

Top 10 Reasons to Deploy DB2 Version 9.1 for z/OS

Availability announcements

- DB2 Version 9.1 for z/OS beta program (code-named "Viper") was announced on May 2, 2006
- DB2 Version 9.1 for z/OS was announced Generally Available (GA) on March 16, 2007
- DB2 UDB for z/OS Version 7 will not be supported after June 30, 2008
- Announcement sources: **IBM DB2 9 for z/OS URL:** <http://www.ibm.com/software/data/db2/zos/db2zos/v91.html>

Key prerequisites for DB2 Version 9.1 for z/OS

- Any processor that supports z/Architecture™
- z/OS V1.7 Base Services (5694-A01), or later, executing in 64-bit addressing mode
- Migration requires running of DB2 for z/OS Version 8 in New Function Mode (NFM)

1) New IBM pureXML™ technology enables DB2 9 for z/OS to store and manage native XML data

DB2 9 for z/OS delivers a new XML data type and pureXML™ storage techniques for efficient management of hierarchical XML data structures - without having to use Character Large Objects (CLOBs) or "shred" the data into relational tables.

pureXML™ for DB2 9 for z/OS not only provides powerful new storage capabilities for both relational and XML data types, but also provides all necessary services to properly support both data structures.

Also, pureXML™ supports new query optimization techniques and indexing technology that dramatically speeds up searches of subsets of XML documents and information.

Additional information:

IBM DB2 9 for z/OS pureXML™ Guide (SC18-9858)

<http://publib.boulder.ibm.com/epubs/pdf/dsnxgk10.pdf>

Powering SOA with IBM Data Servers (SG24-7259)

<http://www.redbooks.ibm.com/redbooks/pdfs/sg247259.pdf>

2) DB2 9 for z/OS can now participate in all Enterprise Applications that share XML data

PureXML™ allows SQL developers to see a relational database that contains an XML repository they can access with DB2 9 for z/OS SQL/XML statements. SQL developers can access data with regular SQL or SQL/XML and can even combine relational and XML data access into one SQL statement.

XML developers see a powerful new XML repository in DB2 9 for z/OS on the mainframe that adheres to the XQuery Data Model (XDM) they are accustomed to using. XML developers also continue to utilize standard XML development tools such as XQuery and XPath.

Both SQL and XML developers are now able to access native XML data stored in DB2 9 for z/OS without using LOBs, CLOBs, or nested tables; and also without converting XML data to a relational DBMS format.

Additional information:

Leveraging Native XML Support in DB2 9 for z/OS

Guogen (Gene) Zhang, IBM SVL

<ftp://ftp.software.ibm.com/software/data/db2zos/IOD173/ODB2v9xmlZhang.pdf>

3) DB2 9 for z/OS has great SQL enhancements to assist in processing relational and XML data, and to ensure better SQL compatibility with DB2 databases on other platforms

Following is a partial list of SQL enhancements in DB2 9 for z/OS:

- New SQL data manipulation statements MERGE and TRUNCATE
- New data types of XML, DECIMAL FLOAT, BIGINT, BINARY, and VARBINARY
- New SELECT from UPDATE, DELETE & MERGE feature
- PureXML adds an SQL/XML interface to XML data
- Data definition consistency with other DB2s is improved
- INTERSECT and EXCEPT set operations simplify SQL coding
- Many new built-in functions and caseless comparisons have been added to the DB2 9 for z/OS SQL language
- Spatial support allows you to generate and analyze spatial information about geographic features

Additional information:

What's New in DB2 9 for z/OS and Beyond?

<http://publib.boulder.ibm.com/epubs/pdf/dsnwnk10.pdf>

4) DB2 9 for z/OS delivers many substantial performance gains for a variety of processes

Following is a partial list of DB2 9 for z/OS performance improvements:

- Reduced CPU times in many DB2 utilities
- Dramatically better INSERT performance
- Improved performance and scalability for INSERT, UPDATE & DELETE processing
- Improved Large Object (LOB) performance & scalability
- Varying length data (Varchar) processing improves dramatically especially with large numbers of varying length columns
- Query/access path performance enhancements
- zIIP Processing for remote native SQL procedures
- Improved virtual storage usage below the 2GB line
- Save space by compressing indexes without a dictionary

Additional information:

DB2 9 for z/OS Performance Preview

Akira Shibamiya / Roger Miller

<ftp://ftp.software.ibm.com/software/data/db2zos/SHARE/db2zPerformanceShibamiya.pdf>

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5) DB2 9 for z/OS – DBMS security and regulatory compliance have been dramatically improved

DB2 9 for z/OS adds role-based security capabilities. Granting privileges by roles rather than groups or users simplifies DB2 9 for z/OS security administration.

DB2 9 for z/OS also adds a trusted security feature that lets you define trusted connections (DDF, RRS, and DSN) to the DBMS. By regulating authorized connections to DB2 for z/OS, overall enterprise security is improved dramatically. Also, the new Secure Socket Layer (SSL) implementation further protects data moving to and from DB2 9 for z/OS from other enterprise applications.

Finally, DB2 9 for z/OS audit reporting has been improved to allow filtering by user ID, workstation ID, and application ID.

Additional information:

Securing DB2 and Implementing MLS on z/OS

IBM Redbook

<http://www.redbooks.ibm.com/abstracts/sg246480.html?Open>

6) DB2 9 for z/OS Database Availability is much better – new tools and features minimize costly DBMS down time

Following is a partial list of DB2 9 for z/OS availability improvements implemented under the new Database Definition On Demand (DDOD) functionality:

- BUILD2 phase removed from Online Reorganization
- Online index rebuild
- Quick table replacement (cloning)
- Ability to rename columns and indexes
- Activate/deactivate tablespace and index logging
- Automatic partitions added to tablespaces as needed

Additional information:

What's New in DB2 9 for z/OS and Beyond?

<http://publib.boulder.ibm.com/epubs/pdf/dsnwnk10.pdf>

7) DB2 9 for z/OS Backup and Recovery facilities have been improved again

New backup and recovery features have been added to DB2 9 for z/OS including Copy Pool, Restart, and RECOVER Utility enhancements to support point-in-time recovery with transaction level consistency.

Additional information:

What's New in DB2 9 for z/OS for Backup and Recovery – Dr. James Teng

ftp://ftp.software.ibm.com/software/data/db2zos/IOD172_9aDB2v9backuprecoveryTeng.pdf

8) Many DB2 9 for z/OS enhancements improve ERP application and data warehouse performance and functionality

DB2 9 for z/OS delivers new features designed specifically for ERP and Data Warehousing applications including SHRLEVEL(REFERENCE) for REORG of LOB tablespaces, online RENAME COLUMN, online RENAME INDEX, online REBUILD INDEX, eliminating REORG BUILD2 phase, faster REORG by intra-REORG, parallelism, and much more.

Additional information:

DB2 V9 - What's In There For SAP and Other Enterprise Applications? – Namik Hrle

<http://www.ibm.com/support/docview.wss?uid=swg27009172>

9) QMF has become a much better ad-hoc reporting tool that can be deployed across many database platforms

DB2 QMF V9 provides an impressive new array of reporting features such as web-enabled cross-platform reporting, drag and drop querying and reporting, new graphic reports, pivot table reports, and executive dashboards.

Additional information:

DB2 Query Management Facility Web Page

<http://www.ibm.com/software/data/qmf/>

10) Because DB2 Version 9.1 for z/OS is *faster, better, and safer!*

- **Faster** – many enhancements for both relational and XML data handling make DB2 9 for z/OS a very high-performance data server solution for your company or organization!
- **Better** – pureXML™ turns DB2 9 into a world-class data server family for enterprise-wide relational and XML data!
- **Safer** – improved security and regulatory compliance functionality make DB2 9 for z/OS an incredibly secure database!

Additional DB2 9 for z/OS Reading & Resources:

- **Planning Your Migration to DB2 V8 and V9**
Roger Miller
ftp://ftp.software.ibm.com/software/data/db2zos/SHARED_b2zv9MigrationMiller.pdf
- **DB2 Version 9.1 for z/OS books**
<http://www.ibm.com/software/data/db2/zos/v9books.html>

About SoftBase:

SoftBase is a leading provider of DB2 for z/OS Application Acceleration Solutions that enable companies to code, test, and deploy key DB2 applications as quickly and safely as possible. For additional information about SoftBase DB2 for z/OS solutions, please visit:

<http://www.softbase.com/sbsolutions.php>