

IBM<sup>®</sup> DB2<sup>®</sup> XML Extender



# Release Notes

*Version 7, Fixpak 7*



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*Version 7, Fixpak 7*

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## About the Release Notes for IBM DB2<sup>®</sup> XML Extender Version 7.2, (Fixpak 7)

This document contains information about Fixpak 7 for DB2 XML Extender 7.2, supplementing information in *DB2 Universal Database<sup>®</sup> XML Extender Administration and Programming, Version 7, Fixpak 2*, released for DB2 Universal Database Version 7, Fixpak 2. The information in these Release Notes includes all topics except installation. For up-to-date information about installing DB2 XML Extender, see the Version 7.2 Installation Notes in readme.txt, in the root directory of the product CD-ROM.

This document also supplements information in *DB2 Universal Database Extenders for iSeries: XML Extender Administration and Programming, Version 7*.





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## Chapter 1. What's new in XML Extender with Fixpak 7?

The following fixes and updates are provided in Fixpak 7. Links are provided for changes that have more detailed information or documentation updates.

- All updates in Fixpak 7 are now available on DB2 UDB for iSeries: XML Extender in PTF 5722DE1 V5R1M0 SI05061.
- “Migrating to Fixpak 7 from prior releases” on page 3
- APAR fixes
  - APAR #IY30717: ERROR IN ASSIGNMENT. SQLSTATE=22005. Null values in key columns cause a failure in SQL composition. XML Extender failed when the value of the NULL column appears in the WHERE clause, while generating the query for the child level.
  - APAR #IY30721: DXXADM ENABLE\_COLUMN -R <COLUMN\_NAME> FAILS WHEN COLUMN IS DECIMAL. When side table columns are specified as DECIMAL, XML Extender defaulted to scale of “5”. This fix accepts value of length as specified in the DAD file.
  - APAR #IY31288: XML EXTENDER INSERTS COLUMN VALUES WITH GARBAGE IF THE XML DOCUMENT BEING SHREDDED CONTAINS ESCAPED CHARACTERS, &

Element content was corrupted when shredded and stored in the database. Data had extra characters appended at the end. The fix prevents the appending of extra characters to the data during decomposition.

- APAR #JR16907: SQL WARNINGS CAUSE XML EXTENDER TO FAIL. When the SQL statement contains a user-defined function (UDF), such as AVG, and the column that it operates on contains a NULL value, a warning (rc=1) is returned. This warning caused dxxGenXML to fail. The dxxGenXML stored procedure no longer fails when encountering the warning.
  - APAR #JR16908: <![CDATA [TEST / WITH SPECIAL CHARS DOES NOT WORK IN SHRED. DOES NOT WORK IN SHRED. Support for CDATA sections in decomposition. CDATA section can now be shredded and stored in the database.
  - APAR #JR16977: XML EXTENDER GETS ERROR WHEN HANDLING MULTIPLE TRANSACTIONS. Concurrent Shred requests result in error. This fix increases the threshold for concurrent stored procedure requests.
- New administration stored procedure: db2xml.dxxDisableDB

- Renamed stored procedures:

<b>Old Name</b>	<b>New Name</b>
db2xml.dxxEnableColl	db2xml.dxxEnableCollection
db2xml.dxxDisableColl	db2xml.dxxDisableCollection

- Miscellaneous fixes
  - The `table_schema` column has been added to the primary key of the `db2xml.XML_USAGE` table.
  - The message catalogs for French, German were corrupted and are now fixed
  - File permissions problems with DXXTRC on UNIX have been fixed.
  - Fixed support for # sign in code page 277.
  - **Requirement:** stored procedure names must have a period (.), not an exclamation mark (!). For example: `db2xml.dxxEnableDB`.

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## Chapter 2. Updates for the *DB2 Universal Database XML Extender Administration and Programming, Version 7*

This section provides updates to information about topics in the *DB2 Universal Database XML Extender Administration and Programming, Version 7*, and follow on Release Notes for Fixpaks 3, 4, 5, and 6 for UNIX and Windows.

The following changes have been made in Fixpak 7.

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### Migrating to Fixpak 7 from prior releases

If you have been using XML Extender V7.2 Fixpak 6 or earlier (on UNIX or Windows operating systems), you must migrate each database enabled for XML Extender before using an existing XML-enabled database with XML Extender V7.2 Fixpak 7. The migration program migrates you to DB2 XML Extender V7.2 Fixpak 7 from prior releases.

The following list describes the steps the migration program goes through, based on the level of the product you had installed:

#### **From Fixpak 6**

- Fixes migration error Fixpak 3 when updating user defined functions (UDFs) for parallel.
- Adds the following stored procedure: db2xml.dxxDisableDB
- Drops db2xml.dxxEnableColl and db2xml.dxxDisableColl stored procedures, and creates the equivalent stored procedures with new names.

#### **From Fixpak 5**

No changes.

#### **From Fixpak 4**

Drops the dxxGenXMLCLOB and dxxRetrieveXMLCLOB stored procedures and recreates them with updated parameter values for CLOBs.

#### **From Fixpak 3**

- Creates new stored procedures (dxxGenXMLCLOB and dxxRetrieveXMLCLOB) that return CLOBs
- Drops and recreates the user defined functions (UDFs) that allow you to use the parallel capability for the scalar UDFs.
- Migration “From Fixpak 4” updates

## From Fixpak 2

- Creates XMLDBCLOB user-defined types (UDTs) and user-defined functions (UDFs) for use with Unicode and DBCS databases.
- Creates additional stored procedures for dxxGenXML and dxxRetrieveXML, to support the use of temporary tables.
- Migration “From Fixpak 3” updates
- Migration “From Fixpak 4” updates

## To migrate the database:

When using iSeries, refer to the cover letter for PTF 5722DE1 V5R1M0 SI05061 for migration instructions.

**Important:** the name of the migration file has changed from migr71 to dxxmigv

When using UNIX or Windows, complete the following steps.

1. From the DB2 command line, enter:

```
db2 connect to <database_name>
db2 bind dxxMigv.bnd
```

2. From the DB2 command line, enter:

```
dxxMigv <database_name>
```

Failing to do the migration step can cause “dxxadm disable\_db ...” to fail.

**Important:** See the Known Problems section of the readme\_fp7.txt file for updates to the fixpak.

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## Miscellaneous Fixes

The following sections provides updates to the XML Extender documentation based on Fixpak 7 fixes.

### Null values in SQL Composition

Key columns having NULL values (either as attribute node or text node) in the retrieved result set will not be emitted as a part of the resulting document. Also, child elements of such an element will not be emitted as well, regardless of whether or not the child elements have NOT NULL data. Key columns are specified in the ORDER BY clause

For example, when generating a document from the following table:

ACTUAL	CHILD1	CHILD2	CHILD3	CHILD4	X	
	1	2	3	4	5	1
	1	2	3	4	6	2

1	2	3	4	7	3
1	2	8	-	-	4
1	2	9	10	-	5
1	2	9	11	-	6

XML Extender might produce the following XML document:

```
<?xml version="1.0"?>
<!DOCTYPE topic SYSTEM "/mydtd.dtd">
<topic_actual toc_title="1">
  <topic_1 toc_title="2">
    <topic_2 toc_title="3">
      <topic_3 toc_title="4">
        <topic_4 toc_title="5">
          <topic_X>1</topic_X>
        </topic_4>
        <topic_4 toc_title="6">
          <topic_X>2</topic_X>
        </topic_4>
        <topic_4 toc_title="7">
          <topic_X>3</topic_X>
        </topic_4>
      </topic_3>
    </topic_2>
    <topic_2 toc_title="8">
      </topic_2>
    <topic_2 toc_title="9">
      <topic_3 toc_title="10">
        </topic_3>
      <topic_3 toc_title="11">
        </topic_3>
      </topic_2>
    </topic_1>
  </topic_actual>
```

### Stored procedure names

**Requirement:** stored procedure names must have a period (.), not an exclamation mark (!). This was previously optional, but recommended. Now the period is required. For example, if you reference a stored procedure such as db2xml!dxxEnableDB, you must change it to db2xml.dxxEnableDB.

### New administration stored procedure

The db2xml.dxxDisableDB stored procedure is now available. You can use this stored procedure to disable a database in your applications. This stored procedures has been previously provided in the XML Extender documentation, but not available for applications.

**Purpose:** Disables the database. When the database is enabled, the XML Extender creates the following objects:

- The XML Extender user-defined types (UDTs).
- The XML Extender user-defined functions (UDFs).

- The XML Extender DTD reference table, DTD\_REF, which stores DTDs and information about each DTD.
- The XML Extender usage table, XML\_USAGE, which stores common information for each column that is enabled for XML and for each collection.

**Format:** :

```
dxxDisableDB(char(dbName) dbName,      /* input */
             long      returnCode,      /* output */
             varchar(1024) returnMsg)   /* output */
```

**Parameters**

*Table 1. dxxEnableDB() parameters*

<b>Parameter</b>	<b>Description</b>	<b>IN/OUT parameter</b>
<i>dbName</i>	The database name.	IN
<i>returnCode</i>	The return code from the stored procedure.	OUT
<i>returnMsg</i>	The message text that is returned in case of error.	OUT

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