



Quality and Performance of SQL Queries

DB2 InfoScope® for z/OS

Together with InfoSimulation and InfoTrace, **DB2 InfoScope** is part of the INFO-OPTIMIZER line, an automated software suite ensuring the quality and performance of DB2 applications.

? The Problem

- ◆ Designing and optimizing database operation is vital for a company
- ◆ Is performance always a central concern in your development efforts?
- ◆ How can you guarantee that application performance is satisfactory today and will continue to be tomorrow with a higher volume of data?
- ◆ How can you guarantee that each of your DB2 applications in production complies with your standards?
- ◆ What is the cost of running a vital application with degraded performance?

! The DB2 InfoScope solution

- ◆ **DB2 InfoScope** automatically monitors the quality and performance of SQL queries
- ◆ **DB2 InfoScope** makes these checks based on your performance, maintainability, and scalability criteria
- ◆ **DB2 InfoScope** is used when designing and writing the programs to ensure current and future performance
- ◆ **DB2 InfoScope** is deployed very easily so the entire development department can filter and check for compliance with the specified standards.



The advantages of DB2 InfoScope: Quality assurance for your DB2 accesses

- ◆ Automatically applies and checks your quality initiative
- ◆ Guarantees application quality and performance by limiting drifts from specified standards
- ◆ Reduces CPU time by avoiding proliferation of queries from resource consumers
- ◆ Guarantees transaction response times
- ◆ Provides your developers with training on the complex mechanisms of the DB2 optimizer by supplying detailed analysis reports and recommendations for optimizing SQL queries and DB2 access paths.

We are prepared to demonstrate to you the excellent return on investment you will achieve with InfoScope.



**Our software products are distributed world-wide.
Our technical support is there to serve you 24/7.**

DB2
Administration

Operational
Integrity

Performance of
DB2 Applications

Data Compression

Flexible Monitoring of the Quality of SQL Queries

DB2 InfoScope detects SQL queries that do not comply with quality criteria (performance, maintainability, scalability, portability, etc.) supplied with the product or established by the user based on site standards.

These standards can be defined for a given type of processing (batch or TP), an application, a group of programs, etc. as specified by the administrator.

DB2 InfoScope analyzes the DBRMs of the programs already written or the SQL statements of the programs running.

DB2 InfoScope generates a quality analysis report containing the queries analyzed. It can be displayed for interactive use or printed out for more generalized use in batch mode.

The query is then accepted or rejected. There can be multiple causes:

- ◆ Use of prohibited options
- ◆ Failure to use compulsory options
- ◆ Non-performing query.

Analysis and Optimization of the Access Strategy

The access paths selected by DB2 when creating PLANS and/or PACKAGES are a decisive factor in application performance.

DB2 InfoScope analyzes these access paths and checks that the access strategy is consistent with the specified performance targets.

This evaluation, made using the PLAN TABLE, is recorded in a detailed report in which each query is identified as accepted or rejected. **DB2 InfoScope** gives the reason for the evaluation of each query, for instance by reporting a query that consumes excessive resources (Tablespace Scan on more than n pages). **DB2 InfoScope** supplies optimization recommendations.

Anticipate Future Data Volumes

Validation of the Plan or Package access paths is especially meaningful if made with the real volume of data, i.e. the data of the production DB2 environment.

InfoSimulation can be used in conjunction with **DB2 InfoScope** to:

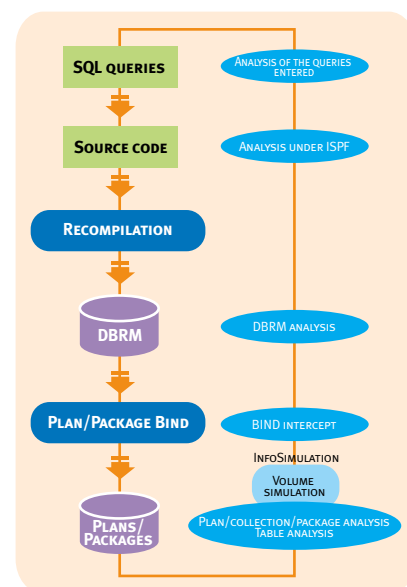
- ◆ Easily import the volumetric data of the production DB2
- ◆ Simulate the future volume
- ◆ Update the DB2 catalogue of the development environment to validate the access paths of the Plans or Packages.

InfoSimulation used interactively helps the user by calculating new variants based on imported or created data to simulate different situations.

Principles of Use of DB2 InfoScope

The main functions include:

- ◆ Analysis of the queries entered
- ◆ Analysis of a source program under ISPF
- ◆ DBRM analysis
- ◆ Interception of BINDS and REBINDS
- ◆ Plan/Collection/Package analysis
- ◆ Table analysis
- ◆ Simulation.



Automatic Quality Control

- ◆ **DB2 InfoScope** is easily integrated in BIND and REBIND procedures
- ◆ **DB2 InfoScope** checks all the queries contained in the plan or package
- ◆ This automatic check guarantees that no nonconformant plans or packages can be placed in production.

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