



# BMC High Speed Utilities for DB2

BMC High Speed Utilities for DB2 provide a faster, more efficient and more intelligent alternative to IBM utilities

## Key Benefits

A faster and more efficient solution to DB2 housekeeping

- » Take image copies in a fraction of the time, and without impacting service availability
- » Recover lost or damaged data in the most efficient way possible
- » Perform high speed loading of data
- » Unload data from DB2 tables or from copies of those tables, even where the structure has changed since the copy was made

## Business Challenge

The twin pressures of cost reduction and business availability put pressure on routine DB2 maintenance activities. Using the standard utilities for DB2 can waste valuable processing cycles and require more time to complete.

## The BMC Solution

BMC High Speed Utilities for DB2 are on average twice as fast, and use one-half the CPU versus IBM's utilities for DB2. As a result, planned downtime for maintenance is shorter increasing application availability, and the cost of performing database housekeeping is lower.

BMC High Speed Utilities for DB2 includes the following product capabilities:

- BMC CHECK PLUS for DB2
- BMC COPY PLUS for DB2
- BMC LOADPLUS for DB2
- BMC SNAPSHOT UPGRADE FEATURE
- BMC RECOVER PLUS for DB2
- BMC REORG PLUS for DB2
- BMC UNLOAD PLUS for DB2

## BMC CHECK PLUS for DB2

BMC CHECK PLUS for DB2 provides the full range of integrity checking functions required in a DB2 environment.

BMC CHECK PLUS for DB2 provides a comprehensive check of table spaces and indexes to ensure a correct structure between space maps and data pages. It provides checking of column data through both the VERIFY option and support of table check constraints. BMC CHECK PLUS for DB2 provides RI validation of related tables, whether the RI is maintained by DB2 or a user-written application program. It generates a sequential file containing foreign keys in RI violation. This file can also be used when correcting the tables and provides an SQL batch execution program for deleting rows with foreign keys.

BMC CHECK PLUS for DB2 improves availability and performance by working with BMC SNAPSHOT UPGRADE FEATURE to perform checking while the data is online and available for read and write access.

## BMC COPY PLUS for DB2

BMC COPY PLUS for DB2 saves time setting up, restarting, and maintaining backup jobs. Thus you can make copies faster or even make more frequent image copies so you can perform a faster recovery. BMC COPY PLUS for DB2 uses significantly less CPU time than any other utility and offers media savings through the use of incremental copies, logical page compression, and synergy with BMC PACLOG for DB2 for disk compression.

A snapshot copy option provides read-and-write support, allowing data to be updated while providing a consistent, registered copy of a table space. Because there is no buffer or locking interference, making copies is completely non-intrusive. A snapshot copy offers all the benefits of a concurrent copy without the

hardware requirements and limitations. Hardware exploitation with BMC SNAPSHOT UPGRADE FEATURE lets you identify and use hardware-based instant snapshot copies to take advantage of quick hardware backup and restore facilities for local recoveries without a quiesce. Instant snapshots reduce elapsed time by 98% and virtually eliminate CPU time for copies.

For security sensitive data, BMC Copy Plus can also create encrypted image copies

## BMC LOADPLUS for DB2

BMC LOADPLUS for DB2 loads DB2 data quickly. You can have read and write access to a table space during load processing by replacing existing data using staging data sets or adding to your existing data using SQL insert processing.

## BMC RECOVER PLUS for DB2

BMC RECOVER PLUS for DB2, a high-speed utility that accelerates DB2 recoveries, offers several high-speed choices for recovering table spaces and indexes:

The Backout Recovery feature allows you to recover table spaces and indexes faster than traditional forward recovery, while significantly reducing CPU time. With backout recovery, you start the recovery process with the database in its current state and back out erroneous updates by using the DB2 log.

BMC RECOVER PLUS for DB2 works with intelligent storage-enabled hardware to recover hardware snapshot copies to a consistent point in time. The forward recovery function lets you recover table spaces and indexes. Index recovery avoids costly key sorts by using image copies and logs.

BMC RECOVER PLUS for DB2 also enables you to migrate data between subsystems while keeping the data online and available for updates. You can migrate data to a local mirror database or to an offsite recovery location. BMC RECOVER PLUS for DB2 creates copies without having to access table spaces and lets you use copies that are not registered in the DB2 subsystem. It takes the image copies and log records of the table space and recovers into a new table space, translating object IDs.

## Exclusive drop recovery

Because DB2 does not recognize the traditional copies or log entries for dropped objects, ordinary recovery methods for those objects do not work. Only BMC RECOVER PLUS for DB2 lets you recover data automatically by combining the copies and log records to populate the database and then translating the old object ID to a new object ID. Drop recovery works not just for DB2 tables and data, but for plans and packages also

## BMC REORG PLUS for DB2

BMC REORG PLUS for DB2 is a powerful utility that reorganizes your DB2 data quickly whilst maintaining read/write access to table spaces and index spaces during processing. BMC REORG PLUS for DB2 automatically calculates the amount of memory required to process online reorganizations, and it allows you to alter the size of DB2 objects while the data is being reorganized. You can resize the structures that hold the data to make better use of disk resources.

BMC REORG PLUS for DB2 performs reorganizations without affecting high-transaction CRM and ERP applications such as SAP. You have more control over reorg completion, which allows you to determine the concurrency levels to suit availability needs.

BMC REORG PLUS for DB2 improves performance of critical DB2 applications and enables continuous access. Allowing access to applications during reorganization is not enough to achieve true non-disruptive processing; if the reorganization process competes with the application for database resources, you can experience performance degradation. BMC REORG PLUS for DB2 avoids this situation by:

- » Working outside of DB2 and not using DB2 resources such as the DB2 buffer pool, the buffer pool manager, or work databases
- » Allocating work files and staging copies of DB2 objects and virtual storage as needed

To achieve even greater application availability, BMC REORG PLUS for DB2 does not require a QUIESCE

when reorganizing DB2 objects. BMC REORG PLUS for DB2 can exploit advanced hardware configurations that support multiple processors. It uses parallel processing and concurrent execution of several tasks to reduce elapsed time. You can scale reorganization tasks based on your resources. BMC REORG PLUS for DB2 can exploit your available resources by automatically detecting the addition of new processors.

The internal sort engine significantly increases the speed of the sort phase during processing. To maximize I/O performance, BMC REORG PLUS for DB2 manages all buffering and performs I/O operations at the lowest level possible. This allows reading and writing of several blocks of data with each I/O operation and allows BMC REORG PLUS for DB2 to perform prefetching of I/O.

## BMC SNAPSHOT UPGRADE FEATURE

BMC SNAPSHOT UPGRADE FEATURE increases data availability through the use of snapshot technology. When used with supporting BMC utilities, BMC SNAPSHOT UPGRADE FEATURE enables the creation of point-in-time copies of DB2, IMS, or VSAM data concurrently with batch and online activity - enabling full read and write access to the databases. You can take snapshot copies and while performing updates.

- » Software snapshots create a point of consistency and then release the objects, so that the objects are again available for updates.
- » Hardware snapshots exploit intelligent hardware storage devices and require no software cache to provide a pre-image for snapshot utilities.
- » Instant snapshots use intelligent storage devices to take instant snapshots. When a utility requests an instant snapshot, BMC SNAPSHOT UPGRADE FEATURE directs a copy of physical data on a storage device to a different location on the same device (or on another device within the same control unit or frame). You can snap, or reapply, this copied data to the original location for recovery.

## BMC UNLOAD PLUS for DB2

BMC UNLOAD PLUS for DB2 unloads DB2 data quickly from full or incremental copies, DSN1COPY data sets, INLINE copies, or snapshot copies. You can also unload data from user-defined table spaces, DB2 catalog table spaces, or VSAM linear data sets. With BMC UNLOAD PLUS for DB2, you can unload specific rows and columns, a sampling of rows, or a limited number of rows.

BMC SNAPSHOT UPGRADE FEATURE enables read and write access to a table space while BMC UNLOAD PLUS for DB2 unloads a consistent image of data. BMC UNLOAD PLUS for DB2 produces multiple unload data sets in a single pass, eliminating the need to make multiple passes of the table space. It optimizes the process even further in a multi-table segmented table space by processing only those segments that pertain to the table being unloaded.

## For More Information

To learn more, please visit <http://www.bmc.com/solutions/msm-functional/BMC-Database-Management-for-DB2-on-zOS.html>.

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