DB2 Universal Database FixPak 3

Release Notes (FixPak 3)

FixPak 3

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About the Release Notes

Content:

The release notes contain the latest information for the following DB2®, Version 8 products:

DB2 Universal Database™ Personal Edition
DB2 Universal Database Workgroup Server Edition
DB2 Universal Database Workgroup Server Unlimited Edition
DB2 Universal Database Enterprise Server Edition
DB2 Personal Developer's Edition
DB2 Universal Developer's Edition
DB2 Warehouse Manager
DB2 Warehouse Manager Sourcing Agent for z/OS™
DB2 Data Links Manager
DB2 Net Search Extender
DB2 Spatial Extender
DB2 Intelligent Miner™ Scoring
DB2 Intelligent Miner Modeling
DB2 Intelligent Miner Visualization
DB2 Connect™ Application Server Edition
DB2 Connect Enterprise Edition
DB2 Connect Personal Edition
DB2 Connect Unlimited Edition

Structure:

The release notes are divided into four parts:

- The first part highlights what is new in this release.
- The second part contains the details of the problems, limitations, and workarounds known at the time of publication that affect the products previously listed. Read these notes to become familiar with any known outstanding issues with this release of the DB2 family of products.
- The third part contains corrections to previously released HTML, PDF, and printed documentation.
- The fourth part contains corrections and updates to the information available in the product GUI tools help.

The most up-to-date documentation is available in the latest version of the DB2 Information Center, which is accessed through a browser. The URL for downloading the latest documentation is provided in the Additional resources section below. Full instructions for downloading and installing the documentation are provided in the appendix.

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Revision marks in the DB2 Information Center documentation indicate text that has been added or changed since the PDF information for version 8.1 was originally made available. A vertical bar (|) indicates information that was added at the time that version 8.1 was first released. A numeric indicator, such as a 1 or a 2, indicates that the information was added for the FixPak or level ending in the same number. For example, a 1 indicates that the information was added or changed in FixPak 1, a 2 indicates that the information was changed for Version 8.1.2.

The *Data Links Manager Administration Guide and Reference* was updated in PDF form (book number SC27-1221-01) at the time of FixPak 1, and is available for download at the DB2 support site.

Additional resources:

Documentation for the DB2 Life Sciences Data Connect product is available for download from the IBM software site:

`http://www.ibm.com/software/data/db2/lifesciencesdataconnect/`

If you want to view the DB2 documentation in HTML format, you can access the DB2 HTML Information Center online from http://publib.boulder.ibm.com/infocenter/db2help/. Alternatively, if you want to install the DB2 HTML Information Center on your system, a *DB2 HTML Documentation* CD-ROM image is available for download from the same site. Updates are made to the DB2 HTML documentation with every release. For the latest documentation, access the DB2 HTML Information Center online or download the *DB2 HTML Documentation* CD-ROM image for installation on your system. PDF documentation is updated less frequently.

More information on the DB2 Development Center and DB2 for z/OS is available at http://www.ibm.com/software/data/db2/os390/spb/.

For the latest information about the DB2 family of products, obtain a free subscription to *DB2 Magazine*. The online edition of the magazine is available at http://www.db2mag.com; instructions for requesting a subscription are also posted on this site.

What's New for Version 8.1 FixPak 3

Windows enhancements

IBM DB2 Development Add-In and DB2 .NET Data Provider supports Microsoft® Visual Studio .NET 2003

You can register DB2 components for Microsoft Visual Studio .NET, including the IBM DB2 Development Add-In and the DB2 .NET Data Provider in both Microsoft Visual Studio .NET 2002 and Microsoft Visual Studio .NET 2003. You can also open DB2 projects that you created in Microsoft Visual Studio .NET 2002 in Microsoft Visual Studio .NET 2003.

See the **Application development enhancements** section for information on building and running applications.

Linux enhancements

DB2 Universal Database for Linux on AMD64-bit

DB2 Universal Database now supports Linux on AMD64-bit. The following operating system environment is supported:

- SuSE SLES 8 for Linux on AMD64-bit

Notes:

1. IBM Developer Kit 1.3.1 Service Release 4 (32-bit) is shipped with FixPak3. However, if you have a previous IBM Developer Kit 1.3.1 Service Release installed on your computer then Service Release 4 will not be installed. If you have installed the IBM Developer Kit 1.3.1 Service Release supplied by SuSE SLES 8, you must uninstall it before installing DB2; otherwise, DB2 Universal Database will not be able to install the recommended IBM Developer Kit. To uninstall previous IBM Developer Kit 1.3.1 Service Releases supplied by SuSE SLES 8:
   a. Enter the following command to query the system for previous IBM SDK for Java 1.3.1 Service Releases installed on your computer:

      ```
      rpm -qa | grep IBMJava2
      ```

      You should see output similar to the following:

      ```
      IBMJava2-JAAS-1.3.1-5
      IBMJava2-JAVACOMM-1.3.1-5
      IBMJava2-JRE-1.3.1-5
      IBMJava2-SDK-1.3.1-5
      ```

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b. Enter the following command to uninstall the rpm filesets returned from the query command:

```
rpm -e --nopdeps <list of rpm filesets>
```

2. If you have a 64-bit operating system installed on an AMD64-bit computer, then only the Hybrid 64-bit/32-bit DB2 Universal Database for LinuxAMD64-bit product is supported. The installation of DB2 Universal Database for LinuxIA32-bit on an AMD64-bit computer with a 64-bit operating system installed is not supported.
3. You must install the libstdc++-33-3.3 package (optionally installable from the SuSE SLES 8 CD) due to a DB2 Universal Database dependency upon the following gcc Version 3.3 library: /opt/gcc33/lib64/libstdc++.so.5.0.3

See the **Application development enhancements** section for information on building and running applications.

Performance enhancements

Database monitor

The database monitor records information at various levels, including the use of database resources such as bufferpool activity. Bufferpool monitor information describes I/O activity at the database, tablespace, bufferpool and application levels. New to DB2 Universal Database are four new elements which report bufferpool activity in temporary tables and temporary indexes. Also new is the recording of bufferpool information at the statement level.

By having bufferpool activity recorded at the statement level, you can isolate and modify costly transactions from an administration or programming perspective..

This information is reported by dynamic SQL, bufferpool, tablespace, application and database monitor snapshot requests.

The following four new elements report bufferpool activity for temporary tables and temporary indexes:

- **pool_temp_data_p_reads**: The number of physical read requests that required I/O to get data pages into the temporary tablespace.
- **pool_temp_index_p_reads**: The number of physical read requests that required I/O to get index pages into the temporary tablespace.
- **pool_temp_data_l_reads**: The number of logical read requests that required I/O to get data pages into the temporary tablespace.
- **pool_temp_index_l_reads**: The number of logical read requests that required I/O to get index pages into the temporary tablespace.

The following four existing elements have been updated to record buffer pool information at the statement level:

- pool_data_p_reads
- pool_index_p_reads
- pool_data_l_reads
- pool_index_l_reads

All eight elements have an element type of counter. For snapshot monitoring, this counter can be reset except at the statement level.

Table 1. Snapshot monitoring information for all eight elements:

Snapshot Level	Logical Data Grouping	Monitor Switch
Database	dbase	Buffer Pool, Statement
Table Space	tablespace	Buffer Pool, Statement
Buffer Pool	bufferpool	Buffer Pool, Statement
Application	appl	Buffer Pool, Statement
Application	stmt	Buffer Pool, Statement
Dynamic SQL	dynsql	Buffer Pool, Statement

Table 2. Event monitoring information for all eight elements:

Event Type	Logical Data Grouping	Monitor Switch
Database	event_db	-
Tablespaces	event_tablespace	-
Connection	event_conn	-
Statement	event_stmt	-

The new functionality to record buffer pool information at the statement level is supported only for API snapshot requests, not CLP snapshot requests. CLP support will be provided in a later service level.

Application development enhancements

IBM DB2 Universal Driver for SQLJ and JDBC

This FixPak contains a number of updates to the IBM DB2 Universal Driver for SQLJ and JDBC. The functional specifications for these changes are posted on http://www.ibm.com/software/data/db2/udb/ad/v8/java/

New AIX® C, C++, and COBOL compiler versions supported

- IBM C for AIX Version 6.0

- IBM VisualAge® C++ Version 6.0 with the March 2003 C++ Runtime PTF:

  ```
  http://www-1.ibm.com/support/docview.wss?rs=0&q=xlC.rte&
    uid=swg24004427&loc=en_US&cs=utf-8&cc=us&lang=en
  ```

- Micro Focus COBOL Server Express Version 2.2

New Windows® VB .NET, C# software supported

Microsoft Visual Basic .NET 7.0 and 7.1 for Microsoft .NET Framework versions 1.0 and 1.1 respectively

Microsoft Visual C# .NET Compiler versions 7.0 and 7.1 for Microsoft .NET Framework versions 1.0 and 1.1 respectively

Note: .NET Framework must be installed before using the DB2 Install program to install the DB2 .NET Data Provider.

New Windows Software for SQL Procedures Supported

SQL procedures can be built with the command line version of the Microsoft Visual Studio .NET C compiler that is part of the Microsoft .NET Framework SDK, as an alternative to using Microsoft Visual C++ Version 6.0, Microsoft Visual C++ .NET, or the Intel C++ Compiler for 32-bit applications Version 6 or later.

Support for Linux on AMD64 for building and running applications

DB2 Universal Database for Linux on AMD64 supports the SuSE SLES 8 for Linux on AMD64 operating system environment.

A 32-bit DB2 Universal Database for Linux on AMD64 instance supports the following programming languages and compilers:

C GNU/Linux gcc versions 3.2 and 3.3

Note: The ″-m32″ compiler option must be used to generate 32-bit applications or routines (stored procedures and user-defined functions).

C++ GNU/Linux g++ versions 3.2 and 3.3

Notes:

1. These versions of the GNU/Linux g++ compiler do not accept integer parameters for some fstream functions. Consult the compiler documentation for more information.
2. The ″-m32″ compiler option must be used to generate 32-bit applications or routines (stored procedures and user-defined functions).

Java™ IBM Developer Kit and Runtime Environment for Linux x86, Java 2 Technology Edition, Version 1.3.1 Service Release 4, 32-bit version.

Notes:

1. DB2 Universal Database will install the appropriate Developer Kit if any components are selected for installation that require Java to run. If none are selected, the Developer Kit can still be selected to be installed.
2. If you have installed the IBM Developer Kit 1.3.1 Service Release supplied by SuSE SLES 8, you must uninstall it before installing DB2, otherwise DB2 Universal Database will not be able to install the recommended Developer Kit. If DB2 Universal Database has been installed while the Developer Kit supplied by SuSE SLES 8 was not uninstalled, please see the instructions in the FixPak 3 readme to update the Developer Kit manually.

Perl Perl 5.8

A 64-bit DB2 Universal Database for Linux on AMD64 instance supports the following programming languages and compilers:

C GNU/Linux gcc versions 3.2 and 3.3

C++ GNU/Linux g++ versions 3.2 and 3.3

Note: These versions of the GNU/Linux g++ compiler do not accept integer parameters for some fstream functions. Consult the compiler documentation for more information.

Java DB2 Universal Database does not currently support any 64-bit Java Developer Kit for Linux on AMD64.

Perl Perl 5.8

DB2 family enhancements

Data Links Manager

Data Links Manager is now supported on AIX Version 5.2.

Documentation feedback

Because we value your feedback, we are giving you two ways to provide us with feedback on DB2 documentation.

You can complete an online documentation survey at http://www.ibm.com/software/data/db2/udb/docsurvey.html. We use the information we gather from the survey to plan improvements to the documentation.

For specific issues regarding the DB2 documentation, send an e-mail to db2docs@ca.ibm.com. The DB2 documentation team reads all of your feedback, but cannot respond to you directly. Please include specific examples wherever possible so that we can better understand your concerns.

Do not use this e-mail address to contact DB2 Customer Support.

Known problems and workarounds (Version 8 FixPak 3)

The following are the currently known limitations problems and workarounds for DB2® Universal Database Version 8 FixPak 3. The information in this section applies only to the version 8 FixPak 3 release of DB2 Universal Database™, and its supporting products. Any limitations and restrictions might or might not apply to other releases of the product.

Product and product-level support

Alternate FixPaks on UNIX-based systems

Prior to DB2 Universal Database Version 8, FixPaks only functioned as updates to installed DB2 Universal Database packages or filesets in one single fixed location. Essentially, this meant that the installation of FixPaks would replace existing files with the updated ones provided within the FixPaks, and multiple DB2 FixPak levels on a single system was not a possibility. DB2 Universal Database Version 8.1 Enterprise Server Edition (ESE) with different FixPak levels can now exist in the same system. This has been supported in production since Version 8.1.2. This is accomplished by the fact that there are now two types of FixPaks:

Regular Fixpaks

- available not only for ESE, but for all supported DB2 V8.1 products for the related platforms
- can be installed directly on top of the existing installation either in `/usr/opt/db2_08_01` on AIX® or `/opt/IBM/db2/V8.1` on other platforms

Alternate FixPaks

- can be installed as a completely new copy of DB2 Universal Database ESE
- installed in a predefined location other than the location used for a regular DB2 Universal Database installation

Notes:

1. You are *not* required to perform a multiple FixPak installation if you do not feel it is necessary for your environment.
2. Starting with DB2 Universal Database v8.1.2 for UNIX® and Linux, Enterprise Service Edition (ESE) Fixpaks are supported in production when installed as Multiple Fixpaks.

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To update a multiple FixPak instance to a different FixPak level, perform one of the following options:

- Install the appropriate Regular FixPak on the GA (General Availability) installation, and update the instance by running db2iupdt from the existing GA path
- Install the appropriate Alternate FixPak to its own unique path, and update the instance by running db2iupdt from this path

For further information regarding downloading Alternate FixPaks, visit the IBM® support site at http://www.ibm.com/software/data/db2/udb/winos2unix/support.

Back-level DB2 Universal Database server support

If you migrate your DB2 Universal Database client systems to version 8 before you have migrated all of your DB2 Universal Database servers to version 8, several restrictions and limitations apply.

For version 8 clients to work with version 7 servers, you need to configure and enable the use of DRDA® application server capability on the version 7 server. For information on how to do this, refer to the version 7 *Installation and Configuration Supplement*. You cannot access a DB2 Connect™ Version 7 server from a DB2 Universal Database Version 8 client.

When accessing version 7 servers from version 8 clients, there is no support available for the following:

- The following data types:
  - Large object (LOB) data types
  - User-defined distinct types
  - DATALINK data types

    The DATALINK data type allows for the management of external data found in nonrelational storage. The DATALINK data type references files that physically reside on file systems external to DB2 Universal Database.
- The following security capabilities:
  - Authentication type SERVER_ENCRYPT

    SERVER_ENCRYPT is a method to encrypt a password. The encrypted password is used with the user ID to authenticate the user.
  - Changing passwords

    You are not able to change passwords on the version 7 server from a version 8 client.
- The following connections and communication protocols:
  - Instance requests that require an ATTACH instead of a connection

    ATTACH is not supported from a version 8 client to a version 7 server.

  - Network protocols other than TCP/IP.

    (SNA, NetBIOS, IPX/SPX, and others)
- The following application features and tasks:
  - The DESCRIBE INPUT statement for all applications except ODBC/JDBC

    In order to support version 8 clients running ODBC/JDBC applications that access version 7 servers, a fix for DESCRIBE INPUT support must be applied to all version 7 servers where this type of access is required. This fix is associated with APAR IY30655. Use the "Contacting IBM" information in any DB2 Universal Database documentation set (PDF or HTML) to find out how to get the fix associated with APAR IY30655.

    The DESCRIBE INPUT statement is a performance and usability enhancement that allows an application requestor to obtain a description of input parameter markers in a prepared statement. For a CALL statement, this includes the parameter markers associated with the IN and INOUT parameters for the stored procedure.
  - Two-phase commit

    A version 7 server cannot be used as a transaction manager database when using coordinated transactions that involve version 8 clients, nor can a version 7 server participate in a coordinated transaction where a version 8 server may be the transaction manager database.
  - XA-compliant transaction managers

    An application using a version 8 client cannot use a version 7 server as an XA resource. This includes WebSphere®, Microsoft® COM+/MTS, BEA WebLogic, and others that are part of a transaction management arrangement.
  - Monitoring
  - Utilities that can be initiated by a client to a server
  - SQL statements greater than 32 KB in size

There are similar limitations and restrictions for version 8 tools working with version 7 servers.

The following version 8 GUI tools, products, and Centers support only version 8 servers:

- Control Center
- Development Center
- Health Center (including the Web version of this center)
- Indoubt Transaction Manager
- Information Catalog Center (including the Web version of this center)
- Journal
- License Center

- Satellite Administration Center
- Spatial Extender
- Task Center
- Tools Settings

The following version 8 tools support version 7 servers (with some restrictions):

- Command Center (including the Web version of this center)

  Saving, importing, and scheduling of scripts are not supported by the Command Center.
- Data Warehouse Center
- Replication Center
- The import/export configuration file function of the Configuration Assistant
- SQL Assist
- Visual Explain

In general, any version 8 tool that is only launched from within the navigation tree of the Control Center, or any details view based on such a tool, will not be available or accessible to version 7 and earlier servers. You should consider using the version 7 tools when working with version 7 or earlier servers.

DB2 Universal Database version 7 server access

To access a DB2 Universal Database Version 7 server on a Linux, UNIX, or Windows® operating system from a version 8 client, you must have version 7 FixPak 8 or later installed on your server and have run the **db2updv7** command. For instructions on installing the version 7 FixPaks, refer to the version 7 FixPak Readme and Release Notes.

You cannot access a DB2 Connect Version 7 server from a DB2 Universal Database Version 8 client

Classic Connect unavailable

The Classic Connect product is *not* available. Although you may find references to the Classic Connect product in the Data Warehouse documentation and elsewhere, these should be ignored, as they are no longer applicable.

SNA support limitations in Version 8

The following support has been withdrawn from DB2 Universal Database Version 8 Enterprise Server Edition (ESE) for Windows and UNIX-based operating systems, and from DB2 Connect Version 8 Enterprise Edition (EE) for Windows and UNIX-based operating systems:

- Multisite update (two-phase commit) capability using SNA cannot be used. Applications that require multisite update (two-phase commit) *must* use

TCP/IP connectivity. Multisite update (two-phase commit) using TCP/IP to a host or iSeries™ database server has been available for several releases. Host or iSeries applications that require multisite update (two-phase commit) support can use the new capability of TCP/IP multisite update (two-phase commit) support within DB2 Universal Database ESE Version 8.

- DB2 Universal Database ESE or DB2 Connect EE servers no longer accept client connections using SNA. As of Version 8 FixPak 1, DB2 Universal Database allows the 32-bit version of AIX, Solaris™ Operating Environment, HP-UX, and Windows-based applications to access host- or iSeries-based database servers using SNA. This support will allow applications access to host or iSeries database servers using SNA, but using only one-phase commit.
- Sysplex support with DB2 Universal Database for z/OS™ is only available using TCP/IP. Sysplex support is not provided using SNA connectivity.
- Change password support is no longer available using SNA connectivity to host database servers.
- All SNA support will be withdrawn in the next version of DB2 Universal Database and DB2 Connect.

Data Warehouse Center not available in Simplified Chinese

The Data Warehouse Center is not available in Simplified Chinese.

Data Warehouse Center down-level server support restrictions

The following limitations exist for down-level server support for DB2 Universal Database Enterprise Server Edition Version 8 Data Warehouse Center:

Large Object (LOB) support

- If you are using a warehouse control database on a server that is older than DB2 Universal Database Enterprise Server Edition Version 8 you will not be able to work with LOBs. You must upgrade the warehouse control database to the correct level, or move the control database to the system where the DB2 Universal Database Enterprise Server Edition Version 8 warehouse server is installed and use it locally from that system.
- If you want to move LOBs back and forth between the Data Warehouse Center and DB2, you must upgrade to DB2 Universal Database Enterprise Server Edition Version 8.

SNA support

If you use SNA to connect to your warehouse sources and targets, you must change the configuration to be TCP/IP over SNA, or use the Windows NT® warehouse agent.

Support for EXPORT and LOAD utilities

When you upgrade your warehouse agent, you must also upgrade

your source target databases, or replace the EXPORT and LOAD utilities in your warehouse processes with SQL Select and Insert steps. SQL Select and Insert steps use a DELETE* command followed by SELECT and INSERT commands. SQL Select and Insert steps require the database to log all transactions. As a result, the performance for SQL Select and Insert steps is not as efficient as it is for EXPORT and LOAD utilities.

DB2 administration server (DAS)

On AIX 5L™, HP-UX and the Solaris Operating Environment, if the tools catalog database is created in a 64-bit instance, DAS migration (dasmigr) and back-level Script Center and Journal are not supported.

DB2 license policy for DB2 Workgroup Server Edition

Although the *DB2 Quick Beginnings for Servers* book and the online tools help for the License Center indicate otherwise, the Internet license policy is *not* valid for DB2 Universal Database Workgroup Server Edition. If you need a license for Internet users, you must purchase DB2 Universal Database Unlimited Workgroup Server Edition.

DB2 Web Tools

The application servers supported by DB2 Web Tools for the following languages are required to be compliant with the Servlet 2.3 specification:

- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese
- Russian
- Polish

DB2 Warehouse Manager not available in Simplified Chinese

The DB2 Warehouse Manager is unavailable in Simplified Chinese. Therefore, the following dependent DB2 components are also unavailable in this environment:

- The Information Catalog Center, which is dependent on the Manage Information Catalog wizard component of DB2 Warehouse Manager.
- The DB2 Warehouse Manager Connector for the Web and the DB2 Warehouse Manager Connector for SAP, which are dependent on the installation of the DB2 Warehouse Manager.

Development Center APARs required for SQLJ and SQL Assist support on DB2 UDB Version 6 for OS/390 and DB2 UDB Version 7 for z/OS

When using the Development Center on an Application Development Client for DB2 Universal Database Version 8 on Windows or UNIX operating systems, the following APARs need to be installed on the server to enable SQLJ and SQL Assist support:

DB2 UDB Version 7 on z/OS

- PQ65125 - Provides SQLJ support for building JAVA SQLJ stored procedures
- PQ62695 - Provides SQL Assist support

DB2 UDB Version 6 on OS/390®

- PQ62695 - Provides SQL Assist support

Development Center limitations for 64–bit operating systems

Debugging of JAVA stored procedures against a 64-bit server is not supported by the Development Center. Debugging SQL stored procedures is supported on 64-bit Windows operating systems. OLE DB and XML are not supported on 64-bit servers.

Development Center on the Intel 32–bit Linux operating system

You cannot use the Development Center to debug Java™ stored procedures running on the Intel 32–bit Linux operating system.

Development Center supports the Windows 98 operating system

The Development Center is supported on the Windows 98 operating system.

Development Center now supports Actual Cost information for SQL statements run on OS/390 or z/OS servers

The DB2 Development Center now provides Actual Cost information for SQL statements run on DB2 Universal Database Version 6 and Version 7 OS/390 and z/OS servers. The following Actual Cost information is provided:

- CPU time
- CPU time in external format
- CPU time as an integer in hundredths of a second
- Latch/lock contention wait time in external format
- Number of getpages in integer format
- Number of read i/o in integer format
- Number of write i/o in integer format

This functionality also allows you to view multiple sets of Actual Cost results for a single SQL statement with different host variable values.

Actual Cost information is available in the Development Center from the Create SQL Stored Procedure and Create Java Stored Procedure wizards,

within the SQL Statement window for OS/390 and z/OS connections. To use the Actual Cost functionality , click the **Actual Cost** button in the OS/390 and z/OS connection window in either of the Stored Procedure wizards. You must have the Stored Procedure Monitor Program (DSNWSPM) installed on your DB2 OS/390 server to use Actual Cost functionality.

Federated systems restrictions

For users of DB2 Universal Database for UNIX and Windows Version 7.2 federated databases:

To successfully create nicknames for DB2 Universal Database for UNIX and Windows Version 8 tables and views, you must apply the DB2 Universal Database for UNIX and Windows Version 7.2 Fixpak 8 on your DB2 Universal Database for UNIX and Windows Version 7.2 federated database. If you do not apply Fixpak 8 on your DB2 Universal Database for UNIX and Windows Version 7.2 federated database, an error will occur when you access the nicknames.

LONG VARCHAR and LONG VARGRAPHIC support:

The federated documentation indicates that the LONG VARCHAR and LONG VARGRAPHIC data types used by the DB2 family of products are unsupported. This is not entirely accurate. You can create nicknames for DB2 Universal Database for UNIX and Windows data source objects that contain LONG VARCHAR and LONG VARGRAPHIC data type columns. These remote columns will be mapped to DB2 Universal Database for UNIX and Windows LOB data types. For the other DB2 family of products, you can create a view that omits or recasts these data types and then create a nickname for the view.

WITH HOLD cursors:

You can use the WITH HOLD semantics on a cursor that is defined on a nickname or in a PASSTHRU session. However, you will receive an error if you try to use the semantics (with a COMMIT) and the data source does not support the WITH HOLD semantics.

Data sources:

Previously unsupported data sources are supported as of Version 8.1.2 using DB2 Information Integrator relational and nonrelational wrappers. For a full list of supported data sources, see the DB2 Information Center for DB2 Information Integrator: Product Overview > Federated systems - overview > Data sources > Supported data sources

Support for DB2 Universal Database Server for VM and VSE:

Federated support for DB2 Universal Database Server for VM and VSE has been added in Version 8.1.2.

Product support:

Previously unsupported products are now supported through Information Integrator:

- DB2 Relational Connect is supported using DB2 Information Integrator relational wrappers.
- DB2 Life Sciences Data Connect is supported using DB2 Information Integrator non relational wrappers.

Unsupported operating systems:

Federated systems are not supported on the Windows ME operating system.

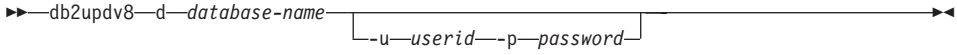
Setting up the federated server to access data sources:

The COMPACT installation option does not install the necessary access to the DB2 family or Informix™ data sources. You must use the TYPICAL or CUSTOM installation to access the DB2 family data sources. The CUSTOM installation option is the only option you can use to install access to both the DB2 family and the Informix data sources.

Update federated database in order to create wrapper:

If you are using a federated database with DB2 Universal Database Version 8.1.2 that was created using DB2 Universal Database Version 8.1 or DB2 Universal Database Version 8.1 FixPak 1, you must update your federated database using the db2updv8 command.

Syntax:



If you do not update your database to Version 8.1.2, you will get one of the following error messages when you try to create a wrapper from the Federated Database Objects folder in the Control Center:

- `java.lang.NullPointerException`
- `[IBM][CLI Driver][DB2/NT] SQL0444N  Routine "GET_WRAP_CFG_C" (specific name "SQL030325095829810") is implemented with code in library or path "\GET_WRAP_CFG_C", function "GET_WRAP_CFG_C" which cannot be accessed.  Reason code: "4".  SQLSTATE=42724`

Cataloging DB2 family data sources in the federated system database directory:

When the name of the remote database is more than 8 characters, it is necessary to create a database connection services (DCS) directory entry.

An example of cataloging an entry in the DCS directory for the database using the CATALOG DCS DATABASE command is:

```
CATALOG DCS DATABASE SALES400 AS SALES_DB2DB400
```

where:

SALES400
Is the name of the remote database you entered in the CATALOG DATABASE command.

AS *SALES_DB2DB400*
Is the name of the target host database that you want to catalog.

High availability function is included in DB2 Universal Database Workgroup Server Edition

Though it is not mentioned explicitly in the topic DB2 Workgroup Server Edition, the high availability function of the DB2 Universal Database Enterprise Server Edition that is referred to in the topic DB2 Enterprise Server Edition is included in the DB2 Universal Database Workgroup Server Edition.

IBM DB2 Development Add-In for Microsoft Visual Studio .NET

The IBM DB2 Development Add-In for Microsoft Visual Studio .NET does not support DB2 Universal Database for z/OS and OS/390, Version 8.

Installation on AIX

If the db2setup program is run from a directory whose path includes a blank, the setup will fail with the following error:

```
<file>: not found
```

Place the installable image in a directory whose path does not include spaces.

Installation on Linux

When you install version 8.1 of DB2 Universal Database on Linux, the RPM-based installation attempts to install the IBM Java RPM (IBMJava2–SDK-1.3.1.-2.0.i386.rpm). If a higher level of the RPM (such as IBMJava2-SDK-1.4.0.-2.0.i386.rpm) already exists, then the back-level RPM is not installed.

However, in this case, the installation leaves the JDK_PATH database configuration parameter pointing to the Java 1.3 path, `/opt/IBMJava2-14/`. As a result, none of the Java-dependant functionality, including the installation of the DB2 Tools Catalog, will work.

To solve this problem, run the following command as the instance owner:

```
db2 update dbm cfg using JDK_PATH /opt/IBMJava2-14
```

This will point DB2 Universal Database to the correct IBM Developer Kit.

License Center back-level versions not supported

If a version 7 License Center attempts a connection to a version 8 server, the License Center receives an "SQL1650 - Function not supported" error message indicating that the connection is not supported.

Microsoft Visual Studio, Visual C++

Despite being mentioned in the DB2 Development Center online help as a possible solution for the `Build not successful: -1` error, Microsoft Visual Studio Visual C++ Version 5.0 is not supported for the development of SQL stored procedures. However, Microsoft Visual Studio Visual C++ Version 6.0 is supported. Additional configuration information is available in the *IBM DB2 Application Development Guide: Building and Running Applications.* Additional configuration information is available in the topic Setting Up the Application Development Environment

Microsoft XP fix needed on 64-bit operating systems

If you are using the Microsoft XP operating system (2600) configured to use the NETBIOS protocol with the DB2 family of products, you need to obtain a hotfix from Microsoft. Contact Microsoft with the Knowledge Base article number Q317437.

MVS operating system not supported

Despite being mentioned in the documentation, the MVS™ operating system is no longer supported by DB2 Universal Database.

Windows XP operating systems

The Windows XP Professional operating system is only supported by Personal Edition and Workgroup Server Edition products. The Windows XP Home Edition operating system is only supported by Personal Edition products.

Application development

Asynchronous execution of CLI

Asynchronous execution with CLI is not available.

CLI and ODBC on Windows 64-bit operating systems

You cannot use an application with mixed ODBC and DB2 CLI on a Windows 64-bit operating system.

Configuration Assistant

Unsupported bind options

The Configuration Assistant does not support the following bind options:

- CALL RESOLUTION
- CLIPKG
- CNULREQD
- DBPROTOCOL
- ENCODING
- MESSAGES
- OPTHINT
- OS400NAMING
- GENERIC
- IMMEDIATE
- KEEP DYNAMIC
- PATH
- SORTSEQ
- TRANSFORM_GROUP
- VALIDATE
- VARS

Configuration parameters

NUM_LOG_SPAN configuration parameter on a multi-partition database

The NUM_LOG_SPAN specifies the maximum number of log files that a transaction can span. If at any time a transaction violates the NUM_LOG_SPAN setting, it is rolled back, and forces the application that caused the transaction off the database.

However, in a multi-partition system, the db2loggr process can only force an application if the coordinating node for the application and the node of the db2loggr process that detects the error are both the same. For example, you have a system with 3 nodes (0,1 and 2) and have set the NUM_LOG_SPAN parameter to 2 on all nodes. An application connects to node 2 of the database, and begins a long-running transaction, which spans more than 2 log files. If the db2loggr process on node 1 is the first to detect this error, then nothing will happen. However, if the violation also occurs on node 2, then the db2loggr process will notice the error, the transaction will be rolled back and the application will be forced off.

DB2 Universal Database Backup and Restore

Backup and restore on Linux 390 operating systems

Backup and restore operations to and from multiple tape devices may not work if you are using the Linux 390 operating system.

DB2 Data Links Manager

Data Links server backup fails using Tivoli Storage Manager archive server (AIX, Solaris Operating Environment)

Problem: During the installation of or migration to DB2 Data Links Manager Version 8.1, a Data Links File Manager (DLFM)-initiated backup of Data Links server data to a Tivoli® Storage Manager archive server fails. One of the following sets of error messages are shown, either on-screen or on the installation status report:

```
DLFM129I: Automatic backup of DLFM_DB database has been triggered.
          Please wait for the backup to complete.

DLFM901E: A system error occurred. Return code = "-2062".
          The current command cannot be processed.
          Refer to the db2diag.log file for additional information.
```

— or —

```
DLFM811E: The current DLFM database could not be backed up.
          SQL code = "-2062", Return code = "-2062"

DLFM901E: A system error occurred. Return code = "-2062".
          The current command cannot be processed.
          Refer to the db2diag.log file for additional information.
```

Cause: The DB2 Data Links Manager Installer program failed to set the variables required to use Tivoli Storage Manager as an archive (backup) server for a Data Links server machine.

Tip: If you want to use Tivoli Storage Manager as an archive server, and you have not yet installed or migrated to DB2 Data Links Manager Version 8.1, you can prevent this problem from occurring. First, do not use the ″Tivoli Storage Manager″ backup option from the Installer program. Then, manually configure the Data Links Manager Administrator's profile to include the appropriate Tivoli Storage Manager variables, as described in step 2), below. After you have done both of these tasks, you can proceed with the installation or migration.

Workaround: Perform the following tasks in the order listed.

1. Back up the DLFM database using this command: `db2 backup <dlfm_db><path>` where:

- <dlfm_db>is the name of the DLFM database. By default, the database is called DLFM_DB.
- <path> is the directory path to the backup storage location of your choice.

2. Manually configure the Data Links Manager Administrator's profile to include the appropriate Tivoli Storage Manager variables. The manual configuration procedure and the required variables are described in the following documentation topics:
   - Using Tivoli Storage Manager as an archive server (AIX)
   - Using Tivoli Storage Manager as an archive server (Solaris Operating Environment)

   You can find these topics either online in the DB2 Information Center, or in the "System Management Options" chapter of the *DB2 Data Links Manager Administration Guide and Reference*.
   - If you are completing a new installation of DB2 Data Links Manager Version 8.1, you are done.
   - If you are migrating to DB2 Data Links Manager Version 8.1, re-run the Migration Utility program, **db2dlmmg**.

Migrating DB2 Universal Database when using DataJoiner or replication

If you want to migrate an instance of DataJoiner® or DB2 Universal Database for UNIX and Windows on which you are running the Capture or Apply programs for DB2 Universal Database replication, you must prepare to migrate your replication environment before you migrate the DB2 Universal Database or DataJoiner instance. Detailed instructions for carrying out the required preparation are included in the migration documentation for DB2 DataPropagator™ Version 8. Migration documentation for DB2 DataPropagator Version 8 can be found at http://www.ibm.com/software/data/dpropr/library.html.

DB2 Universal Database Replication

Java Administrative API documentation for DB2 Data Replication

If you are developing applications using the administrative functions available in DB2 DataPropagator, you can obtain documentation for the relevant administrative Java APIs by contacting IBM support.

Column mapping restrictions and the Replication Center

You cannot map an expression in a source table to a key column in a target table if the TARGET_KEY_CHG column of the IBMSNAP_SUBS_MEMBR table is "Y" for that target table. This means that when using the Replication Center to create a subscription-set member, you should not select the option

Let the Apply program use before-image values to update target-key columns if a key column in the target table is mapped to an expression in the source table.

Replication Center restrictions on iSeries systems

Administrative tasks in IASPs:

When using the Replication Center, you cannot perform administrative tasks in IASPs on iSeries systems.

Restrictions for replication steps that use iSeries control, source and target servers:

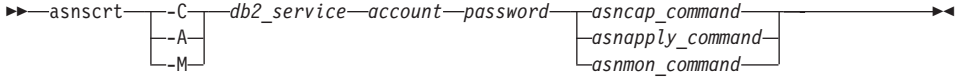
The iSeries control, source, and target servers are supported only on the DB2 Universal Database Enterprise Server Edition.

For both default and remote agents, the iSeries servers must be cataloged on the local machine. For a remote agent, the iSeries severs must also be cataloged on the machine where the agent resides. If the source or the target servers are on an iSeries operating system, then you must specify the system name on the Database page of the Source or Target notebook.

Workaround for the replication asnscrt command (Windows only)

You will receive an error if you run the **asnscrt** command according to the syntax diagram in the main documentation. To use the **asnscrt** command, specify the Windows service name for the DB2 Universal Database instance instead of the DB2 Universal Database instance name:

Syntax:



Where *db2_service* is the Windows service name for the DB2 Universal Database instance.

For example, to create a Windows service that invokes a Capture program for the Windows service called **db2–0**:

```
asnscrt -C db2-0 .\joesmith password asncap capture_server=sampledb
 capture_schema=ASN capture_path=X:\logfiles
```

Data Warehouse Center

ERwin 4.x metadata bridge

ERwin 4.0 metadata cannot be imported on the Linux operating system.

The ERwin 4.x bridge is supported on Windows 98 and WinME with the following restrictions:

- The **db2erwinimport** command can only be run from the db2 command line processor.
- You must fully qualify the XML and trace file names for the -x and -t parameters.

Japanese names of remote objects

Schema, table, and column names of remote sources in Japanese cannot contain certain characters. Unicode mapping differences may cause the names to be null. See http://www.ingrid.org/java/i18n/encoding/ja-conv.html for more information.

Restrictions for the Clean Data transformer

Linking restrictions:

You cannot link any OS/390 data resources such as tables or views with a new Clean Data step. You can still link OS/390 data resources with the deprecated programs Clean Data step.

Parameter restrictions:

For the Find and Replace parameter: If your new Clean Data transformer rules table contains different data types for the Find and Replace columns, you must change the Target column data type in both the Target Table properties page and the Column Mapping page before you promote the transformer to test mode.

For the Discretize parameter: If your new Clean Data rules table contains different data types for the Bounds and Replace columns, you must change the Target column data type in both the Target Table properties page and the Column Mapping page before you promote the transformer to test mode.

iSeries platform restrictions:

On the iSeries platform, the new Clean Data transformer does not perform error processing. You can generate the All Matches match type only on the iSeries platform.

Using the warehouse agent for replication and accessing Client Connect warehouse sources

Using the warehouse agent for replication

If the source, target, capture control, or apply control servers (databases) are remote to the client system, you must catalog the database with the same name, user ID, and password on both the client and the warehouse agent systems. After you catalog the source on the client and warehouse agent systems, verify that you can connect to the source, target, capture, and apply databases.

If you cannot connect to the warehouse source, warehouse target, replication capture, or replication apply databases, verify that the environment variable DB2COMM on the remote system is set to TCP/IP, and that the port number matches the port number of the node that is cataloged on the client system.

To verify the port number on the remote system, type the following command at a DB2 Universal Database command prompt:

```
get dbm cfg | grep SVCENAME
```

You specify the port number of the client system when you catalog the node.

Accessing Client Connect warehouse sources using the warehouse agent

When you access a warehouse source that was defined using Client Connect with a warehouse agent, the source must be cataloged with the same name, user ID, and password on both the client and warehouse agent systems. If you are using the ODBC version of the warehouse agent, you must also catalog the source as an ODBC source on both the warehouse agent and client sites. Otherwise, actions that require the warehouse agent to access the warehouse source will fail.

Scheduling a warehouse process to run at intervals

When scheduling a warehouse process to run at intervals, you must determine the longest time it takes to run all the production steps in the process and schedule the intervals accordingly. If a process exceeds the scheduled time interval, all subsequently scheduled occurrences of that process will not run and will not be rescheduled.

Restriction for import and export

If a process with unlinked shortcuts is exported and then imported as a .tag file into another control database, the unlinked shortcut data will cause error DWC3142:

```
<dirID> was not found in the Data Warehouse Center control database.
```

This error is generated due to the fact that the unlinked shortcut dirIDs are untranslated and they refer back to the original control database.

Documentation

DB2 Replication Guide and Reference documentation

The solutions information at http://www.ibm.com/software/data/dbtools/datarepl.htm, referred to in the preface to the *Replication Guide and Reference*, is no longer available.

DB2 Universal Database Version 8 HTML documentation installation restriction (Windows)

On Windows, do not install the DB2 Universal Database Version 8 HTML documentation on a workstation or server where a DB2 Universal Database Version 7 (or earlier) product is already installed. The installer detects the earlier version and removes the earlier product.

A workaround does exist. If you need to install the DB2 Universal Database Version 8 HTML documentation on a machine where an older version of DB2 Universal Database is installed, you can manually copy the files and directories from the DB2 Universal Database Version 8 HTML Documentation CD, rather than using the installer. The DB2 Information Center and full text search will work, but you will not be able to apply any HTML documentation FixPaks.

Documentation search may fail on AIX unless all documentation categories are installed

If you do not to install all of the categories of documentation on the DB2 HTML Documentation CD-ROM, an attempt to search against "All topics" may fail with an `InvalidParameterException` reported in the Java console of your browser and no search results.

To workaround the problem do one of the following:

- narrow the scope of your search by selecting from the **Search scope** list box in the Search window,
- install all the documentation categories from the DB2 HTML Documentation CD-ROM.

Documentation search problem with Java 2 JRE1.4.0

If your browser uses Java 2 JRE v1.4.0 and your documentation is installed in a path that contains spaces (e.g., `C:\Program Files\SQLLIB\doc\`), the documentation search applet may fail with an InvalidParameterException reported in the Java console of your browser and no search results. This problems is fixed with JRE v1.4.1.

To workaround the problem, do one of the following:

- upgrade your browser's JRE version to 1.4.1, available at http://java.sun.com/j2se/1.4.1/download.html
- downgrade your browser's JRE version to 1.3.x, available at http://www-3.ibm.com/software/data/db2/udb/ad/v8/java/

Installation of the DB2 Information Center for languages that are not options during installation

The DB2 Setup wizard can only install the DB2 HTML documentation for languages that it also installs the DB2 product for. As a result, the DB2 HTML documentation cannot be installed using the DB2 Setup wizard in the following languages:

- Portuguese (restriction for UNIX only)
- Danish, Finnish, Norwegian, Swedish (restriction for Linux only)
- Dutch, Turkish (restriction for HP-UX, Solaris, Linux only)
- Arabic (restriction for UNIX only)

To install the DB2 Information Center for one of the languages listed previously:

1. Insert the *DB2 HTML Documentation CD* in your CD-ROM drive.
2. Copy the following directory to your computer:
   - `/cdrom/program files/IBM/SQLLIB/doc/htmlcd/language`

   where *cdrom* is where you have mounted the CD and *language* is the code for the language you want to use.

It does not matter where you place the folder. You can also view the DB2 HTML documentation directly from the CD. For instructions on how to do so, see the "Viewing technical information online directly from the DB2 HTML Documentation CD" topic in the appendix of any DB2 Version 8 manual.

Notes:

1. To view the documentation, you must use Microsoft Internet Explorer 5.0 or later, or Netscape 6.1 browsers or later.
2. As well, if you launch the documentation from your product, it will go to the documentation installed as part of your product install, and not the documentation that you copied over manually.

Official naming convention for DB2 Universal Database for Linux when used on host systems

The official naming convention for DB2 Universal Database for Linux on host systems is *DB2 on Linux for S/390® and zSeries™*. *S/390* refers to 32-bit and *zSeries* to 64-bit. In addition, it is important to note that the following terms are also obsolete:

- 64-bit Linux/390
- Linux/SGI

GUI tools

Control Center plugin support

The Control Center now supports custom folders. Custom folders can contain user-selected system or database objects. Creating Control Center plugins specifically for a custom folder is not supported, but plugins can be created for the object contained in custom folders. See Introducing the plug-in architecture for the Control Center for more information about Control Center Plugins.

Displaying Indic characters in the DB2 GUI tools

If you have problems displaying Indic characters when using the DB2 GUI tools, you might not have the required fonts installed on your system.

DB2 Universal Database has packaged the following IBM TrueType and OpenType proportional Indic language fonts for your use. These fonts can be found in the `fonts` directory on either of the following CD-ROMs:

- IBM Developer Kit, Java Technology Edition, Version 1.3.1 for AIX operating systems on 64-bit systems
- Java application development and Web administration tools supplement for DB2, Version 8.1

These fonts are to be used only in conjunction with DB2. You cannot engage in the general or unrestricted sale or distribution of these fonts:

Table 3. Indic fonts packaged with DB2 Universal Database

Typeface	Weight	Font File Name
Devanagari MT for IBM	Medium	devamt.ttf
Devanagari MT for IBM	Bold	devamtb.ttf
Tamil	Medium	TamilMT.ttf
Tamil	Bold	TamilMTB.ttf
Telugu	Medium	TeluguMT.ttf
Telugu	Bold	TeleguMTB.ttf

Detailed instructions on how to install the fonts and modify the `font.properties` file can be found in the Internationalization section of the IBM development kit for Java documentation.

In addition, the following Microsoft products also come with Indic fonts that can be used with our GUI tools:

- Microsoft Windows 2000 operating system
- Microsoft Windows XP operating system
- Microsoft Publisher

- Microsoft Office

GUI tools not supported for zSeries servers running Linux operating systems

With the exception of the DB2 Setup wizard, GUI tools will not work on zSeries servers running the Linux operating system. This limitation includes any items normally launched form the Install launchpad, such as the Quick Tour.

If you want to use the GUI tools with one of these systems, install the administrative tools on a client system with a different system configuration, and use this client to connect to your zSeries server.

Load and Import Columns page does not support DBCS characters in IXF files

If you use the Load wizard or Import notebook to set up a load or import from an IXF input file containing DBCS characters, the Columns page will not correctly display the column names contained in the file.

Incorrect indicators given when a load operation fails

If a load fails, but only warnings were returned (not errors), then the task icon will still appear with a green checkmark in the Task Center. Be sure to double-check the success of any loads you carry out.

Minimum display settings for GUI tools

For the GUI tools such as the Control Center to work properly, you must have a screen resolution of at least 800 by 600 dpi, and be using a display palette of at least 32 colors.

SQL1224N error when using the GUI tools on AIX

If you are using the GUI tools on an AIX operating system, you may receive an SQL1224N error. This error is caused by a memory handling problem in DB2. The following workaround will help eliminate the error:

Procedure:

To stop the SQL1224N error on AIX operating systems:

1. As the instance owner, run the following commands:

   ```
   export EXTSHM=ON
   db2set DB2ENVLIST=EXTSHM
   ```

2. Restart the instance with the following commands:

   ```
   db2stop
   db2start
   ```

Once the instance restarts with the new environment variable settings, the SQL1224N errors should stop.

System Monitor

Event record size limitation

For deadlock event monitors and global detailed deadlock event monitors, the event record is limited by the size of a non-configurable internal buffer. If db2diag.log cannot write this logging entry due to the record size, the log will record a message such as ″event record is larger than BUFFERSIZE″.

Snapshot UDF restriction

Snaphot user-defined functions (UDF) are intended to be used on databases whose **Directory entry type** value displays as Indirect or Home when the the LIST DB DIRECTORY command is issued. If a UDF is used against a remote database, the UDF will fail with the following error:

```
SQL1427N An instance attachment does not exist.
```

Health Monitor

Health Monitor off by default

The default value for the database manager switch for the health monitor (HEALTH_MON) is OFF.

Health indicator restrictions

The health monitor is unable to execute actions for the db2.db2_op_status health indicator if the indicator enters the down state. This state can be caused, for example, when an instance that the indicator is monitoring becomes inactive because of an explicit stop request or an abnormal termination. If you want to have the instance restart automatically after any abnormal termination, you must configure the fault monitor to keep the instance “highly available”.

dasdrop limitation in multiple FixPak environments

Alternate FixPaks install their own version of the **dasdrop** command. On AIX, it is installed in the `/usr/opt/db2_08_FPn/` path. On other UNIX systems, it is installed in the `/opt/IBM/db2/V8.FPn/` path. In both cases, *n* is the number of the FixPak.

In a multiple FixPak Environment, you can only have one DAS set up at any one time. You can create the DAS against version 8.1 of the product, or against any of the Alternate FixPaks. To drop a DAS that was created against version 8.1 of the product, you can use any version of **dasdrop** to drop it. However, to drop a DAS that was created against an Alternate FixPak, you must use an Alternate FixPak version of **dasdrop**.

For example, consider the following scenario on the AIX operating system:

- You install DB2 Universal Database Version 8.1.
- You install Alternate FixPak 1 installed.
- You create a DAS using the version 8.1 code, with the following command:
  `/usr/opt/db2_08_01/instance/dascrt dasusr1`
- You want to drop the DAS.

You can drop this DAS by using either of the following commands:
`/usr/opt/db2_08_01/instance/dasdrop`
`/usr/opt/db2_08_FP1/instance/dasdrop`

Both will work properly.

However, in this example:
- You install DB2 Universal Database Version 8.1.
- You install the Alternate FixPak 1.
- You create a DAS using the Alternate FixPak 1 code, with the following command:
  `/usr/opt/db2_08_FP1/instance/dascrt dasusr1`
- You want to drop this DAS

You must use the Alternate FixPak 1 **dasdrop** command:
`/usr/opt/db2_08_FP1/instance/dasdrop`

Trying to use the version 8.1 **dasdrop** command will cause an error.

This limitation only applied to version 8.1 of the product, and not to any of the regular FixPaks. For example:
- You install DB2 Universal Database Version 8.1.
- You apply regular FixPak 1, which corrects the problem with the version 8.1 **dasdrop**.
- You install the Alternate FixPak 1.
- You create a DAS using the Alternate FixPak 1 code, with the following command:
  `/usr/opt/db2_08_FP1/instance/dascrt dasusr1`
- You want to drop this DAS

You can drop this DAS by using either of the following commands:
`/usr/opt/db2_08_01/instance/dasdrop`
`/usr/opt/db2_08_FP1/instance/dasdrop`

Both will work properly because the version of dasdrop in the `/usr/opt/db2_08_01/` path was corrected when you applied the regular FixPak.

Information Catalog Center tables

Do not partition information catalog tables

Tables that the Information Catalog Manager uses must be contained within a single database partition. Numerous methods are available to put the tables within a single partition. The following procedure is one approach that works.

1. Open a DB2 Command Line Processor and issue these commands:
   a. `CREATE DATABASE PARTITION GROUP pgname ON DBPARTITIONNUM pnumber`
   b. `CREATE REGULAR TABLESPACE tsname IN DATABASE PARTITION GROUP pgname MANAGED BY SYSTEM USING ('cname')`

   Click Start --> Programs --> IBM DB2 --> Set-up Tools --> Manage Information Catalog Wizard.

   On the Options page, specify the table space name in the **Table space** field.

Secure Windows environments

You may experience file permission problems if you are using DB2 Universal Database on Windows and are not an administrator on the Windows system. If you receive a SQL1035N, SQL1652N, or SQL5005C error message, possible causes and workarounds are as follows:

User does not have sufficient authority on the sqllib directory:

Problem

Received an SQL1035N or SQL1652N error when trying to open DB2 CLP or command window. The DB2 Universal Database code (core files) are installed into a directory structure where write privileges are limited, but some DB2 Universal Database tools need to write and create files in the DB2INSTPROF directory.

Workaround

Create a new directory where you can grant users, at minimum, the MODIFY permission and use either **db2set -g db2tempdir** to point to the new directory, or set the db2tempdir variable in the Windows system environment.

User does not have sufficient authority to write to the sqllib\<instance_dir> directory even though user belongs to SYSADM_GROUP:

Problem

Received an SQL5005C system error when trying to update the database manager configuration file (update dbm cfg). The user does

not have the required NTFS permissions to write to the sqllib*instance_dir* directory even though you have added this user to the SYSADM_GROUP.

First workaround

Grant the users, at minimum, the MODIFY permission on the *instance_dir* directory at the file system level.

Second workaround

Create a new directory where you can grant the user, at minimum, the MODIFY permission. Use the **db2set db2instprof** to point to the new directory. You will either need to recreate the instance so that the information is stored under the new instance directory specified by db2instprof, or you will need to move the old instance directory to the new directory.

SQL Assist

SQL Assist button disabled in the Command Center

In the Command Center, the SQL Assist button only becomes enabled once a connection has been established.

Two versions of SQL Assist are launched from DB2

You can invoke both version 7 and version 8 of SQL Assist from within DB2 Universal Database Version 8.1. You can launch version 7 from the DB2 Data Warehouse Center. All other centers launch the latest version 8. The product online help has additional information for SQL assist version 7.

Throttled utility restrictions

The simultaneous execution of multiple throttled utilities is not supported. For example:

- If you are running three online backups, only one can be throttled. The other two must have a priority of 0.
- You can invoke a rebalance and backup at the same time but either the rebalance or backup must have a priority of 0.

If you invoke multiple throttled utilities at the same time, it can cause the utilities to run for excessively long periods of time. It can also cause the system impact to be more severe than the limit set by the impact policy (UTIL_IMPACT_LIM).

XML Extender

Renaming of xml extender sample programs

Conflicts between the system operations and XML Extender can cause some XML Extender sample programs to seriously damage your files. The following list shows the conflicting XML Extender sample programs as well as new replacement programs that are less likely to cause conflicts. Make sure to use the new sample programs in place of the old ones.

Replacement sample programs for XML Extender (Windows)

Old Program (Do not use)	New Program (Use)
insertx.exe	dxxisrt.exe
retrieve.exe	dxxretr.exe
retrieve2.exe	dxxretr2.exe
retrievec.exe	dxxretrc.exe
shred.exe	dxxshrd.exe
tests2x.exe	dxxgenx.exe
tests2xb.exe	dxxgenxb.exe
tests2xc.exe	dxxgenxc.exe

Replacement sample programs for XML Extender (UNIX)

Old Program (Do not use)	Old Program (Use)
insertc	dxxisrt
retrieve	dxxretr
retrieve2	dxxretr2
retrievec	dxxretrc
shred	dxxshrd
tests2x	dxxgenx
tests2xb	dxxgenxb
tests2xc	dxxgencx

Using the new sample programs with the sample sqx files

Samples of some of these sample programs are included with the product. If you create new executable files from these samples, you must copy the new files from the \SQLLIB\samples\db2xml\c\ directory into the \SQLLIB\bin\ directory, and then make an additional copy, renaming them according to the table above.

XML Extender on a partitioned database environment.

XSLT user defined functions are not supported in a partitioned database environment.

When working with XML in a partitioned database environment the data is split across multiple physical nodes. The data distribution in this case is not predictable. When working in this kind of environment, you should ensure the following:

- Use the XMLVARCHAR or XMLCLOB data types instead of XMLFile in your UDFs.
- When using the UNIX or Windows operating systems, store your XML files on a file server, and mount or map that server to each machine so that the file has the same path regardless of what machine accesses it.
- Create a response file when you install DB2 Universal Database on the instance owning computer. Use this response file for the rest of your installations. This ensures that the same components are installed and configured the same way on each machine.
- Use the -r option to specify the root id in the **enable_column** command, so that a consistent partitioning key is used for all the table data.

Additional Information

Change in Unicode server behavior

In version 7, Unicode servers ignored any graphic code pages by applications at connect time and assumed that UCS2 Unicode (code page 1200) was being used. Version 8 Unicode servers now respect the code page sent by the client.

Full message text is not returned when using SQLException.getMessage()

By default, the DB2BaseDataSource.retrieveMessagesFromServerOnGetMessage property is disabled. If you enable this property, all calls to the standard JDBC SQLException.getMessage() invoke a server-side stored procedure, which retrieves the readable message text for the error. By default, the full message text is not returned to the client when a server-side error occurs.

You can use the proprietary method DB2Sqlca.getMessage() to retrieve the fully formatted message text. A call to the SQLException.getMessage() method will start a unit of work only if retrieveMessagesFromServerOnGetMessage is enabled. A call to the DB2Sqlca.getMessage() method results in a stored procedure call, which starts a unit of work. Prior to FixPak 1, the DB2Sqlca.getMessage() method may throw an exception.

IBM DB2 Universal JDBC driver

The IBM DB2 Universal JDBC Driver cannot connect to databases that were created using the HP default character set, roman8. All SQLJ and JDBC

applications that use the universal JDBC driver, must connect to a database created with a different character set. If your LANG is set to ″C″ or to a ″roman8″ locale, you must change it to the corresponding ISO locale. For instance, if your LANG is set to de_DE.roman8, it must be changed to de_DE.iso88591:

```
export LANG=de_DE.iso88591
```

To run the DB2 SQLJ and JDBC sample programs with the universal JDBC driver, you can create the sample database with the following commands (in this case, using the ISO locale for US English):

```
export LANG=en_US.iso88591
db2 terminate
db2sampl
```

Note that if the sample database already exists, you must drop it before executing these commands.

Java functions and routines on UNIX and Windows operating systems

Due to limitations in the JVM, a Java routine defined as NOT FENCED will be invoked as if it had been defined as FENCED THREADSAFE. Java UDFs or methods defined with NO SQL, and with the parameter styles GENERAL or GENERAL WITH NULLS will not function if defined with LOB locators in the parameter definition. You must modify these functions to use LOB parameters instead of LOB LOCATORS.

English Microsoft Data Access Components (MDAC) files are used for all national language versions of DB2 Universal Database V8.1 unless translated MDAC files are installed first.

If you do not install the national language version of MDAC 2.7 prior to installing the national language version of DB2, then DB2 Universal Database installs English MDAC files by default. This causes the Windows ODBC Data Source Administrator panels to appear untranslated if your operating system is non-English. To fix this problem, you can install the “MDAC 2.7 RTM - Refresh” bundle from the Microsoft website at http://www.microsoft.com/data/download_270RTM.htm. Choose the language that you want to install, download the required executable, and run it. This will install the translated ODBC Data Source Administrator files.

The Simplified Chinese locale on AIX operating systems

AIX has changed the code set bound to the Simplified Chinese locale Zh_CN on:

- AIX version 5.1.0000.0011 or higher
- AIX version 5.1.0 with maintenance level 2 or later

The code set has been changed from GBK (code page 1386) to GB18030 (code page 5488 or 1392). Since DB2 Universal Database for AIX supports the GBK code set natively and the GB18030 code set via Unicode, DB2 Universal

Database will default the Zh_CN locale's code set to ISO 8859-1 (code page 819), and in some operations will also default the locale's territory to the United States (US).

To work around this limitation, you have two options:

- You can override the locale's code set from GB18030 to GBK and the territory from US to China (whose territory ID is CN and territory code is 86).
- You can use a different Simplified Chinese locale.

If you choose to use the first option, issue the following commands:

```
db2set DB2CODEPAGE=1386
db2set DB2TERRITORY=86
db2 terminate
db2stop
db2start
```

If you choose to use the second option, change your locale from Zh_CN to either ZH_CN or zh_CN. The ZH_CN locale's code set is Unicode (UTF-8), while the zh_CN locale's code set is eucCN (code page 1383).

The Simplified Chinese locale on Red Hat V8 operating systems

Red Hat version 8 has changed the default code set for Simplified Chinese from GBK (code page 1386) to GB18030 (code page 5488 or 1392).

Since DB2 Universal Database for Linux supports the GBK code set natively and the GB18030 code set via Unicode, DB2 Universal Database will default its code set to ISO 8859-1 (code page 819), and in some operations will also default its territory to the United States (US).

To work around this limitation, you have two options:

- You can override the Red Hat default code set from GB18030 to GBK and the territory from US to China (whose territory ID is CN and territory code is 86).
- You can use a different Simplified Chinese locale.

If you choose to use the first option, issue the following statements:

```
db2set DB2CODEPAGE=1386
db2set DB2TERRITORY=86
db2 terminate
db2stop
db2start
```

If you choose to use the second option, issue any one of the following commands:

```
export LANG=zh_CN.gbk
export LANG=zh_CN
export LANG=zh_CN.utf8
```

where the code set associated with zh_CN is eucCN or code page 1383, and with zh_CN.utf8 is code page 1208.

Corrections to the documentation

This section describes corrections to previously released HTML, PDF, and printed documentation. Updated versions of the affected topics will be available in a future version of the DB2® documentation.

SQL Reference

CREATE TABLESPACE statement

Location in the DB2 Information Center accessed from a browser
Reference –> SQL –> SQL statements. This topic was last updated at DB2 Version 8.1.2.

Location in PDF and printed manuals
Book Title: ***SQL Reference, Volume 2***

Chapter Title: Statements

Correction
Existing documentation states that remote resources are currently only supported when using Network Appliance Filers, IBM® iSCSI, or IBM Network Attached Storage. Support has been expanded to the following storage devices:

- Network Appliance iSCSI
- NEC iStorage S2100, S2200, S4100

Command Reference

EXPORT command

Location in the DB2 Information Center accessed from a browser
Reference –> Commands –> Command Line Processor (CLP). This topic was last updated at DB2 Version 8.1.2.

Location in PDF and printed manuals
Book Title: ***Command Reference***

Chapter Title: CLP Commands

Correction
`striplzeros` is a new delimited ASCII file type modifier supported by the EXPORT command. It removes the leading zeros from all exported decimal columns, as shown in the following example:

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```
db2 create table decimalTable ( c1 decimal( 31, 2 ) )
db2 insert into decimalTable values ( 1.1 )

db2 export to data of del select * from decimalTable

db2 export to data of del modified by STRIPLZEROS
    select * from decimalTable
```

In the first export operation, the content of the exported file data will be +0000000000000000000000000000001.10. In the second operation, which is identical to the first except for the `striplzeros` modifier, the content of the exported file data will be +1.10.

db2sqljcustomize - DB2 SQLJ Profile Customizer command

Location in the DB2 Information Center accessed from a browser

Reference –> Commands –> System. This topic was last updated at DB2 Version 8.1.2.

Location in PDF and printed manuals

Book Title: *Command Reference*

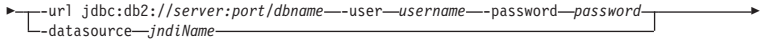
Chapter Title: System Commands

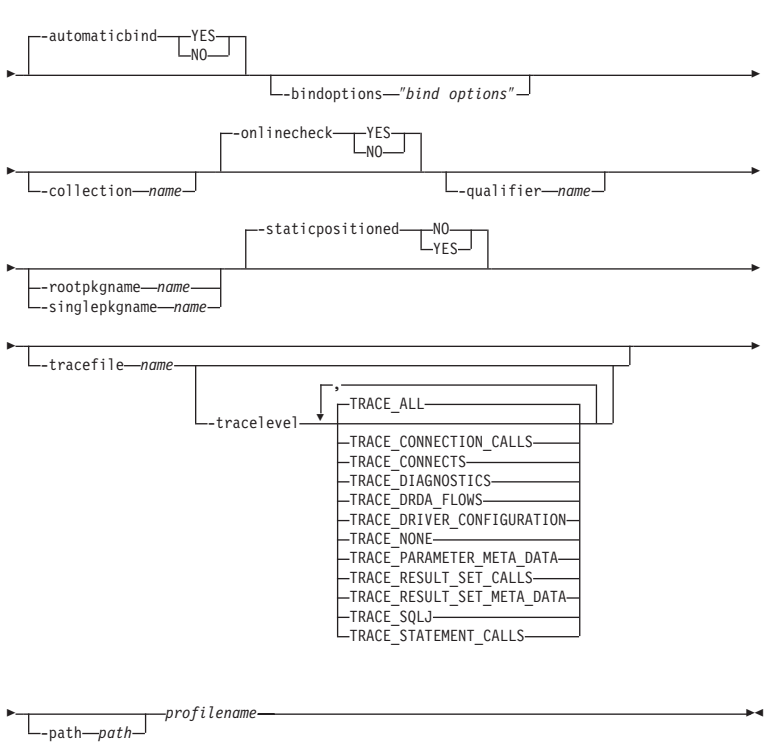
Correction

The **db2sqljcustomize** command, also known as the **db2profc** command, has had the following options changed or added:

- A new option, -datasource, has been added. -datasource *jndiName* specifies a JNDI registered DataSource name for establishing the database connection for online checking or automatic binding. The registered name must map to a Universal Driver data source configured for Type 4 connectivity.
- The default value of the -staticpositioned option is NO.
- A new option, -path, has been added. It identifies the absolute path to the root of the .ser file name provided in *profilename*. The path is added in front of the file name provided.

The updated syntax is as follows:





Application Development Guide: Building and Running Applications

Setting up the Windows® SQL procedures environment

Location in the DB2 Information Center accessed from a browser

Tasks –> Developing applications –> Setting up the application development environment –> Windows –> SQL procedures

This topic was last updated at DB2 Version 8.1.2.

Location in PDF and printed manuals

Book Title: *Application Development Guide: Building and Running Applications*

Chapter Title: Setup
Chapter Section: Windows –> SQL Procedures

Setup for the Microsoft® .NET Framework SDK

If the Microsoft .NET Framework SDK is installed on the C: drive, set the DB2_SQLROUTINE_COMPILER_PATH DB2 registry variable as follows:

```
db2set DB2_SQLROUTINE_COMPILER_PATH=
"c:\Program Files\Microsoft.NET\SDK\v1.1\Bin\sdkvars.bat"
```

Change the drive or the path, if necessary, to reflect the location of the .NET Framework SDK on your system. The DB2_SQLROUTINE_COMPILE_COMMAND should be set the same way it is for Microsoft Visual C++ DB2 Version 6.0 and Microsoft Visual C++ .NET..

Windows Java™ environment settings

Location in the DB2 Information Center accessed from a browser
Concepts –> Application development –> Setup –> Windows Java environment settings

This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals
Book Title: ***Application Development Guide: Building and Running Applications***

Chapter Title: Setup
Chapter section: Windows –> Java

Setup for data source programs
To build Data Source programs, you must obtain and install the following:

- **JNDI 1.2.1 class Libraries (jndi.jar and providerutil.jar)**

  `http://java.sun.com/products/jndi/#download`

- **File System Service Provider 1.2 (fscontext.jar)**

  `http://java.sun.com/products/jndi/#download`

For Java Developer Kit 1.3, you must additionally obtain and install the following:

- **JDBC 2.0 Optional Package**

  `http://java.sun.com/products/jdbc/download.html#spec`

Notes:

1. The JDBC 2.0 Optional Package is not required to build Data Source programs with Java Developer Kit 1.4.

For Data Source programs, you must also update your CLASSPATH to include the following files:

- jndi.jar
- fscontext.jar
- providerutil.jar

For Java Developer Kit 1.3, you must also update your CLASSPATH to include one of the following:

- jdbc2_0-stdext.jar
- j2ee.jar

Notes:

1. For Java Developer Kit 1.3, If you have already updated your CLASSPATH with j2ee.jar, you do not need jdbc2_0-stdext.jar.
2. jdbc2_0-stdext.jar or j2ee.jar are not required in your CLASSPATH when using Java Developer Kit 1.4.

Data Source sample programs are included in the `sqllib\samples\java\sqlj` directory. For details, see the samples README file in `sqllib\samples\java`.

Setting up the UNIX® Java environment

Location in the DB2 Information Center accessed from a browser

Tasks –> Developing applications –> Setting up the application development environment –> UNIX –> Java

This topic was last updated at DB2 Version 8.1..

Location in PDF and printed manuals

Book Title: ***Application Development Guide: Building and Running Applications***

Chapter Title: Setup
Chapter section: UNIX –> Java

Setup for Data Source programs

To build Data Source programs, you must obtain and install the following:

- **JNDI 1.2.1 class Libraries (jndi.jar and providerutil.jar)**

  `http://java.sun.com/products/jndi/#download`

- **File System Service Provider 1.2 (fscontext.jar)**

  `http://java.sun.com/products/jndi/#download`

For Java Developer Kit 1.3, you must additionally obtain and install the following:

- **JDBC 2.0 Optional Package**

  `http://java.sun.com/products/jdbc/download.html#spec`

Notes:

1. The JDBC 2.0 Optional Package is not required to build Data Source programs with Java Developer Kit 1.4.

For Data Source programs, you must also update your CLASSPATH to include the following files:

- jndi.jar
- fscontext.jar
- providerutil.jar

For Java Developer Kit 1.3, you must also update your CLASSPATH to include one of the following:

- jdbc2_0–stdext.jar
- j2ee.jar

Notes:

1. For Java Developer Kit 1.3, If you have already updated your CLASSPATH with j2ee.jar, you do not need jdbc2_0-stdext.jar.
2. jdbc2_0-stdext.jar or j2ee.jar are not required in your CLASSPATH when using Java Developer Kit 1.4.

Data Source sample programs are included in the `sqllib/samples/java/sqlj` directory. For details, see the samples README file in `sqllib/samples/java`.

Setting up the Java environment

Location in the DB2 Information Center accessed from a browser
Tasks –> Developing applications –> Setting up the application development environment –> Java. This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals
Book Title: ***Application Development Guide: Building and Running Applications***

Chapter Title: Setup
Chapter section: General Setup Information

TCP/IP listener required for Universal JDBC drivers
To build applications with the JDBC Universal Type 2 or JDBC Universal Type 4 Driver, and to build applets with the JDBC Universal Type 4 Driver, the TCP/IP listener must be running. To ensure this, do the following:

1. Set the environment variable DB2COMM to TCPIP as follows:

   ```
   db2set DB2COMM=TCPIP
   ```

2. Update the database manager configuration file with the TCP/IP service name as specified in the services file:

```
db2 update dbm cfg using SVCENAME <TCP/IP service name>
```

You must do a ″db2stop″ and ″db2start″ for this setting to take effect.

Note: The port number used for applets and SQLJ programs needs to be the same as the TCP/IP SVCENAME number used in the database manager configuration file.

Java applet considerations

Location in the DB2 Information Center accessed from a browser
Reference –> APIs –> Java –> Java applet considerations. This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals
Book Title: ***Application Development Guide: Building and Running Applications***

Chapter Title: Java

db2JDBC Version Program is for DB2 Universal Database™ Version 7 Only
The `db2JDBCVersion.java` sample file in `sqllib\samples\java` (Windows), or in `sqllib/samples/java` (UNIX) should not be used with DB2 Universal Database Version 8. This program can be used with DB2 Universal Database Version 7 to check which version of the DB2 JDBC driver is currently in use, and whether the JDBC environment is correctly set up for it.

Application Development Guide: Programming Client Applications

Generated columns

Location in the DB2 Information Center accessed from a browser
Concepts –> Application development –> General application programming. This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals
Book Title: ***IBM DB2 Universal Database Application Development Guide: Programming Client Applications***

Chapter Title: Common DB2 Application Techniques

Correction
The example CREATE TABLE statement should have a data type defined for the fourth column (c4). The statement is changed to the following:

```
CREATE TABLE T1(c1 INT, c2 DOUBLE,
                c3 DOUBLE GENERATED ALWAYS AS (c1 + c2),
                c4 SMALLINT GENERATED ALWAYS AS
                  (CASE
                     WHEN c1 > c2 THEN 1
                     ELSE NULL
                   END)
               );
```

Identity columns

Location in the DB2 Information Center accessed from a browser

Concepts –> Application development –> General application programming. This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals

Book Title: ***IBM DB2 Universal Database Application Development Guide: Programming Client Applications***

Chapter Title: Common DB2 Application Techniques

Correction

Identity columns in a table cannot be changed with the ALTER TABLE statement. In this topic's opening paragraph, the closing sentence is changed to the following: To create an identity column, include the IDENTITY clause in the CREATE TABLE.

Limitations for ADO applications

Location in the DB2 Information Center accessed from a browser

Concepts –> Application development –> APIs (application programming interfaces) –> Windows –> IBM OLE DB Provider –> Supported Applications –> ADO. This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals

Book Title: ***IBM DB2 Universal Database Application Development Guide: Programming Client Applications***

Chapter Title: Writing Applications Using the IBM OLE DB Provider for Web Services

Correction

The following limitations for ADO applications are added:

- When inserting a new row using a server-side scrollable cursor, use the AddNew() method with the Fieldlist and Values arguments. This is more efficient than calling AddNew() with no arguments and with Update() calls for each column. Each AddNew() and Update() call is a

separate request to the server and therefore, is less efficient than a single call to AddNew().

- Newly inserted rows are not updateable with a server-side scrollable cursor.
- Tables with long data type, LOB, or Datalink columns are not updateable when using a server-side scrollable cursor.

Call Level Interface Guide and Reference, Volume 1

DB2 Universal Database as transaction manager in CLI applications

Location in the DB2 Information Center accessed from a browser

Concepts –> Application development –> APIs (application programming interfaces) –> Call level interface (CLI) –> Application programming in CLI –> Multisite updates (two-phase commit). This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals

Book Title: ***Call Level Interface Guide and Reference, Volume 1***

Chapter Title: Multisite Updates (Two Phase Commit)

Corrections

The following two corrections apply to this topic:

- In the configuration section, the current documentation incorrectly lists three CLI keywords that need to be set. Only the DISABLEMULTITHREAD CLI keyword needs to be set as follows:

```
[COMMON]
DISABLEMULTITHREAD=1
```

- The SQL_ONEPHASE setting of the SQL_ATTR_SYNC_POINT attribute is no longer supported. Setting SQL_ONEPHASE will yield the two-phase behavior of the SQL_TWOPHASE setting.

Call Level Interface Guide and Reference, Volume 2

SQLCancel function (CLI) - cancel statement

Location in the DB2 Information Center accessed from a browser

Reference –> APIs (application programming interfaces) –> Call level interface (CLI) –> DB2 CLI functions. This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals

Book Title: *Call Level Interface Guide and Reference, Volume 2*

Chapter Title: DB2 CLI Functions

Correction

The following is a clarification to the Usage section: To call SQLCancel() against a server which does not have native interrupt support (such as DB2 Universal Database for z/OS™ and OS/390®, Version 7 and earlier, and DB2 for iSeries™), the INTERRUPT_ENABLED option must be set when cataloging the DCS database entry for the server.

Environment attributes (CLI) list

Location in the DB2 Information Center accessed from a browser

Reference –> APIs (application programming interfaces) –> Call level interface (CLI) –> CLI attributes. This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals

Book Title: *Call Level Interface Guide and Reference, Volume 2*

Chapter Title: CLI Attributes - Environment, Connection, and Statement

Correction

The SQL_ONEPHASE option of the SQL_ATTR_SYNC_POINT environment attribute is no longer supported. Setting SQL_ONEPHASE will yield the two-phase behavior of the SQL_TWOPHASE setting.

Connection attributes (CLI) list

Location in the DB2 Information Center accessed from a browser

Reference –> APIs (application programming interfaces) –> Call level interface (CLI) –> CLI attributes. This topic was last updated at DB2 Version 8.1.2.

Location in PDF and printed manuals

Book Title: *Call Level Interface Guide and Reference, Volume 2*

Chapter Title: CLI Attributes - Environment, Connection, and Statement

Correction

The SQL_ONEPHASE option of the

SQL_ATTR_SYNC_POINT connection attribute is no longer supported. Setting SQL_ONEPHASE will yield the two-phase behavior of the SQL_TWOPHASE setting.

DB2 Spatial Extender User's Guide and Reference

EnvelopesIntersect

Location in the DB2 Information Center accessed from a browser

Reference –> SQL –> Functions –> Spatial Extender –> Deprecated Functions. This topic was last updated at DB2 Version 8.1.

Location in PDF and printed manuals

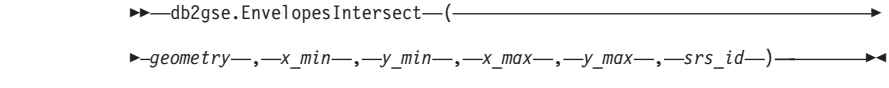
Book Title: *DB2 Spatial Extender User's Guide and Reference*

Chapter Title: Deprecated spatial functions

Correction

The EnvelopesIntersect function is no longer deprecated. Another function signature has been defined to remove the requirement to first create a polygon to represent a rectangular window with which to find all geometries that the window intersects. EnvelopesIntersect now takes a geometry, four type DOUBLE coordinate values that define the lower-left and upper-right corners of a rectangular window, and the spatial reference system identifier. EnvelopesIntersect returns 1 if the envelope of the first geometry intersects with the envelope defined by the four type DOUBLE values. Otherwise, 0 (zero) is returned. <

Syntax:



Parameters:

geometry
A value of type ST_Geometry or one of its subtypes that represents the geometry that is to be tested.

x_min
Specifies the minimum X coordinate value for the envelope. You must specify a non-null value for this parameter.

The data type of this parameter is DOUBLE.

y_min
Specifies the minimum Y coordinate value for the envelope. You must specify a non-null value for this parameter.

The data type of this parameter is DOUBLE.

x_max
Specifies the maximum X coordinate value for the envelope. You must specify a non-null value for this parameter.

The data type of this parameter is DOUBLE.

y_max
Specifies the minimum Y coordinate value for the envelope. You must specify a non-null value for this parameter.

The data type of this parameter is DOUBLE.

srs_id
Uniquely identifies the spatial reference system. The spatial reference system identifier should match the spatial reference system identifier of the geometry parameter. You must specify a non-null value for this parameter.

The data type of this parameter is INTEGER.

Return type:

INTEGER

Example:

This example creates two polygons that represent counties and then determines if any of them intersect a geographic area specified by the four type DOUBLE values.

```
SET CURRENT FUNCTION PATH = CURRENT FUNCTION PATH, db2gse
CREATE TABLE counties (id INTEGER, name CHAR(20),
                       geometry ST_Polygon)

INSERT INTO counties VALUES
       (1, 'County_1', ST_Polygon('polygon((0 0, 30 0, 40 30,
        40 35, 5 35, 5 10, 20 10, 20 5, 0 0))' ,0))

INSERT INTO counties VALUES
       (2, 'County_2', ST_Polygon('polygon((15 15, 15 20,
        60 20, 60 15, 15 15))' ,0))

INSERT INTO counties VALUES
```

```
3                       (3, 'County_3', ST_Polygon('polygon((115 15, 115 20,
3                       160 20, 160 15, 115 15))' ,0))
3
3
3                   SELECT name
3                   FROM counties as c
3                   WHERE EnvelopesIntersect(c.geometry, 15, 15, 60, 20, 0) =1
```

3 Results:

```
3                   Name
3                   --------------------
3                   County_1
3                   County_2
3
3
```

3

Online help corrections and updates

Configuring the C environment for SQL stored procedures in the Development Center

If you are working with DB2® for Windows® on the server and you are using the Visual C++ compiler, you must configure your SQL build settings. You will be not be able to build SQL stored procedures until you configure your SQL Build options.

Use the Database Connection Properties notebook in the Development Center to configure your SQL build settings.

To configure the C compiler environment for SQL stored procedures:

1. On the SQL Build Settings page of the notebook, specify a compiler environment that you want to use for building SQL objects.
   - Click **Refresh**.
   - In the **Compiler environment** field, type the location of the VC98\BIN\VCVARS32.BAT file on your Windows server.
2. Click **OK** to close the notebook and save your changes. If you click **Apply**, the changes are saved and you can continue changing the properties.

Enabling view docking when accessing Development Center with Hummingbird Exceed

When accessing the Development Center on UNIX® with Hummingbird® Exceed, the XTEST extension version 2.2 must be enabled before you can move and dock views by dragging their title bars within the Development Center.

To enable the XTEST extension:

1. From the Start menu, select **Programs** –> **Hummingbird Connectivity 7.0** –>**Exceed**–>**XConfig**. The XConfig window will open.
2. Optional: If your configuration requires a password, enter the XConfig password.
3. Double click the **Protocol** icon. The Protocol window will open.
4. Check the **X Conformance Test Compatibility** checkbox.
5. In the **Protocol** window, click the **Extensions...** button. The Protocol Extensions window will open.
6. In the Enable Extensions list, select the **XTEST(X11R6)** checkbox.

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7. Click **OK**.

Microsoft Visual Studio .NET add-in information update in Development Center help

The ″About the Development Center″ help topic does not include information about the new Microsoft® Visual Studio .NET add-in in the list of development environment add-ins provided. The following information describes the .NET add-in that supports Development Center functionality in the Microsoft Visual Studio .NET development environment:

DB2 Development Add-In for the Microsoft Visual Studio .NET development environment:

A new component of the DB2 Application Development Client is the IBM® DB2 Development Add-In for Microsoft Visual Studio .NET for the .NET framework version 1.0. This add-in extends the Visual Studio .NET IDE to provide tightly integrated DB2 application development support using the DB2 .NET Managed Provider as well as DB2 server-side development support. Using this add-in available in Microsoft Visual Studio .NET you can:

- Develop DB2 specific database projects from the new IBM Projects folder with advanced script generation wizards.
- Explore the DB2 catalogue information using DB2 data connections in the new IBM Explorer.
- Make use of the extended intelligence features for DB2 table/view columns and procedure/function parameters.
- Generate ADO.NET code for your windows forms using drag and drop.
- Configure your DB2 Managed Provider objects using properties custom editors and wizards.
- Launch various DB2 development and administration centers.
- View add-in help from the existing dynamic help window.

The DB2 Development Add-In for Microsoft Visual Studio .NET database connections are managed using the DB2 .NET managed provider and ADO.NET.

Migrating DB2 XML Extender to Version 8.1.2

If you are migrating from a Version 7 FixPak, refer to each of the release notes for the Version 7 FixPak for more information on what changes are included when upgrading to Version 8.1.2. Each new FixPak contains all of the previous FixPaks' updates.

To migrate DB2 XML Extender from previous versions to Version 8.1.2, complete the following steps.

1. From the DB2 Command Line, enter:

   ```
   db2 connect to database_name
   db2 bind dxxinstall\@dxxMigv.lst
   ```

   where *dxxinstall* is the directory path in which you installed DB2 Universal Database .

2. From the DB2 Command Line, enter:

   ```
   dxxMigv database_name
   ```

Path settings to enable Java routines to compile in the Development Center

The Development Center cannot compile Java™ routines unless it knows where your developer kit versions are installed. Default locations for these will be written to your `$HOME/IBM/DB2DC/DB2DC.settings` file when the Development Center starts for the first time. You may copy these into your `$USER.settings` file and modify them with a Unicode editor, or you may create symbolic links to your developer kit directories in the default locations.

Runstats dialog – updated getting there information

To open the Runstats notebook:

1. From the Control Center, expand the object tree until you find the Tables folder.
2. Click the Tables folder. Any existing tables are displayed in the contents pane.
3. Right-click all the tables that you want to run statistics on, and select Run Statistics from the pop-up menu. The Runstats notebook opens.

Spatial Extender – requirements when using the Index Advisor

The ANALYZE clause requires use of a user temporary table space. If the ANALYZE clause is needed, then you must have the USE privilege for the table space in order to use the index advisor.

Specifying build options for a Java stored procedure in the Development Center

Use the Stored Procedure Properties notebook to specify the compile options that will be used when building a Java stored procedure.

These steps are part of the larger task of changing stored procedure properties.

To specify the build options of a stored procedure:

1. On the Build page of the Stored Procedure Properties notebook, specify the compile options for building the stored procedure. See your compiler documentation for information about available options.
   a. In the Precompile options field, type the DB2 Universal Database™ precompiler options that you want to use when building stored procedures. The package name must not exceed 7 characters.
   b. In the Compile options field, type the compiler options that you want to use when building stored procedures.
2. Click **OK** to close the notebook and save your changes. If you click **Apply**, the changes are saved and you can continue changing the properties.

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