EZ-Tracer & EZ-Cache for DB2 on z/OS

Workload-Centric Performance Optimization for DB2

EZ-Tracer and EZ-Cache Capture and Consolidate Static and Dynamic SQL including SQL from the Distributed Environment helping to dramatically improve Mainframe DB2 Performance.

BUSINESS CHALLENGE

SQL response time, throughput and resource utilization are the never ending concerns of the DB2 DBA. Many organizations face ever increasing volumes of dynamic SQL originating from distributed environment in-house applications, reporting tools and packaged applications such as SAP® and PeopleSoft®. Ensuring that SQL performance meets the needs of the business, while at the same time avoiding excessive resource consumption and expensive CPU upgrades, is a constant battle.

THE SOLUTION

EZ-Tracer and EZ-Cache give the DBA or Performance Analyst greater insight into SQL activity on a given DB2 system. The unique patented SQL Consolidation feature groups ‘like’ statements together and provides a more focused view of the activity than is available with conventional DB2 tuning solutions, and helps identify the performance tuning opportunities that will provide the greatest benefit.

EZ-Tracer and EZ-Cache allow the user to monitor a DB2 Workload - collecting both Static and Dynamic SQL into a Workload Performance Warehouse available to Application Programmers, DBAs, Performance Analysts and all.

- EZ-Tracer and EZ-Cache both utilize EZ-DB2's unique patented SQL Consolidation feature which recognizes “essentially the same” SQL Statements, and accumulates CPU costs and row level statistics for each Consolidated statement, making it easier to focus tuning attention where it will be most effective.
- EZ-Tracer and EZ-Cache display vital performance data, providing a multi-dimensional analysis of the Workload. For example, the user may view the Workload by Plan, Package, Program, AuthID, Database name, Table, Index Utilization and SQL Statement detail - immediately and easily zooming-in on the high-cost or most problematic components of the Workload.
- You may use EZ-Tracer and EZ-Cache to:
  - Trace ALL activity for a given subsystem within specified time intervals
  - Trace activity for a given subsystem filtered by various selection criteria, such as AuthIDs, Plans, Programs, DBNames, Tables, Correlation ID, Locations, Collections, CICS Transaction ID
  - Trace activity for specific SQL Statements only
- **Interim Summary Intervals** are optional sub-divisions within the trace which allow the user to focus attention on particular parts of the trace. Data is retained for a specified number of the most recent intervals.

Key Features & Benefits

- Unique SQL Consolidation feature
- Identify "top n" Static and Dynamic SQL
- Multi-dimensional drill down on detailed performance information
- **Continuous tracing** enables tracing to run for an extended period. This works by seamlessly starting a fresh trace as the previous one ends. Combined with Summary intervals, this enables 24x7 monitoring.

- **Trace Sampling** allows the user to request a certain percentage of the system activity to be captured, rather than all activity as a means of reducing the overhead of collecting the data (EZ-Tracer only).

- **Trace Reports** allow the User to sort on any column, thus enabling the user to identify the "top-n" SQL based upon different criteria, such as total/average CPU, Elapsed time, Get Pages, stage-2 requests etc.

- **SQL DRILL** downs show detailed information such as:
  - SQL text for Static and Dynamic Statements
  - Total and average costs for entire statement, as well as break down by OPEN and FETCH
  - Access Path and related catalog statistics
  - Ability to edit problematic SQL and perform "what-if” explains to display access path differences
  - Identify SQL that don't conform to site coding standards or access path guidelines

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**EZ-Tracer**

EZ-Tracer utilizes a DB2 performance trace of selective IFCIDs only to minimize the CPU overhead. Benchmarks indicate the cost at <1% DB2 CPU. This may include both Static and Dynamic SQL and provides more detailed information in the trace than a trace of Dynamic Statement Cache.

**EZ-Cache**

EZ-Cache starts a MONITOR Trace for IFCID 316-318 to capture activity from the Dynamic Statement Cache. A MONITOR trace of IFCIDs 316-318 may run for many hours with minimal DASD required for the trace log files and minimal CPU overhead. EZ-Cache provides the same summarization and consolidation of the SQL activity as EZ-Tracer. However, it is limited to collecting data for Dynamic SQL only. If you wish to include Static SQL in your analysis then you should use EZ Tracer, or a combination of both EZ-Tracer and EZ-Cache. Note that if tracing an SAP® or PeopleSoft® application, you must use the Dynamic Statement Cache trace. When starting an EZ-Cache trace, you can specify whether you wish to include SQL activity already in the Dynamic Statement Cache prior to the EZ-Cache trace starting. Or you may choose to only include activity while the EZ-Cache trace is active. A further option allows you to take a “snap shot” of the current contents of the Dynamic Statement Cache.

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**About Cogito**

Cogito is a leading supplier of software tools for DB2® and CA-IDMS®. Cogito solutions are used by many of the world’s largest organizations to support their enterprise systems. The EZ-DB2 components are proprietary program products of Cogito Ltd. All rights reserved. IBM, z/OS and DB2 are registered trademarks of International Business Machines, Inc. All Other Trademarks acknowledged.