=831167">
http://support.microsoft.com/default.aspx?kbid=831167 for
instructions on downloading and installing the patch.

Changing the Administrator ID name value

The XML Metadata Registry administrator user account is given the name “XMR Administrator” by default when the XML Metadata Registry is deployed. The administrator user account name, not the administrator user ID value, appears in the XML Metadata Registry user interface.

To change the name of the XML Metadata Registry administrator account:

1. In the XML Metadata Registry program, browse through Business Objects.
2. Select the XML Metadata Registry administrator user name.
3. Click the user name to display the user information.
4. On the Basics page, change the value in the Name field.
5. Click Save to store the changes.

Do not use the back function in a Web browser

Do not use the back function (including the Back button) of your Web browser with the XML Metadata Registry interface. Using the Back function can cause problems in the XML Metadata Registry interface.

Double byte character strings do not work in Mozilla Web browsers

Web browsers that use Mozilla file upload controls do not properly handle file names that contain double-byte character set (DBCS) and multi-byte character set (MBCS) characters. Any attempt to upload files with names that contain DBCS or MBCS characters in Mozilla Web browsers will not work.

To avoid this problem, you can either rename the file that you are trying to upload, or use a Web browser that does not use the Mozilla file upload controls (for example, Microsoft Internet Explorer).

HTML limitation affects navigation tree display

XML Metadata Registry objects can contain consecutive white space characters (for example, spaces and tabs). However, because of HTML constraints, the object names as displayed in the XML Metadata Registry navigation tree show any consecutive white space in the name as a single space character.

Invalid HTML markup in About This Registry message causes display problems

The “About This Registry” message text is shown on the XML Metadata Registry Log In page. You can customize the “About This Registry” message by adding HTML markup as needed.

However, if invalid HTML is used (for example, a tag is missing an end tag), the Log In window might be displayed incorrectly. For example, it might be difficult to identify the Username and Password text boxes and controls.

Fix Pack 11 Documentation updates

Corrections to documentation

The following information describes corrections to documentation for fix pack 11.

All of the navigational references to the DB2 Information Center in this section assume that you are using the DB2 Information Center navigation tree as the starting point.

Product overviews

Topic title: Supported data sources

Location in the DB2 Information Center:

Product overviews → Information Integration → DB2
Information Integrator overview → Federated systems overview
→ Tutorials

Correction

Modify the table row for DB2 Universal Database for iSeries data source as follows:

5.1 with the following APARs and PTFs applied:

- APAR SE06003, PTF SI04582
- APAR SE06872, PTF SI05363
- APAR SE07533, PTF SI05990
- APAR SE08416, PTF SI08452
- APAR II13348, PTFs SF99502, SI10371, SI11215, SI11972, SI10596, SI11197, SI11300, SI10977, SI11022, SI10067, SI10718

5.2 with the following APARs and PTFs applied:

- APAR SE06003, PTF SI04582
- APAR SE07533, PTF SI05991
- APAR SE08416, PTF SI07135
- APAR II13348, PTFs SF99502, SI11626, SI11378

5.3

Migrating

Topic title: Changes to default data type mappings for Oracle NET8

Location in the DB2 Information Center

Migrating → Information Integration → Migrating federated systems → Migration reference → DataJoiner Version 2.1.1 migration → Default data type mapping changes → Oracle data sources → Oracle NET8 – changes to default data type mappings

Correction

Several rows in the table for Oracle NET8 forward default data type mapping changes include incorrect footnotes. The following table is correct:

Table 4. Oracle NET8 forward default data type mapping changes

Oracle data type	DataJoiner data type	Federated data type
BLOB	-	BLOB
CLOB	-	CLOB
LONG	CLOB	CLOB
LONG RAW	BLOB	BLOB
NCHAR(1-127)*	-	GRAPHIC
NCHAR(128-2000)*	-	VARGRAPHIC
NCLOB*	-	DBCLOB
NVARCHAR2*	-	VARGRAPHIC
TIMESTAMP**	-	TIMESTAMP
* Requires Oracle 7 client and server version 9 or later and the local UNICODE codepage.		
** Requires Oracle 7 client and server version 9 or later.		

Configuring

Topic title: What is Entrez?

Location in the DB2 Information Center:

Configuring → Federated systems and data sources →
Configuring data sources → Configuring Entrez data sources

Correction

The Entrez wrapper now supports access to the OMIM database on federated servers that run 32-bit operating systems.

Topic title: Registering the server for an Entrez data source

Location in the DB2 Information Center:

Configuring → Federated systems and data sources →
Configuring data sources → Configuring Entrez data sources

Correction

To access the OMIM database, you must specify the value OMIM in the TYPE parameter in the CREATE SERVER statement.

Topic title: PubMed schema tables

Location in the DB2 Information Center:

Configuring → Federated systems and data sources →
Configuring data sources → Configuring Entrez data sources

Correction

A new fixed column has been added to PMArticles nickname for the PubMed database. The new column is ArticleDate. To use and view the ArticleDate column, you must drop the PMArticles nickname after you apply fix pack 11, and create the PMArticles nickname again. The ArticleDate column is described in the following table:

Table 5. Information about the ArticleDate column

Column name	Data type	Description	Tags	Fetch key
ArticleDate	DATE	The date that an electronic version of the article was published	none	No

Developing

Customizing the group.properties file

Location in the DB2 Information Center:

Developing -> Web services and federated Web applications -> Developing applications that use the Web services provider -> Grouping Web services

Correction

Web services incorrectly ignores the **groupNamespaceURI** parameter when it is in the group.properties file and when the value of the **useDocumentStyle** parameter is true. The default namespace (<http://tempuri.org>) is used instead.

The correction makes the **groupNamespaceURI** parameter valid when you define the parameter in the group.properties file and when you set the value of **useDocumentStyle** parameter to true. Your Web services client might not work as expected if you defined a **groupNamespaceURI** but wanted to use the default namespace. When you use the document style encoding and you have a **groupNamespaceURI** defined, the generated Web service description language (WSDL) uses the target namespace that is defined in the group.properties file. To use the default you must remove the **groupNamespaceURI** from the group.properties file.

New documentation

This section provides new information for this release.

Equality operations on the BioRS wrapper

The following topic will be added to the information center under Configuring -> Federated systems and data sources -> Configuring data sources -> Configuring BioRS data sources -> Queries and custom functions

You can use an equality operator (=) in literal expressions or in join queries, with certain limitations. In either case, to be pushed down to the BioRS server the equality operator must reference the **_ID_** element of a BioRS databank. Queries that include an equality operator but that do not reference the **_ID_** element will not be pushed down for processing by the BioRS server.

You can use the equality operator in a literal expression. For example:

```
ID = 'swissprot:100K_RAT'
```

You can use an equality predicate in a join between a BioRS databank and another local table or non-BioRS nicknames. For example:

```
SELECT n.ID, n.EntryDate, t.C1 FROM w46851_n1 n, w46851_t1 t WHERE t.ID = n.ID
```

A join between BioRS databanks must reference the `_ID_` element of one databank and a reference-type element for the other databank.

However, the use of an equality predicate can return results that differ from the expected results under these conditions:

Case-insensitive matching

The operation is not case-sensitive. For example, `ID='100k_rat'` matches both of the following strings:

- `'100k_rat'`
- `'100K_RAT'`

Wildcard matching

The statement `ID='100K_R*'` matches both `'100K_RAT'` and `'100K_RODENT.'`

Databank prefixing

The operation returns a prefix that indicates the source databank. For example, `ID='100K_RAT'` in a join on the SwissProt databank might return a value of `'swissprot:100K_RAT.'`

Note: Do not create applications that depend on any of the described behaviors.

The following example illustrates the behavior of the equality predicate in a join.

The local table, `w46851_t1`, contains the following values:

ID	C1
swissprot:100K_RAT	0
swissprot:RAT	1
swissprot:100K_R	2
swissprot:100K_R*	3
swissprot:100k_rat	4
100K_RAT	100
RAT	101
100K_R	102
100K_R*	103
100k_rat	104

You can join the table `w46851_t1` with a nickname `w46851_n1` that is based on the SwissProt databank. The following statement shows the join query with an equality operation:

```
SELECT n.ID, n.EntryDate, t.C1 FROM w46851_n1 n, w46851_t1 t WHERE t.ID = n.ID
```

The following results are returned:

ID	ENTRYDATE	C1
swissprot:100K_RAT	01-NOV-1997	0
swissprot:100K_RAT	01-NOV-1997	3
swissprot:100K_RAT	01-NOV-1997	4
swissprot:100K_RAT	01-NOV-1997	100
swissprot:100K_RAT	01-NOV-1997	103
swissprot:100K_RAT	01-NOV-1997	104

6 record(s) selected.

However, the expected behavior is that only row 0 would be returned.

Nicknames for the OMIM database

The following topic will be added to the information center under Configuring → Federated systems and data sources → Configuring data sources → Configuring Entrez data sources

Each OMIM nickname represents a group of fields in the OMIM database. Each nickname contains a fixed list of columns, and the nicknames are organized in a hierarchical relationship.

The top of the hierarchy of nicknames is the OMIM nickname. The OMIM nickname is the parent of all of the other nicknames and is called the *root nickname*. All of the other nicknames have parent-child relationships that lead back to the root nickname.

OMIM

OMIM_Alias

OMIM_Allelic_Variant

OMIM_Allelic_Variant_Description

OMIM_Allelic_Variant_Description_UID

OMIM_Clinical_Synopsis

OMIM_Contributors

OMIM_Edit_History

OMIM_Links

OMIM_Links_UID

OMIM_References

OMIM_See_Also

OMIM_Text

OMIM_Text_UID

If you want to query a child nickname, you must create joins between each child nickname and the corresponding parent nickname, up to the root nickname.

For example, if you want to query the OMIM_Allelic_Variant_Description nickname, you must join the OMIM_Allelic_Variant_Description nickname (child) to the OMIM_Allelic_Variant nickname (parent) and join the OMIM_Allelic_Variant nickname (child) to the OMIM nickname (parent).

Fix Pack 10 Documentation updates

Corrections to documentation

The following information describes corrections to documentation for fix pack 10.

All of the navigational references to the DB2 Information Center in this section assume that you are using the DB2 Information Center navigation tree as the starting point.

Configuring

Topic title: Oracle wrapper library file names

Location in the DB2 Information Center:

Configuring -> Federated systems and data sources ->
Configuring data sources -> Configuring Oracle data sources ->
Adding Oracle data sources to a federated system

Correction

The library file names in the "Oracle wrapper library locations and file names" table are not correct. The correct library file names are listed in the table below:

Table 6. Oracle wrapper library locations and file names

Operating system	Directory path	Library file names
AIX	/usr/opt/db2_08_01/lib/	libdb2net8.a
HP-UX	/opt/IBM/db2/V8.1/lib/	libdb2net8.sl
Linux	/opt/IBM/db2/V8.1/lib/	libdb2net8.so
Solaris	/opt/IBM/db2/V8.1/lib/	libdb2net8.so
Windows	%DB2PATH%\bin	db2net8.dll

Topic title: Checking the FEDERATED parameter

Location in the DB2 Information Center:

Configuring -> Federated systems and data sources ->
Configuring a federated system -> Checking the setup of the federated server

Correction

The text in step 2 is incorrect. The correct text is:

Check the MAX_CONNECTIONS and MAX_COORDAGENTS parameter settings. The value for the MAX_CONNECTIONS parameter must be a number that is less than or equal to the value for the MAX_COORDAGENTS parameter. When the MAX_CONNECTIONS parameter is set to a number that is higher than the MAX_COORDAGENTS parameter, the Concentrator feature is on. To set the FEDERATED parameter to YES, the Concentrator feature must not be on.

Topic title: Preparing the federated server and database to access SQL Server data sources

Location in the DB2 Information Center:

Configuring -> Federated systems and data sources ->
Configuring data sources -> Configuring Microsoft SQL Server
data sources -> Adding SQL Server data sources to a federated
system

Correction

In the procedure for UNIX, the second bullet in step 3 is incorrect.
The correct text is:

- On Linux, you need to create the following symbolic links:

```
ln -s $DJX_ODBC_LIBRARY_PATH/./locale /usr/local/locale  
ln -s $DJX_ODBC_LIBRARY_PATH/libodbcinst.so /usr/lib/libodbcinst.so
```

If you are using the DataDirect Technologies Connect for the
ODBC driver, you must also create a symbolic link. For example:

- If you are using DataDirect 4.2, include the following symbolic
link:

```
ln -s $DJX_ODBC_LIBRARY_PATH/libivicu19.so /usr/lib/libivicu19.so
```

- If you are using DataDirect 5.0, you must include the following
symbolic link:

```
ln -s $DJX_ODBC_LIBRARY_PATH/libivicu20.so /usr/lib/libivicu19.so
```

If you are using any version of DataDirect and you do not
include the symbolic link, the CREATE WRAPPER
MSSQLODBC3 statement fails with the following error message:
SQL10013N The specified library name could not be loaded.

Topic title: Excel data source - Sample scenario

Location in the DB2 Information Center:

Configuring -> Federated systems and data sources ->
Configuring data sources -> Configuring Microsoft Excel data
sources

Correction

The SQL example in step 3 of the procedure is incorrect because
the SERVER keyword is missing. The following SQL example is
correct:

```
db2 => CREATE NICKNAME Compound_Master (compound_name VARCHAR(40),  
weight FLOAT, mol_count INTEGER, was_tested VARCHAR(20))  
FOR SERVER biochem_lab  
OPTIONS ( FILE_PATH 'C:\Data\Compound_Master.xls')
```

Installing

Topic title: Prerequisites for installing DB2 Information Integrator Relational Wrappers

Location in the DB2 Information Center:

Installing -> Information Integration -> Planning to install DB2
Information Integrator Version 8 on Windows and UNIX ->
Hardware and software requirements

Correction

Sybase data sources

If you are using Sybase Adaptive Server Enterprise in an
environment where it is accessed frequently, install version

12.5.0.3 or later. Other versions of Sybase Adaptive Server Enterprise have a known array overrun problem.

If you are using the Sybase wrapper on AIX, install the AIX Base Application Development Math Library. The following AIX command will report if the math library is installed.

```
lslpp -l bos.adt.libm
```

If you are using the Sybase wrapper with Sybase Adaptive Server Enterprise Version 11.9, you must use version 11.9.2.6 or later. If one of these versions is not installed, you must install the latest Emergency Bug Fix (EBF) from Sybase on your Sybase server.

New documentation

This section provides new information for this release.

getParameterOrder method

The following topic will be added to the information center under Reference -> APIs -> Wrapper Development Java APIs -> Planning Classes -> Reply class

Retrieves a list of parameter handles. The wrapper calls this method after all the head expressions and predicates that can be processed by the wrapper are added to the Reply object.

Syntax

```
public final int[] getParameterOrder()  
                    throws WrapperException
```

Parameters

none

Return value

An array of the parameter handles. The order of the array corresponds to the order of the parameter values in the RemoteOperation object.

Throws

A WrapperException object if the processing fails.

Expanded support for namespaces for the XML wrapper

The XML wrapper expands the support for namespaces.

You can specify the NAMESPACES nickname option when you register nicknames. The value of the NAMESPACES nickname option is a comma-separated list of name and value pairs. The XML wrapper uses the name and value pairs to resolve the namespace prefixes that are in the nickname and column XPath expressions. The prefixes that are used in the XPath expressions are processed by the XPath processor.

In the following example, the XML document includes the name, code, and description information for three products. The XML document declares two namespaces, `http://www.one.com` and `http://www.two.com`, and has one default namespace `http://www.default.com`. The product element is associated with the `ns1` namespace. The product element contains the name and code attributes and the desc element. The name attribute is not associated with a namespace. The code attribute is associated with the `ns2` namespace. The desc element is associated with the default namespace.

```
<?xml version="1.0" encoding="UTF-8"?>
<doc xmlns:ns1="http://www.one.com" xmlns:ns2="http://www.two.com"
    xmlns="http://www.default.com">
<ns1:product name="Computer" ns2:code="ABC123">
  <desc>"The Computer product description"</desc>
</ns1:product>
<ns1:product name="Keyboard" ns2:code="EFG456">
  <desc>"The Keyboard product description"</desc>
</ns1:product>
<ns1:product name="Mouse" ns2:code="HIJ789">
  <desc>"The Mouse product description"</desc>
</ns1:product>
</doc>
```

The following table shows the namespace that is associated with each element and attribute in the XML document.

Table 7. The elements, attributes, and namespaces in the XML document

Element or attribute	Namespace in XML document
product: An element in the XML document.	ns1="http://www.one.com"
name: An attribute of the product element in the XML document.	None. The attribute is not associated with a namespace.
code: An attribute of the product element in the XML document.	ns2="http://www.two.com"
desc: An element within the product element in the XML document.	"http://www.default.com". Elements that are part of the default namespace do not contain prefixes.

When you register the nickname for the XML document, you define three columns to correspond to the elements and attributes in the XML document. You specify the namespace information in the NAMESPACES nickname option. For example:

```
CREATE NICKNAME products
  (name varchar(16) OPTIONS (XPATH '@name'),
   code varchar(16) OPTIONS (XPATH '@pre2:code'),
   description varchar (256) OPTIONS (XPATH './default:desc'))
FOR SERVER xml_server
OPTIONS (FILE_PATH '/home/mbreining/sql/xml/namespaces.xml',
        XPATH '/doc/pre1:products',
        NAMESPACES 'pre1="http://www.one.com", pre2="http://www.two.com",
                    default="http://www.default.com"');
```

The namespace prefixes that are used in the CREATE NICKNAME statements can be different than the prefixes that are used in the XML instance or document. You can use a different prefix in the XPath expression and XML document, as long as the prefix resolves to the same namespace URI.

The NAMESPACES nickname option uses packed descriptors to support strings that are longer than 256 characters.

For more information about XML namespaces, see the explanation for namespaces on the W3C Web site.

Fix Pack 9 Documentation updates

Corrections to documentation

The following information describes corrections to documentation for fix pack 9.

All of the navigational references to the DB2 Information Center in this section assume that you are using the DB2 Information Center navigation tree as the starting point.

Product overviews

Topic title: Supported data sources

Location in the DB2 Information Center:

Product overviews → Information Integration → DB2
Information Integrator overview → Federated systems overview

Addition 1 of 7

For DB2 Universal Database for iSeries, 5.3 is a supported version.

Addition 2 of 7

For Microsoft SQL Server: If you use the Microsoft SQL Server wrapper with a UTF-8 database on UNIX you must use DataDirect Connect for ODBC 4.2 Service Pack 2 or later.

Addition 3 of 7

For Informix data sources:

- On Solaris, the Informix client version 2.81.xC2 is not supported. If you are using the Informix client version 2.81.xC2, update the client to version 2.81.xC2R1 or later.
- On Windows, the Informix SDK client version 2.81.TC2 or later is required.
- If you use Informix Dynamic Server 9.3 as a data source, you must use Informix Dynamic Server 9.30.xC4 or later.
- On the 64-bit mode zLinux operating system, you must use the Informix client version 2.81.FC3 or later.

Addition 4 of 7

For Teradata data sources: On Windows, you must use the Teradata client TTU 7.0 or later and the Teradata API library CLIV2 4.7.0 or later on the federated server.

Addition 5 of 7

For Oracle data sources: Oracle 8.0.6 and 8.1.6 are not supported versions.

Addition 6 of 7

For BioRS and Entrez, the access method should be HTTP.

Addition 7 of 7

For BioRS the supported versions are: 5.0.14, 5.2.x.x.

Installing

Topic title: Web services consumer functions

Location in the DB2 Information Center:

Installing —> Information Integration —> Installing DB2 Information Integrator on Windows and UNIX —> Installing Web services components —> Installing the Web services consumer

Addition

To use HTTP proxies, you must set two environment variables for configuring to DB2 Universal Database:

- Set the DB2SOAP_PROXY variable to include the host name of the computer with the HTTP proxy.
- Set the DB2SOAP_PORT to the port of the HTTP proxy, such as 8080.

The SOAP traffic goes through the system that tunnels the firewall.

You can set the DB2SOAP_TIMEOUT environment variable to specify a maximum number of minutes to wait for both a network transfer and the computation of a result. When you use a proxy server, make sure that the TIMEOUT setting of the proxy server is longer than the TIMEOUT value of the Web services wrapper SERVER OPTION or the DB2SOAP_TIMEOUT value. Otherwise, the proxy might report a timeout to Information Integrator even though Information Integrator would have waited longer for a result.

Configuring

Topic title: Fixed columns for BLAST nicknames

Location in the DB2 Information Center:

Configuring -> Federated systems and data sources -> Configuring data sources -> Configuring BLAST data sources -> Adding BLAST to a federated system -> Registering nicknames for BLAST data sources

Correction 1 of 3

There are six new input columns for BLAST nicknames. You must drop any existing nicknames and create the nicknames again before you can use the new input columns.

Table 8. New fixed input columns for BLAST nicknames

Name	Data type	Operators	Description
Mask_Lower_Case	CHAR(1)	=	Use lowercase filtering with a FASTA sequence.
Query_Genetic_Code	INTEGER	=	Query genetic code uses default = 1.
DB_Genetic_Code	INTEGER	=	DB genetic code for tblastn and tblastx queries uses default = 1.
XDropoff_Ungapped	DOUBLE	=	The X dropoff value for ungapped extension, measured in bits. The value 0.0 invokes the default behavior. For blastn queries, the default is 20 bits. For megablast queries, the default is 10 bits. For all other query types, the default is 7 bits (REAL data types).

Table 8. New fixed input columns for BLAST nicknames (continued)

Name	Data type	Operators	Description
XDropoff_Gapped	INTEGER	=	The X dropoff value for gapped alignment, measured in bits. The value 0.0 invokes the default behavior. For blastn queries, the default is 30 bits. For megablast queries, the default is 20 bits. For all other query types, the default is 15 bits (INTEGER data types).
Final_XDropoff	INTEGER	=	The X dropoff value for the final gapped alignment, measured in bits. The value 0.0 invokes the default behavior. For blastn and megablast queries, the default is 50 bits. For tblastx queries, the default is 0 bits. For all other query types the default is 25 bits (INTEGER data types).

Correction 2 of 3

There are new BLAST switches for the new input columns.

Table 9. BLAST search types and switches supported by the new input fixed columns

Name	BLAST search types	BLAST switch	Required	Default
Mask_Lower_Case	n, p, x, tn, tx	-U	No	F
Query_Genetic_Code	n, p, x, tn, tx	-Q	No	1
DB_Genetic_Code	tn, tx	-D	No	1
XDropoff_Ungapped	n, p, x, tn, tx	-y	No	0.0
XDropoff_Gapped	n, p, x, tn, tx	-X	No	0
Final_XDropoff	n, p, x, tn, tx	-Z	No	0

Correction 3 of 3

There is one new fixed output column for BLAST nicknames.

Table 10. New fixed output columns for BLAST nicknames

Name	Data type	Description
Hsp_Score	DOUBLE	Use lowercase filtering with a FASTA sequence.

Topic title: Writing BLAST SQL queries

Location in the DB2 Information Center:

Configuring -> Federated systems and data sources ->
 Configuring data sources -> Configuring BLAST data sources ->
 Adding BLAST to a federated system

Correction 1 of 3

Add the following text to the Restrictions section in this topic:

If the BlastSeq column for a BLAST nickname is defined as a CLOB data type, you must create sequence match function templates before you can query BLAST data sources. The SQL statements that you issue on the federated database to create the function templates are:

```

CREATE FUNCTION lblast.sequence_match (CLOB, CLOB)
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lblast.sequence_match (CLOB, VARCHAR())
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lblast.sequence_match (VARCHAR(), CLOB)
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lblast.sequence_match (VARCHAR(), VARCHAR())
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;

```

Correction 2 of 3

You can use the SUBSTR scalar function in the query predicate. The SUBSTR function returns part of a string.

For example:

```

SELECT BlastSeq FROM t1, t2
  WHERE BlastSeq = SUBSTR (t2.sequence, 15, 300)

```

Correction 3 of 3

You can use the SUBSTR function in a SEQUENCE_MATCH function.

For example:

```

SELECT BlastSeq FROM t1, t2
  WHERE LSblast.SEQUENCE_MATCH
    (BlastSeq, SUBSTR(t2.sequence, 15, 300)) = 1

```

Topic title: CREATE SERVER statement options - BioRS wrapper

Location in the DB2 Information Center

Configuring → Federated systems and data sources →
 Configuring data sources → Configuring BioRS data sources →
 Adding BioRS to a federated system

Correction

The description for the VERSION parameter has changed to reflect the support for BioRS server version 5.2. The updated description is:

VERSION The version of the BioRS server that you want to access. The supported BioRS versions are 5.0.14 and 5.2. If you are accessing a BioRS server that is version 5.2, you must specify 5.2 as the value for the VERSION parameter. You do not need to specify this option if you are using version 5.0.14. The default value of 1.0, which equates to version 5.0.14, is used for this parameter if you do not specify the value.

Topic title: Registering nicknames for XML data sources

Location in the DB2 Information Center

Configuring → Federated systems and data sources →
 Configuring data sources → Configuring XML data sources →
 Adding XML to a federated system

Correction: Restriction with Windows 2003 federated servers

If you try to access XML data sources that are on a shared drive from a federated server that runs Windows 2003, your query might fail with the following error message:

```

SQL1822N Unexpected error code "ERRNO = 2"
received from data source "XML_SERVER".
Associated text and tokens are
"Unable to read file".
SQLSTATE=560BD

```

This is a limitation of Windows 2003. You can avoid this problem by specifying the absolute path in the FILE_PATH or DIRECTORY_PATH option in the CREATE NICKNAME statement.

The following example shows a CREATE NICKNAME statement with an abbreviated path that is specified in the FILE_PATH option (X:\ is the drive that maps to the remote computer).

```
CREATE NICKNAME customers
(
  id VARCHAR(5) OPTIONS(XPATH './@id'),
  name VARCHAR(16) OPTIONS(XPATH './name'),
  address VARCHAR(30) OPTIONS
(XPATH './address/@street'),

  FOR SERVER xml_server
  OPTIONS(FILE_PATH 'X:\customers.xml',
    XPATH '/doc/customer');
```

Queries that use this nickname might fail because you specified the abbreviated path.

For a federated server that runs Windows 2003, specify the absolute path in the FILE_PATH or DIRECTORY_PATH option in the CREATE NICKNAME statement.

For example:

```
CREATE NICKNAME customers
(
  id      VARCHAR(5) OPTIONS(XPATH './@id'),
  name    VARCHAR(16) OPTIONS(XPATH './name'),
  address VARCHAR(30) OPTIONS(XPATH './address/@street'),
  FOR SERVER xml_server
  OPTIONS(FILE_PATH '\\host.svl.ibm.com\D$\customers.xml',
    XPATH '/doc/customer');
```

Topic title: Registering nicknames for table-structured files

Location in the DB2 Information Center

Configuring -> Federated systems and data sources ->
Configuring data sources -> Configuring table-structured file data sources

Correction: Restriction with Windows 2003 federated servers

If you attempt to access a table-structured file data sources that are on a shared drive from federated server that runs Windows 2003, your query might fail with the following error message:

```
SQL1822N Unexpected error code "ERRNO = 2"
received from data source "SERVERNAME1".
Associated text and tokens are
"Unable to read file".
SQLSTATE=560BD
```

This is a limitation of Windows 2003. You can avoid this problem by specifying the absolute path in the FILE_PATH option in the CREATE NICKNAME statement.

The following example shows a CREATE NICKNAME statement with an abbreviated path specified in the FILE_PATH option:

```
CREATE NICKNAME nickname
(COL1 CHARACTER (10) NOT NULL)
  FOR SERVER servername1
  OPTIONS (FILE_PATH '\textfile1.txt');
```

Queries that use this nickname might fail because you specified the abbreviated path.

For a federated server that runs Windows 2003, specify the absolute path in the FILE_PATH option in the CREATE NICKNAME statement.

For example:

```
CREATE NICKNAME nickname
(COL1 CHARACTER (10) NOT NULL)
  FOR SERVER servername1
  OPTIONS (FILE_PATH
'\host.svl.ibm.com\D$\textfile1.txt');
```

Developing

Topic title: Installing or migrating WORF to work with WebSphere Application Server Version 5 or later for Windows and UNIX

Location in the DB2 Information Center:

Developing —> Web services and federated Web applications —> Installing the Web services provider —> Installing or migrating WORF —> For Windows and UNIX

Addition

If you create a Web services application in WebSphere Studio Application Developer Version 5, the Web applications that are generated are not compatible with the DB2 Information Integrator Version 8.2 Web services engine. You will not be able to deploy that Web application into an application server that uses DB2 Information Integrator Version 8.2 Web services provider. Also, if you manually create a Web application that uses the DB2 Information Integrator Version 8.2 Web services engine, and then import that application into WebSphere Studio Application Developer Version 5, you cannot run that Web application.

You must manually update a Web application that is generated with WebSphere Studio Version 5 to deploy the application in an application server that has DB2 Information Integrator Web Services Provider Version 8.2.

To update the Web application:

1. Optional: Copy the Web application into a file system to modify the files in the application. Use the following command from the command line:

```
jar xf myWebapp.war
```
2. Replace the worf-servlets.jar file in the \WEB-INF\lib directory of the Web application with the worf-servlets.jar file that is in the dxxworf.zip file.
3. If you are using the custom configuration manager that is used by WebSphere Application Server 5.1, perform one of the following actions:

- Generate the deployment descriptors by using the default Apache SOAP configuration manager. The Web services provider automatically redeploys all of the Web services when you access them.
- Manually regenerate the Apache SOAP deployment descriptors. Modify the dds.xml file by regenerating the deployment descriptors:

a. Issue the following command:

```
com.ibm.etools.webservice.rt.dadx2dd.Dadx2Dd
-r list.dadx
-p /db2sample
-n /dxx_sample
-i "classes\groups\dxx_sample\list.dadx"
-o "classes\dds\dxx_sample\list.isd"
```

You must precede the group name and the directory name with a slash.

b. Add or replace the generated deployment descriptor (list.isd) to the dds.xml file.

The dds.xml file contains all of the Apache SOAP deployment descriptors for the current Web application.

Note: If a soap.xml file exists in the root of the Web application, and it contains the com.ibm.soap.server.XMLDrivenConfigManager specification (this driver is the custom configuration manager that is used by WebSphere Application Server 5.1 when using Apache SOAP), then you are using the custom configuration manager.

4. For each application that you deployed, replace the JavaServer Pages in the worf directory of that application, with the files in the worf directory of the apache-services.war or the axis-services.war.
5. Create the WAR file again with the following command:


```
jar cf myWebapp.war *
```
6. Deploy the application again.

Topic title: Starting and stopping the application server for DB2 Information Integrator

Location in the DB2 Information Center:

Developing —> Web services and federated Web applications —> Deploying and testing Web applications

Addition 1 of 2

To start the application server for DB2, you must use server1 as the server name.

```
startServer server1
stopServer server1
```

Addition 2 of 2

You must define port number 20000 for the Web services that are running under the application server for DB2. Invoke the WOF samples with the following URL:

```
http://localhost:20000/services
```

In this example, `services` is the context root that you specify when you install the Web services.

Reference

Topic title: Server options for federated systems

Location in the DB2 Information Center:

Reference —> Configuration parameters —> Federated systems and data sources

Correction

Table: Server options for nonrelational data sources.

In the Web services row, X has been added to the TIMEOUT column.

Table: Server options and their settings

In the TIMEOUT row, the following column has been added:

Table 11.

TIMEOUT	Web services: Specifies the time, in minutes, that DB2 should wait for a network transfer and the computation of a result.
---------	--

Fix Pack 8 Documentation updates

Corrections to documentation

The following information describes corrections to documentation for fix pack 8.

All of the navigational references to the DB2 Information Center in this section assume that you are using the DB2 Information Center navigation tree as the starting point.

Migrating

Topic title: Verifying that your databases are ready for migration

Location in the DB2 Information Center:

Migrating —> Database Systems —> DB2 Universal Database Version 8.2 —> Migrating from previous versions of DB2 Universal Database —> Servers —> Migrating DB2 Servers (Linux and UNIX) —> Premigration tasks

Correction 1 of 2

The second sentence in the topic should read as follows:

Use the db2ckmig command to verify that databases that are owned by the current instance are ready to be migrated.

Correction 2 of 2

The following paragraph should be added to step 3:

On UNIX (AIX), you can run the db2ckmig command from the install_directory/instance where install_directory is /usr/opt/db2_08_01/ on AIX and /opt/IBM/db2_V* on all other UNIX systems.

Configuring

Topic title: Adding data sources to a federated server using the DB2 UDB Control Center

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Data source configuration - overview

Correction

The following prerequisite should be added to this topic:

Prerequisite: To use the discover feature to create server definitions for Microsoft SQL Server data sources, you must edit the data source configuration file before you use the discover feature.

To edit the data source configuration file:

1. Determine the name of the data source configuration file. The data source configuration file is specified in the db2dj.ini file in the ODBCINI entry. Typically, the name of the data source configuration file is odbc.ini or .odbc.ini.
2. Edit the data source configuration file.

3. In the data source configuration file, locate the Microsoft SQL Server data sources in the [ODBC Data Sources] section.
4. Add entries for the Microsoft SQL Server data sources that you want to access, if entries for the data sources do not already exist. The entry must include the text SQL Server.

For example, the entry for a DSN with the name mssqldsn is:

```
mssqldsn=Microsoft SQL Server 2003
```

5. Save the changes to the data source configuration file.

Topic title: Registering server definitions for a data source

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Data source configuration - overview

Correction

The federated server does not verify whether the version of the server that you specify in the CREATE SERVER statement matches the version of the data source server. If you specify an incorrect version in the CREATE SERVER statement, you might receive SQL errors. Errors can occur when you issue SQL statements that specify a nickname that relies on the inaccurate server definition.

Topic title: CREATE SERVER statement options - BioRS wrapper

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring BioRS data sources —> Adding BioRS data sources to a federated server

Correction

The text that describes the VERSION parameter is not correct. The correct text is:

VERSION

Specifies the version of the BioRS server. Examples of valid values are 5.0 or 5.2.1.10. If you do not specify the VERSION parameter, the default value 1.0 is used. This default value is used for backward compatibility, and is equivalent to specifying the version 5.0.

Topic title: Constructing BLAST SQL queries

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring BLAST data sources —> Adding BLAST to a federated system

Correction

Wrappers that require predicates, such as the BlastSeq fixed input column, cannot process queries that result in a left outer join on the required predicate.

For example, the following query returns an SQL0901N error:

```
SELECT n1.Score FROM blastNN1 n1
LEFT OUTER JOIN myseqs n2 ON N1.BlastSeq = n2.seq
```

Addition

If the BlastSeq column for a BLAST nickname is defined as a CLOB data type, you must create sequence match function templates before you can query BLAST data sources. The SQL statements that you issue on the federated database to create the function templates are:

```
CREATE FUNCTION lblast.sequence_match (CLOB, CLOB)
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lblast.sequence_match (CLOB, VARCHAR(1))
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lblast.sequence_match (VARCHAR(1), CLOB)
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lblast.sequence_match (VARCHAR(1), VARCHAR(1))
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
```

Topic title: Custom functions and Entrez queries

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring Entrez data sources —> Adding Entrez to a federated system —> Queries and custom functions for Entrez data sources

Correction

When you use the CONTAINS function on a fetch key, the results of the query might not be accurate. The fetch key for PubMed nicknames is pmid. The fetch key for Genbank nicknames is gi.

For example, the following SELECT statement uses the CONTAINS function. When you issue this statement, no rows are returned:

```
SELECT g.gi,g.seqlength FROM gbseq g
  WHERE entrez.contains(g.gi,'23273757')=1;
```

If you issue the SELECT statement with an equal predicate, the rows are returned:

```
SELECT g.gi,g.seqlength FROM gbseq g
  WHERE g.gi = '23273757';
```

Rows that are not returned when you use the CONTAINS function, but are returned when you use an equal predicate, might be marked as dead in the Entrez database and not available for search.

Topic title: What is Extended Search?

Location in the DB2 Information Center:

Configuring —> Federated systems and data sources —>
Configuring data sources —> Configuring Extended Search data sources

Addition

To use Extended Search with WebSphere, you must have Extended Search 4.0.2 and WebSphere 5.1.1.

Topic title: Extended Search vertical tables

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring Extended Search data sources

Correction

The last table in this topic lists the fixed columns that the wrapper creates when the VERTICAL_TABLE option is used. In the list of valid data types that the column FIELD_DATATYPE can represent, the DOUBLE data type is also a valid data type.

Topic title: Extended Search wrapper - query guidelines

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring Extended Search data sources

Correction 1 of 5

When an SQL query contains predicates in the WHERE clause that the Extended Search wrapper cannot process, the following SQL0901N error is returned:

```
SQL0901N The SQL statement failed because of a non-severe system error.
Subsequent SQL statements can be processed.
(Reason "sqlNo_crude_remote_pushdow[200]:rc(-2144272270)
Error generatin".) SQLSTATE=58004
```

The following examples show queries that return the SQL0901N error.

Example of a query without a predicate:

```
SELECT E.COLUMN FROM ES_NICKNAME as E
```

Example of query that uses the ANY, ALL, SOME, or EXIST predicates:

```
SELECT E.COLUMN
FROM ES_NICKNAME as E
WHERE E.COLUMN = ALL (SELECT COL FROM TABLE)
```

Example of a query that uses the NOT IN predicate and is not supported with a FULL SELECT clause:

```
SELECT E.COLUMN
FROM ES_NICKNAME as E
WHERE E.COLUMN NOT IN (SELECT COL FROM TABLE)
```

Example of a query that uses the IN predicate and is not supported with a FULL SELECT clause:

```
SELECT E.COLUMN
FROM ES_NICKNAME as E
WHERE E.COLUMN IN (SELECT COL FROM TABLE)
```

Example of a query that uses a fixed column predicate:

```
SELECT E.COLUMN
FROM ES_NICKNAME as E
WHERE DOC_ID = 'ABC'
```

If the SQL query contains at least one predicate that the Extended Search wrapper can process, the query is accepted and run.

The following example shows a query that does not return the error:

```
SELECT E.COLUMN
FROM ES_NICKNAME as E
WHERE E.COLUMN IN (SELECT COL FROM TABLE)
AND E.COLUMN = 'ABC'
```

The predicate E.COLUMN IN (SELECT COL FROM TABLE) is rejected by the Extended Search wrapper, but the predicate E.COLUMN = 'ABC' can be processed by the Extended Search wrapper.

Correction 2 of 5

The Extended Search wrapper can process queries that specify the SQL LIKE predicate if the General Query Language (GQL) that Extended Search

uses can process the LIKE predicate. The data sources that support the LIKE predicate are listed in the GQL support matrix in the *IBM Lotus Extended Search Programming*.

Examples of valid SQL statements with the LIKE predicate:

```
SELECT * FROM nickname WHERE title LIKE "%defense%"
```

```
SELECT * FROM nickname WHERE title LIKE "%defense"
```

```
SELECT * FROM nickname WHERE title LIKE "defense%"
```

Example of an invalid SQL statement with the LIKE predicate:

```
SELECT * FROM nickname WHERE title LIKE "defen_e"
```

In this example, the Extended Search wrapper cannot convert the single character specification in the SQL query into a valid GQL statement.

Correction 3 of 5

Limitations of the Extended Search data sources affect the queries that you can run. Before you run queries on Extended Search data sources, check the data types, the operators in the predicates, and the target Extended Search data sources. For example, you cannot specify combinations of AND, OR, or SUBTRACT predicates in the es_search() table function queries for File System data sources on the Extended Search server. For a complete list of supported predicates, see the GQL support matrix in *IBM Lotus Extended Search Programming*.

Correction 4 of 5

When you use an SQL date expression with the Extended Search custom function ESWRAPPER.ES_SEARCH, you must use the YYYYMMDD date format. For example, for December 31, 2004, the date that you specify is 20041231.

Correction 5 of 5

Some of the Extended Search wrapper data sources do not support comparison operators in string fields. Examples of data sources that do not support comparison operators are File System, Lotus Notes® Formula, Lotus Notes Full Text, and Web. The types of operators that are not supported include the greater than, less than, less than or equal to, and greater than or equal to operators.

For example, the following query returns an SQL1822N error. This query selects data from a VARCHAR column with the column name LA.

```
SELECT YEAR(JournalDate) FROM notes.alzheimer_13 WHERE LA > 'A';
```

The following error is returned from this query:

```
SQL1822N Unexpected error code "ES Non-critical Error" received from data source "ES Server: iisvtnt2.sv". Associated text and tokens are "DBCQAE0011 Cannot transla". SQLSTATE=560BD
```

The GQL support matrix that is in the *IBM Lotus Extended Search Programming* document lists the comparison operator limitations.

Topic title: Registering the Extended Search wrapper

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring Extended Search data sources —> Adding Extended Search data sources to a federated system

Correction

The following prerequisite applies to this topic:

Prerequisite: With IBM Lotus® Extended Search, Version 4.0, values that are returned from the Extended Search server might not be converted from the Extended Search server operating system code page to UTF-8. Before you register the Extended Search wrapper, you must do either of these tasks:

- Install fix pack 1 for IBM Lotus Extended Search, Version 4.0 on the Extended Search server.
- Change the Extended Search server operating system code page. To change the Extended Search server operating system code page, you must add a line to the esNLS.ini file on the Extended Search server. The esNLS.ini file is in the *Extended_Search_installation_path/config* directory. Add the following line to the esNLS.ini file:

```
A.ALL.File\ System.Title=1
```

Then stop and restart the Extended Search Server and the Extended Search Remote Method Invocation Server.

Topic title: Construct new HMMER queries with samples

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring HMMER data sources —> Adding HMMER to a federated server

Correction

Wrappers that require predicates, such as the HmmerQSeq fixed input column, cannot process queries that result in a left outer join on the required predicates. For example, the following query returns an SQL0901N error:

```
SELECT n1.Score FROM hmerNN1 n1
LEFT OUTER JOIN myseqs n2 ON N1.HmmerQSeq = n2.seq
```

Addition

If the HMMQSEQ column for a HMMER nickname is defined as a CLOB data type, you must create sequence match function templates before you can query HMMER data sources. The SQL statements that you issue on the federated database to create the function templates are:

```
CREATE FUNCTION lshimmer.sequence_match (CLOB, CLOB)
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lshimmer.sequence_match (CLOB, VARCHAR(1))
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lshimmer.sequence_match (VARCHAR(1), CLOB)
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
CREATE FUNCTION lshimmer.sequence_match (VARCHAR(1), VARCHAR(1))
  RETURNS INTEGER AS TEMPLATE DETERMINISTIC NO EXTERNAL ACTION;
```

Topic title: Tuning and troubleshooting the configuration to ODBC data sources

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring ODBC data sources —> Adding ODBC data sources to federated servers

Correction

If queries fail because of data source syntax errors, set the PUSHDOWN server option value to 'N', or remove the PUSHDOWN server option.

Topic title: Testing the connection to the Teradata server

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring Teradata data sources —> Adding Teradata data sources to a federated system

Correction

To verify that the character set that you want to use is installed on the Teradata server:

1. Log on to the Teradata server by using the BTEQ utility or any other valid logon utility.
2. Issue the following statement to display the dbc.chartranslations table:

```
select * from dbc.chartranslations;
```
3. Check the value in the third column, InstallFlag, of the table that is returned. The value 'Y' in the third column indicates that the character set is installed and in use on the Teradata server.

Use the following table to determine if you have the correct character set installed:

Table 12. Character sets for Teradata

Double- byte character set	Single- byte character set	Teradata character set	Language	IBM DB2 code set
941	897	"KanjiSJIS_0S"	Japanese	IBM-943
1362	1126	"HANGULKSC5601_2R4"	Korean	1363
1385	1114	"SCHGB2312_1T0"	Simplified Chinese	GBk
380	1115	"SCHGB2312_1T0"	Simplified Chinese	IBM-1381
947	1114	"TCHBIG5_1R0"	Traditional Chinese	big5
1200	1208	"UTF8"	Unicode	UTF-8
0	819	"Latin1_0A"	English (Latin 1)	ISO8859-1
0	1252	"Latin1252_0A"	English (Win Latin)	ISO8859-1/15

4. If you do not have the required character set installed, install the character set to use the Teradata wrapper.
 - If the character set that you want to use is listed in the dbc.chartranslations table, but the InstallFlag value is set to 'N', issue the following statement to change the InstallFlag to 'Y':

```
update dbc.chartranslations  
  set installflag='Y' where CharSetName= 'character_set_name';
```
 - If the character set that you want to use is not listed in the dbc.chartranslations table, contact Teradata customer support.
5. Restart the Teradata server to update the list of character sets. In a Teradata command window, enter:

```
tpareset -f reason_for_restart
```

Topic title: Registering nicknames for Web services data sources

Location in the DB2 Information Center:

Configuring —> Federated systems and data sources —>

Configuring data sources —> Configuring Web services data sources —> Adding Web services to a federated system

Correction 1 of 2

The following sentence should be included in the introduction to registering nicknames:

If a WSDL operation has an input variable that contains optional grouping elements for the value, then the DB2 Control Center generates input-only child nicknames. You can use these nicknames to specify optional input by joining the input-only nickname with the root of the nickname hierarchy for that operation.

Correction 2 of 2

The following sentence should be included in the introduction to registering nicknames:

When the DB2 Control Center generates a child nickname that is used only for input, the XPATH nickname option contains a period, as in the following example:

```
XPATH '.'
```

Topic title: Web services wrapper library files

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring Web services data sources

Correction

The Web services wrapper is supported on Sun and Linux. The name of the library file for Sun and Linux is libdb2ws.so. The name of the path is /opt/IBM/db2/V8.1/lib

Topic title: What is XML?

Location in the DB2 Information Center

Configuring —> Federated systems and data sources —> Configuring data sources —> Configuring XML data sources

Correction

Vendor-defined characters are retrieved as alternative characters. The XML parser extracts the data from the XML document and converts it into UTF-16, the native code page of the XML parser. The XML wrapper then extracts the data from the XML parser. The wrapper receives the data in UTF-16 and converts it into the federated database code page.

The XML wrapper does not support vendor-defined characters in the XML instance documents.

Topic title: Configuring servers for Q replication and event publishing—Overview

Location in the DB2 Information Center:

Configuring -> Replication and event publishing -> Configuring for Q replication and event publishing -> Configuring servers for Q replication and event publishing

Correction

New functionality: Q replication and event publishing now support the WebSphere MQ Client. Q replication and event publishing programs previously ran as 32-bit but now they run as 64-bit on 64-bit platforms for all platforms except HP-UX, z/OS,

and Windows. You can run the programs as 64-bit by using the MQ Client. If you want to continue running the programs as 32-bit on 64-bit platforms, see the technote entitled "Running Q replication and event publishing as 32-bit on 64-bit platforms with the MQ Client" at the DB2 Information Integrator support Web site: www.ibm.com/software/data/integration/db2ii/support.html.

Administering

Topic title: Changing attributes of Q subscriptions

Location in the DB2 Information Center:

Administering —> Replication and event publishing —>
Administering Q replication and event publishing —> Changing a Q replication environment

Correction

You can change attributes for Q subscriptions that participate in unidirectional, bidirectional, or peer-to-peer replication. In addition to the attributes that are listed, you can change the following attributes for Q subscriptions:

- source_colname
- target_colname
- target_colno
- description
- error_action
- has_loadphase
- load_type
- src_nickname
- src_nickname_owner
- sendq
- recvq
- target_name
- target_owner
- target_type
- conflict_action
- before_values
- conflict_rule
- changed_cols_only
- is_key

For instructions on how to change these additional attributes for Q subscriptions, see the technote entitled "Changing attributes for Q replication and event publishing objects" at the DB2 Information Integrator support Web site: www.ibm.com/software/data/integration/db2ii/support.html.

Topic title: Changing attributes of replication queue maps

Location in the DB2 Information Center:

Administering —> Replication and event publishing —>
Administering Q replication and event publishing —> Changing a Q replication environment

Correction

In addition to the attributes that are listed, you can change the following attributes for replication queue maps:

- sendq
- recvq
- description

For detailed instructions on how to change these additional attributes for replication queue maps, see the technote entitled “Changing attributes for Q replication and event publishing objects” at the DB2 Information Integrator support Web site: www.ibm.com/software/data/integration/db2ii/support.html.

Topic title: Changing attributes of XML publications**Location in the DB2 Information Center:**

Administering —> Replication and event publishing —>
Administering Q replication and event publishing —> Changing an event publishing environment

Correction

In addition to the attributes that are listed, you can change the following attributes for XML publications:

- before_values
- changed_cols_only
- description
- sendq
- src_colname
- is_key
- topic

For detailed instructions on how to change these additional attributes for XML publications, see the technote entitled “Changing attributes for Q replication and event publishing objects” at the DB2 Information Integrator support Web site: www.ibm.com/software/data/integration/db2ii/support.html.

Topic title: Changing attributes of publishing queue maps**Location in the DB2 Information Center:**

Administering —> Replication and event publishing —>
Administering Q replication and event publishing —> Changing an event publishing environment

Correction

In addition to the changeable attributes that are listed, you can change the following attributes for publishing queue maps:

- sendq
- message_format

For detailed instructions on how to change these additional attributes for publishing queue maps, see the technote entitled “Changing attributes for Q replication and event publishing objects” at the DB2 Information Integrator support Web site: www.ibm.com/software/data/integration/db2ii/support.html.

Topic title: Customizing the XML Metadata Registry home page

Location in the DB2 Information Center:

Administering —> Administering XML metadata with the XML Metadata Registry

Correction

The sentence in step 1 about where the registry home page is displayed has changed to include the login page:

The information in the About section of the home page is also displayed on the login page.

Topic title: Enabling version control for objects in the XML Metadata Registry

Location in the DB2 Information Center:

Administering —> Administering XML metadata with the XML Metadata Registry —> Controlling versions

Correction

You must have full access to an object to enable version control.

Topic title: Access groups in the XML Metadata Registry

Location in the DB2 Information Center:

Administering —> Administering XML metadata with the XML Metadata Registry —> Managing user registration, object access, and security

Correction

You must have Write access to an access group to add or remove members from it.

Topic title: Disabling access to the XML Metadata Registry for users or access groups

Location in the DB2 Information Center:

Administering —> Administering XML metadata with the XML Metadata Registry —> Managing user registration, object access, and security

Correction

When you click **Enable** or **Disable** to grant or revoke access to the XML Metadata Registry, the change occurs immediately. If you are logged in as the user that you disable access for, the Login page is displayed when you click **Disable**. Otherwise, the notebook for the user or access group that you are editing does not change.

Topic title: Enabling automatic registration for the XML Metadata Registry

Location in the DB2 Information Center:

Administering —> Administering XML metadata with the XML Metadata Registry —> Managing user registration, object access, and security

Correction

This topic incorrectly states that the **Enable the Register a user feature** link is in the About this Registry section of the home page. The link is in the Using the Registry section of the home page if automatic registration is not enabled. You might need to scroll down on the section to see the link.

Topic title: Disabling automatic registration for the XML Metadata Registry

Location in the DB2 Information Center:

Administering —> Administering XML metadata with the XML Metadata Registry —> Managing user registration, object access, and security

Correction

This topic incorrectly states that the **Disable the Register a user feature** link is in the About this Registry section of the home page. The link is in the Using the Registry section of the home page if automatic registration is enabled. You might need to scroll down on the section to see the link.

Developing

Topic title: Why develop a wrapper?**Location in the DB2 Information Center:**

Developing —> Connections (wrappers) to customer data sources —> Developing wrappers – overview

Correction

In the figure entitled “Query to request IDs of molecules similar to molecules with a result > 0.8 in a stomach experiment”, the last line E.MOLE_ID should be E.MOLECULE_ID.

Topic title: Wrapper development kit**Location in the DB2 Information Center:**

Developing —> Connections (wrappers) to customer data sources —> Developing wrappers – overview

Correction

The Windows environment variable %DB2PATH% should be %DB2TEMPDIR%, which represents the environment variable that is used to specify a temporary directory path on Windows.

Topic title: Control flow for query planning**Location in the DB2 Information Center:**

Developing —> Connections (wrappers) to customer data sources —> Developing and documenting wrappers —> Overview of data flows —> Control flows for processes

Correction

Some of the step numbers that are referenced from the process are incorrect:

- Step 10 should read: “The wrapper determines whether a data source can compute the value of the head expression that is represented by Request_Exp. The wrapper repeats step 9 [not step 12] recursively descending the Request_Exp tree until a the wrapper makes a decision.”
- Step 12 should read: “Repeat steps 8-11 [not steps 9-12] for each additional head expression in the request.”
- Step 17 should read: “Repeat steps 14-16 [not steps 15-17] for each additional predicate in the request.”

Topic title: Dynamic database queries that use the Web services provider

Location in the DB2 Information Center:

Developing —> Web services and federated Web applications —>
Developing applications that use the Web services provider —>
Using dynamic database queries

Correction

The supported functions for dynamic query services should include the delete function:

With dynamic query services, you can dynamically build and submit queries at run time that select, insert, update, and delete application data, and call stored procedures rather than run queries that are predefined at deployment time.

Topic title: Starting and stopping the application server for DB2 in Information Integrator**Location in the DB2 Information Center:**

Developing —> Web services and federated Web applications —>
Deploying and testing Web applications

Correction

You can install and configure the Web services provider, the Web services provider applications (including the Web services provider samples), and JDBC providers and enable and disable a trace on an application server for DB2 by using a script that is included in the \bin directory of the dxxworf.zip file. The application server for DB2 must be running.

Prerequisite

To install and configure the Web services provider runtime on an application server for a DB2 Universal Database system, follow installation instructions steps 1– 4 in the topic “Installing or migrating WORF to work with WebSphere Application Server Version 5 or later for Windows and UNIX.”

You can use the worf_eas_admin.jacl script in these ways:

- **Install the Web services provider samples on an application server for DB2**

The following examples assume that you are familiar with deploying the Web services provider examples, as described in topic “Deploying WORF examples on WebSphere Application Server Version 5.1 or later for Windows and UNIX.”

- Optional: Use the following command to install a JDBC provider that is used by the Web services provider samples Web application:

```
$appserv_install_dir\bin\wsadmin.bat -f worf_eas_admin.jacl  
configureJDBC  
-name db2jdbc  
-classpath "C:\SQLLIB\java\db2java.zip"  
-iClassName COM.ibm.db2.jdbc.app.DB2Driver
```

From the command line in Windows, use either \\ or / as the directory delimiter.

- Optional: Use the following command to install the Web services provider samples:

```
$appserv_install_dir\bin\wsadmin.bat -f worf_eas_admin.jacl
installApp
-warPath "C:\\worf\\lib\\axis-services.war"
-contextRoot services
-appName WorfAxis
```

From the command line in Windows, use either \\ or / as the directory delimiter.

- **Install user-created Web services provider Web applications on an application server for DB2**

You can issue the following command to install and configure Web Services provider Web applications:

- worf_eas_admin.jacl (use one of the following six optional keywords)

```
installApp <parameters>
configureJDBC <parameters>
uninstallApp <parameters>
removeJDBC <parameters>
enableTrace
disableTrace
```

installApp

Installs a Web application that is based on the following parameters:

warPath

The path to the Web archive (WAR) package.

contextRoot

The context root of the application in the application server for DB2.

appName

The name of the application in the application server for DB2. The name must not contain any blank characters.

The following example shows the installApp mode:

```
$appserv_install_dir\bin\wsadmin.bat -f worf_eas_admin.jacl
installApp
-warPath "C:\\My Files\\WORF\\axis-services.war"
-contextRoot services
-appName WorfAxis
```

From the command line in Windows, use either \\ or / as the directory delimiter.

configureJDBC

Configures a JDBC provider. The following parameters are required:

name The name of the JDBC provider in the application server for DB2.

classPath

The CLASSPATH to the Java™ archive (JAR) packages of the JDBC driver.

iClassName

The name of the implementation class.

The following example shows the configureJDBC mode:

```
$appserv_install_dir\bin\wsadmin.bat -f worf_eas_admin.jacl
configureJDBC
-name db2jcc
-classPath "C:\SQLLIB\java\db2jcc.jar;
           C:\SQLLIB\java\db2jcc_license_cu.jar;
           C:\SQLLIB\java\db2jcc_license_cisuz.jar"
-iClassName com.ibm.db2.jcc.DB2Driver
```

From the command line in Windows, use either `\\` or `/` as the directory delimiter.

uninstallApp mode

Removes an installed application. You must provide the name of the application in the application server for DB2, as in the following example:

```
$appserv_install_dir\bin\wsadmin.bat -f worf_eas_admin.jacl
uninstallApp -appName WorfAxis
```

removeJDBC

Removes a JDBC provider. You must provide the name of the JDBC provider in the application server for DB2, as in the following example:

```
$appserv_install_dir\bin\wsadmin.bat -f worf_eas_admin.jacl
removeJDBC -name db2jcc
```

enableTrace

Enables the trace for the application server for DB2. The application server for DB2 must be running. The following example enables the trace:

```
$appserv_install_dir\bin\wsadmin -f worf_eas_admin.jacl
enableTrace
```

disableTrace

Disables the trace for the application server for DB2. The application server for DB2 must be running. The following example disables the trace:

```
$appserv_install_dir\bin\wsadmin -f worf_eas_admin.jacl
disableTrace
```

Topic title: Enabling tracing for the DB2 Web services provider—Apache Tomcat Version 4.0 or later Web application server

Location in the DB2 Information Center:

Developing —> Web services and federated Web applications —> Deploying and Testing Web applications —> Enabling Web services provider tracing

Correction

Specify the default level of trace information as INFO, instead of DEBUG, to maintain better performance. The following example is correct:

```
log4j.rootCategory=INFO, console, rollingFile
```

Topic title: The Web service consumer functions

Location in the DB2 Information Center:

Developing —> Web services and federated Web applications —> Installing the Web services consumer

Correction

You cannot secure the Web services consumer by encrypting messages through HTTPS.

Tuning

Topic title: Data source specific restrictions for materialized query tables

Location in the DB2 Information Center:

Tuning —> Federated systems —> Materialized query tables

Addition 1 of 3

For federated queries, you must specify the `-u` option for the DB2 Design Advisor command, `db2advis`. If this option is not specified, the DB2 Design Advisor recommends only refresh immediate materialized query tables. Because the refresh immediate function is not supported for materialized query tables that reference nicknames, no recommendations are provided by the DB2 Design Advisor.

Addition 2 of 3

If the materialized query table recommendation that is provided by the DB2 Design Advisor does not comply with the materialized query table restrictions of the data source, the materialized query table can be created, but it cannot be refreshed. To prevent this situation from occurring, follow the recommendations provided by the DB2 Design Advisor for materialized query tables and ensure that the recommended materialized query table definition is acceptable to the data source.

Addition 3 of 3

In a multi-partitioned environment, the DB2 Design Advisor does not provide materialized query table recommendations that involve nicknames.

Reference

Topic title: Wrapper class

Location in the DB2 Information Center:

Reference -> APIs -> Wrapper development Java APIs -> Wrapper classes

Correction

destroy method

Purpose

Destroy this wrapper object and free any resources that are associated with it. The default implementation is no action. This method is called by the federated server before the wrapper object is removed so that the wrapper can free any allocated resources. To free wrapper-specific resources, you can implement this method in the wrapper-specific subclasses `UnfencedGenericWrapper` and `FencedGenericWrapper`.

Syntax

```
protected void destroy()  
                throws java.lang.Exception
```

Parameters

None.

Return value

None.

Throws

An Exception object if the processing fails.

Topic title: UnfencedWrapper class**Location in the DB2 Information Center:**

Reference -> APIs -> Wrapper development Java APIs -> Wrapper classes

Correction**getFencedWrapperClass method****Purpose**

Retrieve the name of the class that must be loaded for the fenced part of the wrapper. The class name is specified as the value of the FENCED_WRAPPER_CLASS wrapper option.

Syntax

```
public final java.lang.String  
getFencedWrapperClass(WrapperInfo wrapperInfo) throws  
WrapperException
```

Parameters**wrapperInfo**

The WrapperInfo object that stores the wrapper catalog information.

Return value

The name of the FencedWrapper subclass or null if no class name was specified.

Throws

A WrapperException object if the processing fails.

Topic title: Nickname class**Location in the DB2 Information Center:**

Reference -> APIs -> Wrapper development Java APIs -> Nickname classes -> Nickname class

Correction**destroy method****Purpose**

Destroy this nickname object and free any resources associated with it. The default implementation does nothing. This method is called by the federated server before the nickname object is removed and gives the wrapper a chance to free any resources allocated. If you need to free wrapper-specific resources, you can implement this method in the wrapper-specific subclass **UnfencedGenericNickname** and **FencedGenericNickname**.

Syntax

```
protected void destroy()  
throws java.lang.Exception
```

Parameters

None.

Return value

None.

Throws

An Exception object if the processing fails.

Topic title: RemoteUser class**Location in the DB2 Information Center:**

Reference -> APIs -> Wrapper development Java APIs -> User classes -> RemoteUser class

Correction**destroy method****Purpose**

Destroy this user mapping object and free any resources associated with it. The default implementation does nothing. This method is called by the federated server before the user mapping object is removed and gives the wrapper a chance to free any resources allocated. If you need to free wrapper-specific resources, you can implement this method in the wrapper-specific subclass **UnfencedGenericNickname** and **FencedGenericNickname**.

Syntax

```
protected void destroy()  
                throws java.lang.Exception
```

Parameters

None.

Return value

None.

Throws

An Exception object if the processing fails.

Topic title: Server class**Location in the DB2 Information Center:**

Reference -> APIs -> Wrapper development Java APIs -> Server classes -> Server class

Correction**destroy method****Purpose**

Destroy this server object and free any resources associated with it. The default implementation does nothing. This method is called by the federated server before the server object is removed and gives the wrapper a chance to free any resources allocated. If you need to free wrapper-specific resources, you can implement this method in the wrapper-specific subclass **UnfencedGenericNickname** and **FencedGenericNickname**.

Syntax

```
protected void destroy()  
                throws java.lang.Exception
```

Parameters

None.

Return value

None.

Throws

An Exception object if the processing fails.

Topic title: **asntrep: Repairing differences between source and target tables**

Location in the DB2 Information Center:

Reference → Commands → Q replication and event publishing commands

Correction

The following examples show how to use the **asntrep** command.

Example 1

In Q replication, to synchronize a source and target table that are specified in a Q subscription named `my_qsub`, on a Q Capture server named `source_db`, with a Q Capture schema of `asn`, and whose differences are stored in a table called `q_diff_table`:

```
asntrep DB=source_db SCHEMA=asn
WHERE="subname = 'my_qsub'" DIFF=q_diff_table
```

Example 2

In SQL replication, to synchronize a source and target table that are specified in a subscription set called `my_set`, with a target table named `trg_table`, on an Apply control server named `apply_db`, with an Apply schema of `asn`, and whose differences are stored in a table called `sql_diff_table`:

```
asntrep DB=apply_db SCHEMA=asn WHERE="set_name = 'my_set'
and target_table = 'trg_table'" DIFF=sql_diff_table
```

New documentation

The following topic will be added to the *DB2 Information Integrator Installation Guide*.

Installing the IBM Tivoli License Manager (ITLM) file on your system

When you install DB2 Information Integrator Advanced Edition or DB2 Information Integrator Advanced Edition Unlimited, the IBM Tivoli® License Manager (ITLM) file is added to your system and renamed after the product license key is registered. If the ITLM file is not installed on your system successfully, you must install the file manually.

When it is installed, the ITLM file is renamed from `db2ii080200.sys` to one of the following file names depending on your edition and operating system.

Table 13. Table of file names for the DB2 Information Integrator ITLM file

Operating system	Advanced Edition ITLM file name	Advanced Edition Unlimited ITLM file name
AIX	db2iiaex080200.sys	db2iiuex080200.sys
Linux	db2iiael080200.sys	db2iiuel080200.sys
HP-UX	db2iiaeh080200.sys	db2iiueh080200.sys
Solaris	db2iiaes080200.sys	db2iiues080200.sys

Table 13. Table of file names for the DB2 Information Integrator ITLM file (continued)

Operating system	Advanced Edition ITLM file name	Advanced Edition Unlimited ITLM file name
Windows	db2iaew080200.sys	db2iiu080200.sys

Procedure

To install the db2ii080200.sys ITLM file on your system, copy the <prod_cd>\license\db2ii080200.sys to one of the following directories, and rename it to the name that corresponds to your edition and operating system in Table 13 on page 67. <prod_cd> is the root level of the DB2 Information Integrator product CD.

Windows

x:\Program Files\IBM\DB2InformationIntegrator\V8\

x is the drive where DB2 Information Integrator is installed.

UNIX /opt/IBM/DB2InformationIntegrator/V8/

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