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Product Brief

Plan Analyzer® for Db2 for z/OS

Overview

Plan Analyzer for Db2 for z/OS (Plan Analyzer) is designed to improve Db2 performance by efficiently analyzing SQL and utilizing expert rules to offer SQL performance improvement recommendations. Plan Analyzer offers analysis capabilities that go beyond the plan and package level. Any SQL can be analyzed—from a single statement to an entire application. Plan Analyzer uses rules to evaluate the SQL statements and the underlying physical objects and makes recommendations for improving performance to help determine how plans will perform in production—before they go live.

Business Challenges

When a change in SQL performance is uncovered, database administrators (DBAs) need to find the cause and potential solution before it enters production. However, analyzing SQL statements and complex access paths to find the subset of statements is a time-consuming process, requiring DBAs to read and interpret PLAN_TABLE output or collect statistics and dependency information to determine which access path Db2 has chosen and why. To complicate matters further, DBAs do not want to introduce changes that will create problems on your production system.

Solution Overview

Plan Analyzer features advanced EXPLAIN services to help streamline SQL analysis and reporting through predefined options. It also enables EXPLAIN processing on a production Db2 subsystem for a plan or package that resides on a test system. In addition, access path analysis includes the access path chosen and the factors that led to its choice. DBAs can save the SQL source, EXPLAIN data and expert system rules violations into the historical database for reporting and comparison against modified SQL sources.

Plan Analyzer compares old and new versions of SQL, SQL costs and EXPLAIN data to highlight changes that may affect performance. Differences in the SQL text, Db2 SQL costs or access paths are shown even when the SQL is unchanged. The compare options—cost margin milliseconds (ms), cost margin service units (su) and cost margin timerons (tm)—enable you to compare SQL costs and set a threshold to trigger notification when a cost change that is outside of the threshold has taken place.

Critical Differentiators

- **Explain analysis of multiple SQL sources:** Logically group SQL sources for explain processing. For example, group the plans in your payroll system into one explain. Add collections, packages, queries, SQL statements and file or library input and create are-executable and modifiable strategy with these sources. The EXPLAIN results are provided in detailed reports.

- **Influence the access path:** Create and maintain statement-level optimization hints, which help influence the access path that the Db2 optimizer selects for processing SQL statements. These hints can help control SQL statement costs.

- **Virtual Index services:** Logically create or drop indexes to simulate affect when explaining a statement or package and not impact executing SQL.

- **Comprehensive reporting:** In addition to plan, packages, objects and statement reporting, Plan Analyzer generates catalog-based reports about data contained in the access path repository. Also, comparison reporting identifies SQL changes that will result in degraded access paths. Multiple filters limit the report data.

- **Leverage the IBM Db2 Accelerator:** Generate accelerator-related explain data, which helps you assess whether queries are accelerator-eligible. ACCEL profiles also help verify that queries which meet certain cost thresholds are processed on the IBM Db2 Accelerator.

- **Capture access path information for SQL that references temporary objects:** Use Future Explain to obtain access path information for SQL that references temporary objects. For example, you can explain the SQL that uses declare global temporary tables. You can also execute other statement types, including INSERT to populate the table and CREATE INDEX to mimic the temporary application-defined objects. You can also supply application-defined objects such as special registers for execution before a Future Explain

For more information, please visit our site at:
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About the Mainframe Division at Broadcom

The Mainframe Division at Broadcom continues to drive the next horizon of open, cross-platform, enterprise solutions. We specialize in DevOps, security, AIOps, and infrastructure software solutions that allow customers to embrace open tools and technologies, make mainframe an integral part of their cloud, and enable innovation that drives business forward. We are committed to forging deep relationships with our clients at all levels. We go beyond products and technology to partner with you in creative ways that support your success.

Related Products

Plan Analyzer integrates with these Broadcom® products:

- **Detector:** Enables SQL statements to be passed directly to Plan Analyzer for EXPLAIN analysis.

- **SQL-Ease® for Db2 for z/OS:** Generate, edit, syntax check, and allows you to do Predicate analysis and standardize SQL text with access to EXPLAIN and Expert System Rules processing within Plan Analyzer

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