

## Why DB2 for z/OS for SAP applications?

Independent of whether your platform of choice is z/OS, Linux, UNIX, Windows or iSeries, IBM DB2 UDB can provide you with a database that is extremely well positioned to be a SAP database server.

When you require the **highest level of availability, unparalleled scalability, consolidation of workload, integration with tools and other applications and flexible growth**, IBM DB2 UDB for z/OS is the database server for you.

IBM and SAP have cooperated for a long time to support the large number of enterprises that use the SAP application suite with DB2 for z/OS. Enhancements that benefit SAP applications have been delivered in DB2 for z/OS since Version 5 with every release since containing a large set of features explicitly asked for by SAP. DB2 for z/OS Version 8 alone delivers more than 50 features specifically requested by SAP making **DB2 for z/OS Version 8 the SAP database server for the most demanding SAP workloads.**

**DB2 for z/OS for SAP key themes:**

- ✓ **Continuous Availability**
- ✓ **Integration: WebSphere, OMF, Java, zSeries , IBM DB2 tools**
- ✓ **Performance**
- ✓ **Incremental Scalability**

**Proven track of record of running the business critical and most challenging workloads in terms of continuous availability, performance, scale-out, database size and the number of concurrent users.**

## SAP related functions and enhancements delivered in Version 8 include:

- **Continuous Availability – Now, even structural changes may not stop DB2**
  - Less planned outage time for database changes: Online Schema Evolution allows you to make critical database structure changes without having to unload and later restore all of your data
  - Faster and integrated backups & recovery: Point in Time Recovery means your scheduled backups happen faster and if recovery is needed, it's faster and less costly because you're back in production more quickly. This feature has been specifically designed to facilitate typical SAP operations such as online backup of the entire SAP system, fast recovery to any point in time, system cloning etc.
  - Automated space management: avoid running out of extents!
  - Table controlled partitioning and Data-Partitioned secondary indexes
  - Unobtrusive updating of partitioning columns
  - Larger control interval sizes
  - Capability to recovering to any RBA as a vehicle to provide coordinated recovery of multiple SAP components
  - Reorg utility enhancements
  - Datasharing enhancements: V8 datasharing enhancements improve performance, availability, and usability

Online Schema Evolution helps you meet the challenge to apply changes with as minimal impact as possible on availability. Examples of SAP requirements delivered with Online Schema Evolution include: Changing Column Type and Length, Adding Columns to Index, Changing Number of partitions, Separating Partitioning and Clustering Keys

- **Integration – Reliability, security and flexibility**
  - zSeries - DB2 leverages the hardware and software in order to provide a highly reliable and secure DBMS.
  - Numerous features that benefit SAP Business Warehouse workload such as star join enhancements, sparse indexes, in-memory workfiles, controlled materialization of snowflakes, common table expressions, materialized query tables, capability to add and rotate partitions etc.
  - Major performance and functional enhancements to DRDA in support of replacing the proprietary protocol to connect to SAP (so called ICLI) with the standard distributed DRDA protocol.
  - Full Unicode support
  - Improved ease of application development with Java on zSeries - Universal Driver for SQLJ and JDBC – an open and consistent set of database protocols to access data on the UNIX, Windows and z/OS platforms
  - Optimized interface from Linux on zSeries, 64-bit DB2 Connect as Linux on zSeries client
  - Data Management Tools – value of DB2 is enhanced through use of utilities and tools to increase effectiveness and productivity.
  - Control Center enhancements for managing complex SAP landscapes
  - Numerous monitoring improvements

DRDA improvements include Network Statistics, the capability for detailed monitoring of the network performance between application and database servers with network statistics collected at the granularity of the SAP application server , and DRDA Ping Service, a feature that can be used in customer situations to easily check the latency of the network.

V8 Improvements that benefit the SAP Business Warehouse also include more tables in join (225 tables). Common table expression and recursive SQL lets users derive the query result through recursion and extends the expressiveness of SQL. DB2 for z/OS has deep synergy with z/OS and zSeries architecture taking full advantage of z-level of RAS, security, scalability and performance.

- **Performance**

- Multi row fetch and insert
- Index only access paths
- Unique capability to exploit WLM and assign computing resources and priorities to SAP end users, transactions and reports, and to provide accounting data for any combination of these
- Bidirectional indexes
- RUNSTATS enhanced with more optimizer relevant statistics
- Reduced impact of host variables on the access path selection through usage of REOPT(ONCE)
- Multiple DISTINCTs
- Eliminating lock contention on SAP cluster tables
- Coupling Facility lock propagation reduction
- Large bufferpools and EDM pool thanks to 64-bit addressing

Version 8 improvements are designed to allow SAP to provide DB2 accounting and workload management on the granularity of individual SAP transactions and SAP end-users.

- **Incremental Scalability - Capacity exactly when you need it**

- Increased number of new / ported key ISV applications through SQL enhancements, Long Name support, easier porting within DB2 family, and UNICODE for continued application enablement
- 64-bit virtual addressing: Use more virtual storage, more effectively, with less complexity. Substantially reduce system constraints as more applications and users are added.
- Data sharing enhancements that extend the lead of the industry leading, unparalleled scale-out architecture (Parallel Sysplex)

DB2 for z/OS Version 8 is considered the industry leading scalability and availability leader for high volume mission critical workloads.  
DB2 for z/OS is engineered with a fundamental design objective that database must meet the highest availability and scalability requirements.  
DB2 for z/OS has a one-of-a-kind exploitation of Parallel Sysplex.

**DB2 for z/OS Version 8 - the SAP database server for the most demanding SAP workloads.**

**For more information and latest news of DB2 for z/OS please visit:**  
<http://www.ibm.com/software/data/db2/zos/db2zosv8.html>