IBM DB2 Buffer Pool Analyzer for z/OS, Version 2

Getting the most from your information resources

In today’s on demand world, you must make informed decisions quickly, relying on ready access to vital corporate data. Maximizing database performance, therefore, is more important than ever—and IBM can help with IBM DB2® Buffer Pool Analyzer for z/OS®, Version 2. Buffer pools are among the most valuable components of a relational database system such as IBM DB2 Universal Database™, supporting the database’s data access and modification processes. Much more than a one-time-only optimization tool, DB2 Buffer Pool Analyzer provides comprehensive information about current buffer pool behavior and uses simulation to predict future behavior, ensuring that your buffer pools operate at peak efficiency.

Highlights

• Collects summary and detail activity data for individual and group buffer pools
• Generates activity reports in multiple formats
• Recommends optimal groupings of DB2 objects
• Simulates buffer pool usage in various object groupings
• Predicts the impact of varying buffer pool size on performance
• Reduces elapsed transaction times and optimizes DB2 memory usage

Multi-level data collection for maximum database performance

To monitor current buffer pool behavior, DB2 Buffer Pool Analyzer performs two levels of data collection:

• Buffer pool statistics on I/O activity for objects (tablespaces and indexes) offering continuous data collection with minimal impact on system performance to obtain daily summary-level data.
• Collection of all events involving buffer pools, references, updates and I/O, along with the cause of each event. This provides detailed results you can examine in depth to pinpoint the sources of buffer pool bottlenecks and simulate pool behavior in what-if scenarios.

To minimize training time, DB2 Buffer Pool Analyzer uses an interactive system productivity facility (ISPF) interface that is consistent with other DB2 performance management tools, such as IBM DB2 Performance Monitor for z/OS. The tool lets users start data collection immediately or at a specified time, and to stop when the tool has collected a specified number of records. Data can be collected in batch mode, continuously or in sampling mode.

Comprehensive reporting pinpoints areas for improvement

To minimize query response times, DB2 Buffer Pool Analyzer generates statistical reports to help you assess buffer pool function and object usage. For added flexibility, the tool displays object activity information in several ways, such as:

• Grouped by identifiers, such as buffer pool, plan, object and primary authorization ID.
To test the performance of a new configuration and determine the optimal buffer pool sizes, DB2 Buffer Pool Analyzer runs a what-if simulation, using the detailed trace data, so there's no need to disrupt the production system. Once the optimal memory/performance trade-off point has been identified, the DBA can be confident the new configuration will run as expected in production.

Part of a family of DB2 tools for z/OS
DB2 Buffer Pool Analyzer is available individually or along with IBM DB2 Performance Monitor, as part of both IBM DB2 Performance Expert for z/OS and DB2 Performance Expert for Multiplatforms (Linux, UNIX® and Windows®). The tool supports DB2 Universal Database for OS/390®, Versions 6, 7 and 8.

DB2 Buffer Pool Analyzer makes it easy to tune your database and substantially boost its capacity, speed and reliability—which, in turn, helps you succeed in the information economy.

For more information
Please contact your IBM marketing representative or IBM Business Partner, or call 1-800 IBM CALL within the U.S. Also visit our Web site at ibm.com/software/data/db2imstools

When ordering IBM DB2 Buffer Pool Analyzer for z/OS, V2, please refer to program number 5697-H82.

• Sorted by activity counters such as getpage, sequential prefetch and synchronous read.
• Organized by top processing, showing results only for the most important object.
• Filtered to show activity for a specific buffer pool or plan.
• Displayed as highlight reports pointing out which fields need attention.
• Displayed as simulation reports providing exact page residency times per object.

The data produced in the reporting process can also be loaded into DB2 tables, enabling analysis through structured query language (SQL) queries.

You can display reports in the form of tables, pie charts and diagrams, showing buffer pool characteristics in detail. Used individually or in concert, these reporting options make it easier to see performance results and make decisions on how to optimize buffer pools. You can look at individual or group buffer pool performance, compare activity of different buffer pools or objects, and plot trends over time.

Using simulations and expert recommendations
To optimize object placement and reduce transaction times, DB2 Buffer Pool Analyzer analyzes predefined patterns of object groupings in buffer pools. Based on the results, the tool recommends tuning changes, generating its own ALTER commands and distributing the assigned total virtual buffer pool storage to the different buffer pools as an initial sizing.