



DB2 for z/OS Version 11 ESP

Announcement

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GA – general availability for partners in Early Supply Programm

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What's in DB2 11 (ESP)

- **CPU reductions, performance improvements and system efficiency**
 - Compared to use of DB2 10, you may achieve up to 5% out-of-the-box CPU savings for many traditional OLTP, heavy INSERT, and SAP workloads.
 - Compared to use of DB2 10, you may also achieve up to 20 to 30% out-of-the-box CPU savings for select query workloads. These performance improvements along with use of IBM DB2 Analytics Accelerator for z/OS , can further enable significant query acceleration and potential cost savings.
 - New SQL PL ARRAY support may bring up to an additional 10% CPU savings for OLTP workloads with higher read-to-write ratios
 - You may see additional performance and CPU savings by taking advantage of additional enhancements, including DPSI performance improvements and suppress null indexes.
 - Additional optimizer enhancements for distinct, group by, and sparse index support bring performance improvements across a wide variety of queries.
 - Cost effective archiving of warm and cold data with easy access to both within a single query
 - Using pageable large (1 MB) pages and Flash Express (with IBM zEnterprise EC12, zEC12)
 - Enabling support of 2 GB pages (with IBM zEnterprise EC12, zEC12).
- **Improved-data sharing performance**
 - Data sharing clients may see performance improvements from a 2x to 5x more efficient index structure modification and from full LRSN spin avoidance.
- **Improved utility performance and additional zIIP eligible workload**
 - Inline statistics gathering enhancements greatly reduces the need for RUNSTATS which can reduce resource consumption.
 - DB2 Utilities now offer more zIIP eligible workload for RUNSTATS and LOAD and faster LOAD processing for improved performance and CPU savings. Additional REORG enhancements minimize DBA workload with automated mapping tables and improved PBG handling.
 - Improve productivity and performance through REORG avoidance and auto index pseudo delete cleanup.
- **Availability and reliability**
 - SWITCH phase reduction and improved drain processing in online REORG deliver additional availability improvements.
 - The need for planned outages is significantly reduced with online data repartitioning capabilities, including support for REORG, REBALANCE, SHRLEVEL, CHANGE, and online ALTER LIMITKEY.
 - With extended relative byte address (RBA) and log record sequence number (LRSN) addressing support you can avoid many manual recovery actions that can potentially cause extended outages.
 - Improved backup manageability enables even faster recovery.
 - Improved cloning capabilities support automatic VCAT name translation for system-level backup.



- **Other enhancements**
 - Deploy real-time scoring directly within the transaction when used in conjunction with IBM SPSS offering.
 - Together with IBM DB2 Analytics Accelerator for z/OS and System z , user can efficiently colocate OLTP and data warehouse as one integrated workload in real time.
 - DB2 QMF , a separately priced feature of DB2 for z/OS , has also been enhanced to include improved analysis, forecasting, reporting, and presentation capabilities, as well as better storage management, supporting greater analytics on business data.
 - Improvements in XML, temporal support, and SQL PL deliver even more capabilities for application developers.
 - Various SQL enhancements including support for array data types and global variables, make it easier for application developers.
- **Migration:**
 - With the new application compatibility feature, migration plans no longer have to wait for applications to make SQL or XML changes before leveraging new DB2 features.
 - Simpler catalog migration helps your business get the value of DB2 11 faster.
 - DB2 11 for z/OS is upwardly compatible with earlier releases of DB2 for z/OS . Migration with full fallback protection is available for customers running on DB2 10. Existing customers should ensure they are successfully running on DB2 10 for z/OS (NFM) before migrating to DB2 11.

Orderable and related no-charge feature

- **z/OS Application Connectivity to DB2 for z/OS:**
Universal Database Driver for z/OS Java™ Edition, a pure Java type 4 JDBC driver designed to deliver high performance and scalable remote connectivity for Java-based enterprise applications on z/OS to a remote DB2 for z/OS database server.

Options and features no longer supported or deprecated in the future

Since DB2 UDB for z/OS V8:

- 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.

Since DB2 9 for z/OS:

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



Since 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.

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.
- KEYCARD option deprecated in LOAD/REBUILD/REORG/RUNSTATS utility.
- EBCDIC-encoded EXPLAIN tables are deprecated.
- DPSEGSZ parameter is provided for compatibility only. It is deprecated in Version 10, and you should take steps to modify affected CREATE TABLESPACE statements.

Following features are deprecated in DB2 11 for z/OS and may be dropped from future versions:

- *...to be continued ...*