IBM® DB2® XML Extender

Release Notes

Version 7.2, Fixpak 12

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About the Release Notes for IBM DB2 XML Extender, Version 7.2 Fixpak 12

This document contains information about Fixpak 12 for DB2 XML Extender, Version 7.2. This supplements the information in *DB2 Universal Database® XML Extender Administration and Programming, Version 7*, released for DB2 Universal Database, Version 7.2.

For users of DB2 XML Extender for iSeries, this document supplements information found in *DB2 Universal Database Extenders for iSeries: XML Extender Administration and Programming, Version 7*.

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Chapter 1. Installation Requirements

The following items are required to install this fix pack:

- DB2 UDB, Version 7.2 Fixpak 12
- JDK, Version 1.1.8 or higher

Operating system requirements:

- AIX, Version 4.2.1 or higher
- Solaris Operating Environment, Version 2.6 or higher
- Microsoft Windows NT 4.0 SP4 or higher, Microsoft Windows 2000
- Linux (Intel only), Linux kernel 2.2.12 or higher, glibc 2.1.2 or higher, libstdc++ 2.9.0
- OS/400 V5R1

The Web Services servlet requires JDK 1.2.2+ and JDBC 2.0+.

If you have older versions of DB2 XML Extender installed, uninstall the previous version before installing DB2 XML Extender, Version 7.2.

Before beginning installation, check that DB2 is not running by entering `db2stop force` on the DB2 command line.

After installing DB2 XML Extender on the Solaris Operating Environment, it is necessary to run the following script:

```
/opt/IBMdb2xml/V7.1/bin/xmlsetup
```

You must have root authority to run this script.

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Chapter 2. Migrating to Fixpak 12 from prior releases

If you are using XML Extender, Version 7.2 Fixpak 11 or earlier, you must migrate each database enabled for XML Extender before using an existing XML-enabled database with XML Extender, Version 7.2 Fixpak 12. The migration program migrates you to DB2 XML Extender, Version 7.2 Fixpak 12 from prior releases.

When using iSeries, refer to the cover letter for PTF 5722DE1 V5R1M0 SI14385 for migration instructions.

Before running the migration program, create a backup of the database.

The migration files are located in the fix pack install image.

When using UNIX or Windows, complete the following steps from the directory where you extracted the fix pack files (use a DB2 Command Window on Windows operating systems):

1. Enter:

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

2. Enter:

   ```
   db2 bind @dxxbind.lst
   ```

   The *dxxbind.lst* file is located in the *%install%*/bnd directory, where *%install%* is the directory where you installed XML Extender.

3. Enter:

   ```
   dxxMigv database_name
   ```

Failing to do the migration step can cause problems and unpredictable results such as failure while disabling databases and inability to access new UDFs.

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Chapter 3. What's new in XML Extender with Fixpak 12?

All updates in Fixpak 12 are now available on DB2 for iSeries: XML Extender in PTF 5722DE1 V5R1M0 SI14385.

When you decompose documents on workstation environments that are larger than 1 MB, it is no longer necessary to drop then recreate the stored procedure dxxShredXML. To decompose documents that are larger than 1 MB, invoke the stored procedure dxxShredXML50MB, which can shred documents up to 50 MB. Although the dxxShredXML50MB can accept large documents, additional resources might be required for the stored procedure to successfully shred large documents. To invoke the new stored procedure through the sample program ***shred***, use the new flag `-large`. For example: `shred -large mydb xxx.xml.`

APAR's that have been fixed in Fixpak 12:

- **APAR JR16864:** An invalid DAD file crashes the program. This fix gives a message that describes why the DAD file might be invalid. For example:
  - DXXQ000E: ″RDB_node″ is missing from the DAD file.
  - DXXQ012E: Errors occurred in DAD.
  - DXXQ016E: The table name in this RDB_node is not defined in the top element of the DAD file.
- **APAR IY52702:** Fixes a problem where extract UDF, when used against a column in a table with multiple rows, was able to resolve only the internal entities that are used in the XML document of the first row.
- **APAR IY52844:** Allow different user IDs to run the migration program.
- **APAR PQ81744:** Fixes a problem with errors accessing trace files. If the trace file cannot be opened for output, usually because of file persmssions, an error message was put in the SQLCA.SQLSTATE field, which caused DB2 to return a different error. With this fix the correct SQLSTATE (38X03) and message DXXQ070E are issued.
- **APAR IY54945:** Fixes a problem where using an update UDF against XML documents with internal entities sometimes returns an incorrect result.
- **APAR IY57539:** This APAR fixes two problems:
  - When you insert or update XML data in an XML Extender enabled column, the side tables are updated even if the `dtdid` element in the DAD is missing or has a null value.
  - If a table contains more than one column and at least one column is enabled for XML, updates to non-XML-enabled columns unnecessarily update the side tables for all XML-enabled columns. Updates to an XML-enabled column also updates side tables for XML-enabled columns that were not updated.″

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Chapter 4. Message updates

DXXQ056E

Element/attribute `xmlname` cannot be mapped to the column designated as part of the foreign key (column `column` in table `table`).

Explanation: The specified element/attribute cannot be mapped to a column that is specified as part of a foreign key. Data values for foreign keys are determined by that of the primary keys; a mapping of the specified element/attribute in the xml document to a table and column is not necessary.

User Response: Remove the RDB_node mapping to the specified column and table in the DAD.

DXXQ057E

The schemabindings and dtdid tags cannot exist together in the DAD file.

Explanation: The schemabindings and dtdid tags cannot exist together in the DAD file.

User Response: Check that either the schemabindings tag or the dtdid tag exists in the DAD file, but not both.

DXXQ058E

The nonamespacelocation tag inside the schemabindings tag is missing in the DAD file.

Explanation: The nonamespacelocation tag inside the schemabindings tag is missing in the DAD file.

User Response: Add the nonamespacelocation tag to the schemabindings tag.

DXXQ059E

The doctype tag cannot be located inside the XCollection tag in the DAD for schema validation.

Explanation: The doctype tag cannot be located inside the XCollection tag in the DAD for schema validation.

User Response: Remove the doctype tag inside the Xcollection tag for schema validation.

DXXQ060E

Attempt to find SCHEMA ID `schemaid` failed.

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Explanation: The XML Extender could not find the SCHEMA ID while attempting to enable the column. The SCHEMA ID corresponds to the value of the location attribute of the nonamespacelocation tag which is inside the schemabindings tag in the DAD file.

User Response: Check that the correct value for the SCHEMA ID is specified in the DAD file.

DXXQ061E

The format of the string is invalid.

Explanation: The format of the string representation is invalid. If the string is a date, time, or timestamp value, the syntax does not conform to its data type.

User Response: Check that the format of the date, time, or timestamp value conforms to the format for its data type.

DXXQ062E

No rows of result set for `table` are left to produce a XML value for `element`.

Explanation: This error condition is usually caused by a missing multi_occurrence = YES specification on the parent element_node of the given element or attribute.

User Response: Check the DAD that the value of multi_occurrence on the parent element_node correctly reflects the multiplicity of child element_nodes.

DXXQ063E

The multi_occurrence attribute value on elementname in the DAD file is invalid.

Explanation: The value of the multi_occurrence attribute on the specified element_node in the document access definition (DAD) file is wrong or missing. The value must be 'yes' or 'no', case insensitive.

User Response: Ensure that the multi_occurrence attribute is specified correctly in the DAD file.

DXXQ064E

Column `column` not found in foreign table `table`.

Explanation: A key column specified in the join condition was not mapped to any element or attribute node.

User Response: Check to make sure the join condition specified in the DAD file is correct, and all key columns are mapped to element or attribute nodes.

DXXQ065I

All triggers relating to XML enabled columns have been successfully regenerated.

Explanation: This is an informational message only.

User Response: No action required.

DXXQ066E

The primary key for table `tablename` does not exist.

Explanation: XML Extender could not determine the primary key for table tablename . Check that the primary key for the table was not dropped after the column was enabled for XML.

User Response: Alter the table to add the primary key specified as the ROOT ID when the column was enabled for XML.

DXXQ067E

Attempt to `action` failed.

Explanation: While attempting to `action`, a SQL error occurred.

User Response: Contact your Software Service Provider. When reporting the error, be sure to include the XML Extender trace file.

DXXQ068E

Cannot set current SQLID to [userid]. SQLCODE = [sqlcode].

Explanation: While attempting to set current sqlid to a secondary authorization id, a SQL error occurred.

User Response: Check that you are specifying a valid secondary authorization id and that you have authorization for the ID.

DXXQ069E

Cannot find element/attribute `xmlitemname` mapped to table `tabname` as foreign key for table `tab2name`.

Explanation: The mapping, including multi-occurrence usage, as specified by the DAD does not allow the value of `xmlitemname` to be used to populate a foreign key value of `tab2name`.

User Response: Check the following: join condition involving the two tables; the value of multi_occurrence attribute of the highest level element mapping to `tabname` and its wrapper; the presence of other items that is a child of an ancestor of `xmlitemname` mapping to a different table than `tabname`.

DXXQ070E

Cannot open trace file `tracefile` for output.

Explanation: The open of the trace file failed.

User Response: Ensure that the process writing the trace file has write permission and that the file resides on a read/write filesystem.

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