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DB Optimizer 2016
The Automated SQL Profiling and Tuning for Optimized Code Performance

Embarcadero® DB Optimizer™ 2016 is an automated SQL optimization tool that maximizes database and application performance by quickly discovering, diagnosing, and optimizing poor-performing SQL code. DB Optimizer empowers DBAs and database developers to eliminate performance bottlenecks by graphically profiling key metrics inside the database, relating resource utilization to specific queries, and helping to visually tune problematic SQL.

Today's database professional is short on time when it comes to per-formance tuning and maintaining database availability. Both DBAs and database developers face similar challenges as they are continuously asked to do more with less. IT staffs continue to shrink, leaving data-base professionals to work with a growing database infrastructure.

The result is that only short-term and immediate tasks are completed while long-term sustainable solutions are missed, leading to inevitable performance problems in production databases. The business impact varies by industry as companies lose up to millions of dollars for each hour a key database is not available. These data-base professionals face three distinct challenges:

• **Maximizing existing staff and IT infrastructure**

• **Quickly understanding and identifying performance bottlenecks**

• **Resolving performance problems with sustainable solutions**

DB Optimizer is a SQL optimization tool that maximizes database and application performance by quickly discovering, diagnosing, and optimizing poor-performing SQL. These capabilities allow DBAs and developers to reduce costs by maximizing productivity and IT infrastructure, improve productivity quickly through ease of use and a consistent interface, and connect their organization with reporting ca-pabilities. Whether or not the user is a performance tuning specialist, DB Optimizer enables users to tune like a pro!

Identify Performance Bottlenecks Immediately

Database profiling provides a graphical visualization of wait-time anal-ysis, making the SQL that is causing poor database performance easy to pinpoint. Continuous profiling monitors an entire data source within a configurable span of time.

Also, explain plans are provided for a better understanding of how SQL will be executed and the performance costs.

Tune SQL Like a Pro!

The SQL tuning wizard automatically suggests solutions and provides essential context in tuning SQL code. Col-or-coded Index Analysis shows used, not used, or missing indexes and offers recommenda-tions for optimum performance. Case Generation is used to generate all possible cases and to find the best alternative to a given SQL statement by including SQL rewrites and hint injections.

Visually Tackle Complex SQL Queries

Unique in the industry, Visual SQL Tuning (VST) diagrams turn text-based SQL code into graphical SQL diagrams. This approach helps DBAs and developers understand the impact of SQL statements on the database. The Visual SQL Tuning (VST) diagram displays indexes and constraints on tables and views with table statistics, as well as the joins used in a SQL statement.

- Identify performance issues previously undetected
- Accelerate SQL tuning and optimization
- Visually understand complex SQL queries
- Maintain database uptime and availability, align with data governance principles
- Maximize existing IT infrastructure

General Features

MULTI-PLATFORM SUPPORT	Manage all major DBMSs from a single interface. Support includes Oracle, SQL Server, Sybase, and DB2.
EMBARCADERO® APPWAVE™	Enables centralized license management.
UNICODE	Offers full Unicode support.
COMMAND-LINE API	Launch profiling and tuning sessions remotely.

Visual Diagnostics

PROFILE CHART	Shows the CPU, I/O, and other wait activity over the course of the session.
EXECUTION STATISTICS	Detailed information on the profiled SQL and wait categories, broken down by SQL state-ments, events, and sessions.
PROFILING DETAILS	Drill down into the execution details for any given statement, including the SQL text, events, sessions, child cursors, blockers.
PREDICATE ANALYSIS	SQL statements are rolled up for a true analysis of the number of executions in real-time.
EXPLAIN PLANS	The Explain Plan for each SQL statement can be computed on demand via a context menu item in the Execution Statistics table..
CROPPING	Highlights a time interval in the profile chart to instantly change the data displayed, making it easier to see the details.

Profiling

PROFILE CHART	Shows the CPU, I/O, and other wait activity over the course of the session.
EXECUTION STATISTICS	Detailed information on the profiled SQL and wait categories, broken down by SQL state-ments, events, and sessions.
PROFILING DETAILS	Drill down into the execution details for any given statement, including the SQL text, events, sessions, child cursors, blockers.
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CROPPING	Highlights a time interval in the profile chart to instantly change the data displayed, making it easier to see the details.

Tuning

TUNING JOB	Create and run tuning jobs for a single statement or batch of statements.
BATCH TUNING	Tune all DML statements, stored routines, and entire SQL files.
CASE GENERATION	SQL rewrites and hint injection are used to generate all possible cases and find the best alternative to a given SQL statement.
SQL REWRITES	SQL rewrites are suggested as part of the case generation in the SQL tuner. SQL rewrites are also suggested as you type in the SQL IDE.
HINT INJECTION	Customize the subset of hints to be considered for hint injection and alternative execution paths.
COST GENERATION	Display the explain plan cost for each original statement and each generated.
VISUAL SQL TUNING	The Visual SQL Tuning (VST) diagram displays indexes and constraints on tables and views, as well as the joins used in SQL statements.
INDEX ANALYSIS	The color-coded Index Analysis feature shows indexes that are used (green), not used (blue), or missing (orange) and offers indexing recom-mendations
EXECUTION STATISTICS	Run the SQL with alternative execution paths to discover the fastest running SQL statement, and apply the change at the click of a button.
TEXTUAL COMPARISON OF CASES	A visual diff viewer helps the user spot the textu-al differences between any two SQL statements.

Data Capture

FILE CAPTURE	Save an entire profiling session to a file for future analysis and reference or to share with others.
REPOSITORY CAPTURE	Stream profiling data into a central repository for your open session.

Become Proactive in Data Governance Compliance

DB Optimizer's ability to identify bottlenecks via database profiling, tune SQL, and load test gives organizations an advantage in ensuring database performance, uptime, and availability. This functionality gives DBAs and developers the ability to be proactive in identifying performance problems, and complying with Data Governance performance and availability standards.

Ready to learn more about DB Optimizer 2016? | 1.888.233.2224 or sales@embarcadero.com

For data modelers and data architects, ask us about ER/Studio, the ultimate design, modeling, and collaboration solution.