

# DB/IQ QA Quality Assurance for DB2<sup>®</sup> Applications

DB/IQ QA ensures quality, maintainability and performance for all DB2<sup>®</sup> for z/OS<sup>®</sup> applications

#### **ADVANTAGES**

DB/IQ QA guarantees long-term application maintainability. Interested in a trial ?

We help you during a test installation and analyze your DB2<sup>®</sup> applications and resources to identify candidates for improving.



Establishes standards and guidelines for all  $\mathsf{DB2}^\circledast$  applications, regardless of origin

Detects reliability and performance problems before they occur in production - saving significant time (and money) of DBAs, users, and clients, while typically saving percentage points in machine utilization

Reveals problems early in the development phase

Improvements or deterioration within the DB2® application quality can be monitored

Prevents poor performing SQL spreading

Increases developers' awareness by explaining the mechanisms of the DB2® optimizer

Performance evaluations can be made with different data volumes for active databases



Check the quality of any SQL code according to organization-defined standards

More than 300 optional rule checks delivered as standard – more can be customized

Evaluate "new code" automatically

Reject SQL violating standards and critical rules

Provide developers interactive quality control and full EXPLAIN functionality for all SQL statements at source level

Document index and RI maintenance as well as "Trigger Cascading" involved with DML

Evaluate access path efficiency and simulate future situations as data volumes change

Assesses Vnext impact on current applications

Query Accelerator (IDAA) supported

Batch mode, ISPF interface or Eclipse plug-in for developers

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# QA YOUR DB2<sup>®</sup> FOR z/OS<sup>®</sup> SYSTEM

- DB/IQ QA checks all SQL code, whether in source form, a DBRM, all Catalog-based SQL (plans, packages, views, MQTs, triggers) or executed as dynamic SQL
- SQL statements are evaluated in accordance with a set of more than 300 rules
- DB/IQ QA manages multiple sets and versions of rules, allowing sensitive applications to be viewed critically and older applications more liberally
- DB/IQ QA rejects violations of standards such as the use of object qualifiers, superfluous cursors and objects, view materialization, Cartesian Products, DELETEs or UPDATEs without WHERE predicates, arithmetic in predicates, non-matching host variables, join predicates, and ... many more

## **BENCHMARK YOUR DB2® FOR z/OS® APPLICATIONS**

- OB/IQ QA benchmarks all SQL statements static or dynamic: according to cost factors, joins, sorts, access paths, elapse time, CPU, number of GETPAGEs and much more
- DB/IQ QA SQL Monitor captures all or just SQL activities of named applications. Navigating through the captured application's SQL reveals the most frequent and most costly SQL
- SQL statements can be automatically compared with previous versions to indicate any changes in access paths selected by DB2® (i.e., V11>V12 impact)
- DB/IQ QA detects any improvement or deterioration in the quality of all DB2<sup>®</sup> applications
- Batch utilities include an audit, assessing the most significant and frequently violated rules, as well as applications "ranked" as contributing the most violations

### **AVOID PERFORMANCE ISSUES**

- OB/IQ QA's EXPLAIN feature provides developers with clear detailed explanations of access paths and of the processing of statements by the DB2® Optimizer
- Production-like or manipulated values of the Optimizer's RUNSTATS can be set to influence DB2<sup>®</sup> access paths and simulate future situations as data volumes change

#### PROBLEMS REVEALED EARLY IN THE DEVELOPMENT PHASE

- The ISPF interface, batch utilities and the Eclipse<sup>®</sup> plug-In all assist developers in ensuring an early remedy to SQL Problems
- Batch utilities automate QA control, access path comparison and manipulation of the Optimizer's RUNSTATS values

#### **AVAILABLE DB/IQ PRODUCTS & ADD-ONS**

- **DB/IQ QA** Quality Assurance base product **DB/IQ QE** QA Eclipse Plugin
- **DB/IQ QA+** Quality Assurance Plus
- **DB/IQ WL** WorkLoad Detector
- **DB/IQ IA+** Index Administrator
- **DB/IQ PM** Package Management

**DB/IQ MA** Migration Aid

