SQL tuner overview

Tuning provides an easy and optimal way to discover efficient paths for queries that may not be performing as quickly or as efficiently as they could be.

The application enables the optimization of poorly-performing SQL code through the detection and modification of execution paths used in data retrieval. This process is performed through the following functions:

- Hint Injection
- Index Analysis
- Statistic Analysis (Oracle only)
- Query re-writes such as suggesting joins to eliminate Cartesian joins, adding transitivity predicates, and unnesting subqueries in the WHERE clause.

Tuning analyzes an SQL statement and supplies execution path directives to the application that encourage the database to use different paths.

For example, if tuning is selecting from two tables (A and B), it will enable the joining of A to B, or B to A as well as the join form. Additionally, different joining methods such as nested loops or hash joins can be used and will be tested, as appropriate.

Tuning selects alternate paths and enables you to change the original path to one of the alternates. Execution paths slower than the original are eliminated, which enables you to select the quickest of the returned selections and improve query times, overall.

This enables the DBA to correctly optimize queries in the cases where the native optimizer failed.