
DB2 for z/OS Version 10

Announcement

<http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=877&letternum=ENUSZP10-0486>

GA – general availability

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What's new

- Reduced CPU usage:
 - DB2 CPU savings of up to 5% - 10% for traditional workloads and up to 20% for specific workloads, when compared to running the same workloads on DB2 9. Customers moving from DB2 9 should expect the same CPU times for utilities, while customers moving from DB2 V8 will see CPU reductions up to 20%.
 - DB2 reduces its CPU usage by optimizing processor times and memory access, leveraging the latest processor improvements, larger amounts of memory, and z/OS enhancements.
 - Improved scalability and virtual storage constraint relief can add to the savings.
- Productivity improvements:
 - New SQL and XML capabilities
 - Automating, reducing, or eliminating tasks
 - Resiliency improvements for virtual storage and availability
 - Installation, migration, and service processes faster and more reliable
- Flexibility in migration paths:
 - Migration from DB2 Version 8 subsystem in new-function mode directly to Version 10.
- Greater reliability and availability ('resiliency'):
 - Scalability improvements
 - Virtual storage enhancements
 - 5 to 10 times more concurrent active users
 - up to 20,000 concurrent active threads
 - Schema evolution, data definition on demand
 - Manageability enhancements for query performance
 - Security improvements
 - Continuous availability enhancements:
 - Online schema enhancements (more ALTER functions on indexes and table spaces)
 - Improved performance of online reorganization
 - Reorganization of disjoint partition ranges of a partitioned table space
 - Improves SWITCH phase performance and diagnostics
 - Removed restrictions related to the online reorganization of base table spaces that use LOB (large object) columns.
 - Reduced catalog contention:
 - links in the catalog and directory removed
 - new functionality of the lock avoidance techniques
 - improved concurrency by holding acquired locks for less time and preventing writers from blocking the readers of data
 - access to currently committed data to minimize transaction suspension (only in NFM, a read transaction can access the currently committed and consistent image of rows that are incompatibly locked by write transactions without being blocked).

- Virtual storage relief:
 - increased capacity by moving most memory to 64-bit, which provides virtual storage relief and can improve the vertical scalability
 - 64-bit ODBC driver
 - extended support for LOB and XML streaming
 - improvements to LOB and XML processing
 - enhancements to the FETCH statement for LOB and XML data
- Security enhancements
 - enhancements to security and auditing
 - granularity for DB2 administrative authority
 - new data security solution that enables to manage access to a table at the level of a row, a column, or both.
 - define and create different audit policies
- Rapid application and warehouse deployment for business growth
 - SQL improvements
 - enhancements for SQL scalar functions and SQL table functions
 - native SQL procedure language (SQL PL) enhancements
 - implicit casting
 - number of digits for fractions of seconds and allowing timestamps with time zones
 - moved sums and moved averages
 - Temporal tables and versioning
 - two new types of periods, which are the system time (SYSTEM_TIME) period and the business time (BUSINESS_TIME) period.
 - versioning, keeping historical versions of rows for a temporal table that is defined with a SYSTEM_TIME period, or both time periods
 - pureXML improvements
 - performance improvements
 - binary XML format
 - XML schema validation as a built-in function
 - XML date and time data types and functions
 - XML parameters in routines
- QMF Enterprise Edition (chargeable feature)
 - support for QMF-based dashboards and visually rich page-based reports
 - new charts and graphical presentation items
 - over 140 new analytical functions for use in reports and dashboard solutions
 - new application-level security model for access control and personalization
 - support for HTML, PDF, or Flash report and dashboard output formats
 - new QMF metadata layer establishing a unified view of information
 - introduction of data environments, simplifying the distribution and management of dashboard and reporting content
- QMF Classic Edition (chargeable feature):
 - start QMF for TSO as a DB2 for z/OS stored procedure
 - additional features include support for multi-statement SQL queries
 - enhancements to certain commands and changes that improve performance, resource control, and troubleshooting capabilities

Orderable and related no-charge feature

- z/OS Application Connectivity to DB2 for z/OS:
DB2 Universal Database™ Driver for z/OS, Java Edition, a pure Java, type 4 JDBC driver for remote connectivity for z/OS Java-based enterprise applications on z/OS to a remote DB2 for z/OS database server.
- IBM Spatial Support for DB2 for z/OS
- IBM OmniFind Text Search Server for DB2 for z/OS
- IBM International Components for Unicode for DB2 for z/OS (ICU)

Options and features no longer supported or deprecated in the future

For both DB2 UDB for z/OS V8 and DB2 9 for z/OS:

- DB2 XML Extender is no longer supported.
- DB2 Management Clients feature is no longer available → Data Studio (free of charge)
- EXPLAIN tables prior to Version 8 format are no longer supported → alter tables
- Private protocol is no longer supported → DRDA.
- Plans containing DBRMs are no longer supported → use plans with packages or package lists
- ACQUIRE ALLOCATE is not a supported BIND option any longer → ACQUIRE USE for all packages
- DB2 catalog tables are DB2-managed and SMS-controlled. Catalog and directory tables do not have links, but have more LOBs and more table spaces. Compression for table space SPT01 is not supported.
- DB2 MQ XML functions are no longer supported → pureXML
- msys for Setup DB2 Customization Center is no longer supported.
- REORG TABLESPACE SHRLEVEL NONE on LOB table spaces is removed → use SHRLEVEL CHANGE or REFERENCE.
- Several subsystem parameters are removed or no longer supported.
- To create a classic partitioned table space in DB2 Version 10, you must specify SEGSIZE 0 and the Numparts keyword of the CREATE TABLESPACE statement.

For DB2 UDB for z/OS V8 only:

- Net.Data is removed → WebSphere is the strategic IBM solution for delivering DB2 data to web applications.
- DB2-established stored procedure address spaces are no longer supported → Workload Manager (WLM) managed stored procedure address spaces is the strategic solution for stored procedure support, and migration to WLM managed stored procedure spaces is required for use of stored procedures in DB2 10.
- JDBC/SQLJ Driver is no longer supported → all Java application programs and Java routines that are currently written to work with the JDBC/SQLJ Driver need to be modified to work with the IBM DB2 Driver for JDBC and SQLJ (formerly known as the DB2 Universal JDBC Driver). In addition, all WLM-managed stored procedures address spaces that are set up to execute Java routines must be modified to reference the IBM DB2 Driver for JDBC and SQLJ.
- Connections from VAX machines and the PASCAL L string data type are no longer supported.
- Creation of simple table spaces is no longer supported. DB2 10 for z/OS no longer implicitly creates simple table spaces nor allows customers to create simple table spaces. However, DB2 10 for z/OS continues to support simple table spaces created in previous versions.
- DB2 QMF Visionary Studio program is removed from DB2 QMF Enterprise Edition.
- DB2 Estimator is no longer available.
- BookManager-based online help has been removed → help support has been replaced by the web-based Information Center, which is updated periodically during the life of each DB2 version.
- AIV Extender, Text Extender, and Net Search Extender are removed.
- Java stored procedures no longer run in resettable JVMs.

For DB2 9 for z/OS only:

- Annotated XML schema decomposition using XDBDECOMPXML and XDBDECOMPXML100MB is no longer supported.

Following features are deprecated in DB2 10 for z/OS and may be dropped from future versions:

- Simple and partitioned table spaces other than universal table spaces are deprecated → use ALTER in New Function Mode to convert single-table table spaces to universal. The default table space type for new tables is now the universal table space. For partitioned table spaces, the default is now partition-by-range.
- Some current use of DSNHDECP is deprecated. If you have code that loads DSNHDECP and maps it with macros, you should plan to change that code by using the new techniques. Customers who want to have one library for multiple DSNHDECP modules need to make this change.
- SQL processing options NEWFUN(YES) and NEWFUN(NO) options are deprecated → use NEWFUN(V10) rather than NEWFUN(YES). Use NEWFUN(V9) or NEWFUN(V8) rather than NEWFUN(YES).
- The DSNHPC7 precompiler is deprecated. Use the current precompiler or coprocessor.