Overview

Web-enabled e-business is driving most companies to redefine their IT strategy. Moving away from proprietary data formats towards an open, interchangeable format such as Extensible Markup Language (XML) to transact business on the Web is a key part of the strategy.

In this electronic age, the bulk of companies’ managed data (90%), including e-mail, technical and business documents, contracts, problem reports, and customer complaints is still in textual form. Companies continue to look for efficient ways to leverage such massive textual data to provide valuable information.

The DB2 Universal Database® (UDB) Extenders for iSeries, Version 7.1 program comes with two major functions to extend DB2® to cover the storage, management, and retrieval of XML and text data for your enterprise:

- DB2 UDB XML Extender
- DB2 UDB Text Extender

XML is the standard for data interchange in e-business. The DB2 UDB XML Extender provides new data types that let you store XML documents in DB2 databases and new functions that assist you in working with these structured documents. Entire XML documents can be stored in DB2 databases as character data or stored as external files but still managed by DB2. Retrieval functions allow you to retrieve either the entire XML document or individual elements or attributes.

The DB2 UDB Text Extender gives you a powerful way to search for and extract key information in documents stored in DB2 databases or in files. You can use Text Extender to search through a full-text document or perform a structural text search. XML Extender understands the XML structures and allows application queries to be based on the structure of the document.

Together, the DB2 UDB XML Extender and DB2 UDB Text Extender help you leverage iSeries to manage your critical business information in DB2 databases to engage in business-to-business and business-to-customer solutions in the next generation of e-business.

The product is packaged on the media with the iSeries Version 5 Release 1. It can be freely used for up to a 70-day trial period.

Key Prerequisites

iSeries with Version 5 Release 1, or later, software

Planned Availability Date

May 25, 2001

At a Glance

DB2 UDB Extenders for iSeries, Version 7.1 adds XML and Text Search capabilities to your iSeries database and:

- Supports business-to-business data interchange
- Leverages your voluminous text data
- Reduces your e-business application development costs
- Enables the next generation of Web content

For ordering, contact: Your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL

Reference: AE001
Description

DB2 UDB Extenders for iSeries, Version 7.1 consists of two powerful DB2 Extenders® that add to the capabilities of your DB2 to satisfy your enterprise applications needs for e-business:

- DB2 UDB XML Extender
- DB2 UDB Text Extender

Depending on your application needs, they can be used separately or together.

**DB2 UDB XML Extender**

XML allows for a method to mark the meaning of the data so it can be more easily used. It is extensible in that the language itself is a meta-language that allows you to create your own language, depending on the needs of your enterprise.

XML support is being added to your DB2. It is now possible to combine structured XML information with traditional relational data. You can choose whether to store entire XML documents in DB2 as an XML Character Large Object (XMLCLOB), or you can map the XML content as traditional data in relational tables. The DB2 UDB XML Extender adds the ability for powerful searching of rich data types of XML element or attribute values, even for nontraditional XML data types.

Incoming XML documents can be decomposed into traditional SQL data types and placed in columns. This will allow for decomposing an XML document into one or more pieces for storing in tables. Data in existing relational tables can be used to compose XML documents.

By using the DB2 UDB XML Extender and its set of User-Defined Types (UDTs), an application can store entire XML documents as column data in an application table. The UDTs also provide for the composition or decomposition of the contents of XML documents from or into an XML collection. These XML collections can be made up of one or more regular DB2 tables. These user-defined functions provide powerful capabilities toward solving your enterprise application needs for e-business.

**DB2 UDB Text Extender**

The DB2 UDB Text Extender is based on the proven IBM Text Search Engine technology and provides full-text search capabilities with your DB2. It offers a rich set of text search features that allow for more complex and precise queries, and an improved recall in search operations.

The DB2 UDB Text Extender provides full-text search through a set of User-Defined Functions (UDFs). These extend the SQL query language by providing additional functionality. It is easy to combine full-text search with parametric search. Text search capabilities depend on index type chosen when the documents are indexed. All index types support:

- Boolean searches — AND, OR, NOT of words and phrases.
- Proximity searches — for terms that occur in the same paragraph, or in the same sentence.
- Thesaurus expansion — a sample thesaurus and a Thesaurus compiler are provided.
- Wild card searches — allow for masking using wild cards for single characters, or a string of characters.

Depending on the index types, you may have additional search functions:

- Base form reduction (stemming) — can increase the recall of a search by expanding the search terms using a dictionary. (Search on “go,” “went” and “gone” will also be found.)
- Phonetic searches — expand the search terms with similar sounding terms (“gose” could find “goose”).
- Free text search — based on the probabilistic retrieval model using term frequency and other information collected at indexing time. The result is a rank list of documents.
- Fuzzy search — for words that are spelled in a similar way to the search term.

**Text Search on Structured Documents**

Structured documents are documents that have an internal structure (sections) defined using tags. DB2 UDB Text Extender can recognize this structure and allows searches to be restricted to sections of the document. Structured documents defined by DB2 UDB XML Extender can be recognized. In addition HTML or user-defined tagged ASCII files can also be recognized by the Text Extender.

**Additional Information:** You can find additional information about the XML and Text Extenders on the Web at:

http://www.ibm.com/software/data/db2/extenders/

**Accessibility by People with Disabilities**

The following features support use by people with disabilities:

- Operation by keyboard alone
- Optional font enlargement and high-contrast display settings
- Screen readers and screen magnifiers tested for use by people with visual impairment

**Euro Currency**

This program is not impacted by euro currency.

Reference Information

- For information on terms and conditions, ordering information, and prices, refer to Software Announcement 201-114, “IBM @server iSeries V5R1 Software Terms, Ordering Information, and Prices,” dated April 23, 2001.
- Also refer to Software Announcement 201-113, “IBM @server iSeries V5R1 Programs Improved,” dated April 23, 2001.

**Trademarks**

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**Education Support**

Visit the following Web site for additional information:

http://www.training.ibm.com

The appropriate curriculum will include the enhancements described in this announcement.

Call IBM Education and Training at 800-IBM-TEACH (426-8322) for catalogs, schedules, and enrollments.

**Offering Information**

Product information is available through Offering Information (OITOOL) at:

http://www.ibm.com/wwoi

**Publications**

No publications are shipped with this program.

The following publications can be ordered by contacting your IBM representative.

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<tr>
<th>Title</th>
<th>Order Number</th>
<th>Language</th>
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<tr>
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<td>English</td>
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<tr>
<td>DB2 UDB Extenders for iSeries Text Extender Version 7</td>
<td>SH12-6720</td>
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</tbody>
</table>

The Publication Notification System (PNS) is available by order number/product number. Customers currently subscribing to PNS will receive automatically notifications by e-mail. Customers who want to subscribe, can visit the PNS Web site location at:


The IBM Publications Center portal at:

http://www.ibm.com/shop/publications/order

The Publications Center is a worldwide central repository for IBM product publications and marketing materials with a catalog of 70,000 items. Extensive search facilities are provided, as well as payment options via credit card. Furthermore, a large number of publications are available online in various file formats, which can currently be downloaded free of charge.

**Note:** PNS subscribers most often order their publications via the Publications Center.

**Displayable Softcopy Publications:** The following publications are included in displayable softcopy PDF format as a part of the basic machine-readable material of iSeries Version 5 Release 1 software:

<table>
<thead>
<tr>
<th>Title</th>
<th>Language</th>
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<tbody>
<tr>
<td>DB2 UDB Extenders for iSeries XML Extender Version 7</td>
<td>English</td>
</tr>
<tr>
<td>DB2 UDB Extenders for iSeries Text Extender Version 7</td>
<td>English</td>
</tr>
</tbody>
</table>

Terms and conditions for use of the machine-readable files are shipped with the files.

These PDF books can also be accessed on the Internet at:

http://www.ibm.com/eserver/iseries/infocenter

**Technical Information**

**Hardware Requirements:** iSeries or AS/400® that can run OS/400® Version 5 Release 1

- Minimum 512 K RAM and 14 MB disk space for the Text Extender component
- 59 MB of disk space for the Text Search Engine component
- The following additional disk space is required for your text search indexes:
  - Index size about 130% of document size
  - Temporary disk space about 200% of index size

**Software Requirements**

- DB2 UDB for AS/400 V5R1, or later
- OS/400 V5R1, or later

**Compatibility with Implementations on Other Platforms:** The DB2 UDB XML Extender for iSeries, for the most part, provides the same function as on other DB2 platforms. Main exceptions are:

- There is no table function UDF support.
- A uniform CCSID needs to be used among the Job, DB2, and XML files.
- The Getting Started tutorials are supported using the Operations Navigator interface, and the OS/400 command line.

The Text Extender for iSeries has the following differences:

- The search result UDF supported on the workstation platforms is not available on the iSeries.
• It is not possible to define referential constraints on tables that are enabled for text search. Text Extender does not support automatic index update for deletion of records in a table with defined referential constraints. However, tables containing referential constraints can be enabled for text search.
• The workstation command GET ENVIRONMENT to retrieve the setting of the Text Extender environment variables is not required and not supported on the iSeries.
• It is not possible to index and search on date information and numeric data.

Planning Information

Packaging: The product is packaged on the media with the OS/400 V5R1 software and can be used freely for a 70-day trial period.

Security, Auditability, and Control

DB2 UDB Extenders for iSeries, Version 7.1 uses the security and auditability features of OS/400 V5R1. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering Information

DB2 UDB Extenders for iSeries, Version 7.1 has a single charge unit based on Processor Group.

For detailed ordering information, refer to Software Announcement 201-114, "IBM @server iSeries V5R1 Software Terms, Ordering Information, and Prices," dated April 23, 2001.

Terms and Conditions

Licensing: IBM International Program License Agreement (IPLA). Proofs of Entitlement (PoE) are required for all authorized use.

Limited Warranty Applies: Yes


Money-Back Guarantee: Two-month, money-back guarantee

Copy and Use on Home/Portable Computer: No

Volume Orders (IVO): Yes, contact your IBM representative.

Passport Advantage Applies: No

Passport Advantage Subscription Applies: No

Usage Restriction: Yes

For further information on terms, conditions, and usage restrictions, refer to Software Announcement 201-114, "IBM @server iSeries V5R1 Software Terms, Ordering Information, and Prices," dated April 23, 2001.

IBM Operational Support Services — Support Line: Yes

AIX®/UNIX® Upgrade Protection Applies: No

Entitled Upgrade for Current AIX/UNIX Upgrade Protection Licensees: No

AS/400 Software Subscription Applies: Yes

Variable Charges Apply: No

Educational Allowance Available: Yes, a 15% education allowance applies to qualified education institution customers.

Prices

For Pricing information, refer to Software Announcement 201-114, "IBM @server iSeries V5R1 Software Terms, Ordering Information, and Prices," dated April 23, 2001.

Customer Financing: IBM Global Financing offers attractive financing to credit-qualified commercial and government customers and Business Partners in more than 40 countries. IBM Global Financing is provided by the IBM Credit Corporation in the United States. Offerings, rates, terms, and availability may vary by country. Contact your local IBM Global Financing organization. Country organizations are listed at:

http://www.financing.ibm.com

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You can also contact your local IBM Business Partner or IBM representative. To identify them, call 800-IBM-4YOU.

Note: Shipments will begin after the planned availability date.

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