

Database Utilities

Data Sheet



CDB/® Auto-Online Reorg

CDB/Auto-Online Reorg for DB2® for z/OS™ efficiently reorganizes DB2 data using a fraction of the resources required by all other Reorg processes. Through flexible built-in automation and patented advanced processing techniques, CDB/Auto-Online Reorg streamlines the Reorg process for tens of thousands of objects, eliminating the SORT, and providing full availability to applications, while reducing overall CPU usage and Elapsed time no matter how much data is managed.

Key Benefits

- No Sort Reorg
- Built-In Automation
- Reduced CPU and Elapsed time
- Full Read-Write Availability
- Optimized multi-tasking and parallel processing through NGT Server Technology
- SQL Discard Capability
- Real-Time Statistics Processing
- Automatic zIIP Exploitation

The Challenge

DB2 objects need reorganization because ongoing Insert, Update, and Delete activity disorganizes the physical data. As DB2 tables and indexes become disorganized application performance suffers and more system resources are needed; CPU, Memory, and DASD. Furthermore it is becoming increasingly more common to have multi-Gigabyte to Terabyte tablespaces with many billions of records and, to increase application performance, many large indexes.

All other Reorg products, just like the native DB2 Reorg utility require Sorts to reorganize DB2 objects. Sorts are slow and require a lot of resources including DASD, Memory, and CPU. Increasingly more DB2 customers are building tables and indexes so large that their current utilities cannot reorganize them. When Reorgs do run they often cause applications to fail due to unavailable resources or perform poorly due to competing for DB2's log datasets and general system resources. In addition, some Tablespace Reorgs actually leave NPI's in worse condition than before the Reorg due to the BUILD2 phase.

Twenty years of developing DB2 applications and purchasing applications like Peoplesoft and SAP leave DBAs with thousands of DB2 objects to manage. Constantly changing table sizes, new tables, and new devices for processing and back-ups cause many job changes which introduce errors and outages.

The CDB Solution

No Sort Reorg

Only CDB can reorganize DB2 Tablespaces and indexes without sorting. CDB/Auto-Online Reorg uses a fraction of the resources and runs in a fraction of the time required by all the others. Through innovation and patented I/O strategy CDB efficiently reorganizes DB2 objects of any size without sorting.

Index Processing

DB2's native reorg, and all the others, rebuilds indexes after reorganizing the data. This is a very inefficient and dangerous process because any inconsistencies between the data and indexes are covered up.

CDB/Auto-Reorg reorganizes the index as well as the data in a single pass through a process that is not only faster but safer. After a Reorg of a Tablespace your indexes will be perfectly Reorged. Your data and indexes are checked for consistency as part of the Reorg. This has saved many customers from continuing data loss.

Built-In Automation

Only CDB has automation built into each utility. We do not require expensive time consuming Runstats or proprietary tables to determine what objects need reorganizing. True automation involves running one simple job with wild carded names that not only Reorgs the objects that need reorging but can

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also automatically Copy, Runstats, and Check while processing the object. It then automatically Modifies, Alters, updates RTS, writes utility history, controls MQ or Batch systems, or whatever else your installation requires.

With CDB utilities you have full control of the Reorg process and the flexibility to do all these functions and more based on your business rules. True automation, another CDB innovation, is an integrated part of the utility, not another product that generates massive streams of utility JCL. Once you realize what real automation is and work outside the boundaries that other products put on you, managing thousands of objects becomes easy and worry free. Real-Time Statistics are natively processed without the need for outside JCL Generators or monitors.

Full Availability

The reorging of DB2 tables while keeping them available to applications for read-write access was also pioneered by CDB. CDB/Auto-Online Reorg reorganizes objects while they are fully online to your applications. With CDB/Auto-Online Reorg your tables and indexes are in RW 100% of the time.

DB2 Log Independence

By working completely outside of DB2, not using DB2's Buffers or Logs, we use fewer resources and do not affect, and are not affected by, any processing on any other table in your system. The DB2 Log is key to transaction throughput and your data integrity. Log contention is a major performance issue with your applications. CDB never reads or writes the logs.

Important and unique features

•No Sort Reorg

Sort is expensive and slow. A sort of a multi-terabyte index would require more SORT DASD than most shops have for their total environment.

• Managed quiesce

All online reorgs must "Quiesce" the object. CDB accomplishes this without

ever taking the object out of RW status. Application activity can make this process challenging. CDB allows DBAs to control the process thus preventing resource unavailable situations.

• No DB2 Log Monitor

All changes to the object being Reorged on all members of the Data Sharing group are captured and prepared during the Reorg without using the DB2 log. The change apply is very fast, usually seconds.

• Next Generation Server Technology

You don't have to separate your Reorgs into multiple jobs to process them in parallel. CDB automatically processes objects in parallel and gives you the ability to control the degree of parallelism and resources used.

A single job can spawn multiple address spaces to better manage throughput and maximize parallelism. Work is automatically spread across address spaces and members of the sysplex to manage memory and avoid bottlenecks. Return codes are passed back to the submitted job for easy maintenance.

• Space management

Dataset allocation is dynamically controlled using your rules. Whether you use SMS, Stogroups, or User Defined datasets we automate and control the allocations and extending of datasets.

• Built-in Automation

True automation is part of the utility, not a separate product that generates JCL. With Automation you have the flexibility to work how you want. At key points during a reorg you can page or e-mail the status of Reorgs, run commands, execute SQL, run programs to affect MQ or Batch functions, or other processes that streamline data management. You're in control, automation enforces your standards.

• Real-Time Statistics Processing

Natively manage RTS without a

third party processor to generate job statements. Simply submit a reorg and RTS tables are processed in real time and objects are evaluated based on company criteria at the system, application or object level with no extra maintenance required. If tablespaces are skipped, indexes can be automatically evaluated and processed.

• Automatic zIIP Exploitation

All work that is able to be processed by a zIIP processor is automatically assigned to zIIP for processing. Internal processes have been specifically architected to operate in Enclave SRB mode to reduce CPU costs.

• Massdelete

A simple keyword on Reorg that instantly and efficiently empties a partition or list of partitions while reorging.

• Purge or Archive capabilities

CDB/Auto-Online Reorg uses robust SQL to select rows for purging or archiving during the Reorg process. The selection criteria can even reference other tables in other databases.

About CDB Software

CDB Software, Inc. is a leader in data management solutions for DB2 z/OS. CDB focuses its business on DB2 for z/OS to provide unique and innovative solutions that enable companies to expand their DB2 system to meet business needs while controlling the overall cost of the mainframe. Founded in 1985, CDB is a privately held corporation based in Houston, Texas with offices worldwide.

For more information visit:

www.cdbsoftware.com

