

# ActiveBase Performance™

Improve response time and prevent performance-degrading requests

## The Challenges

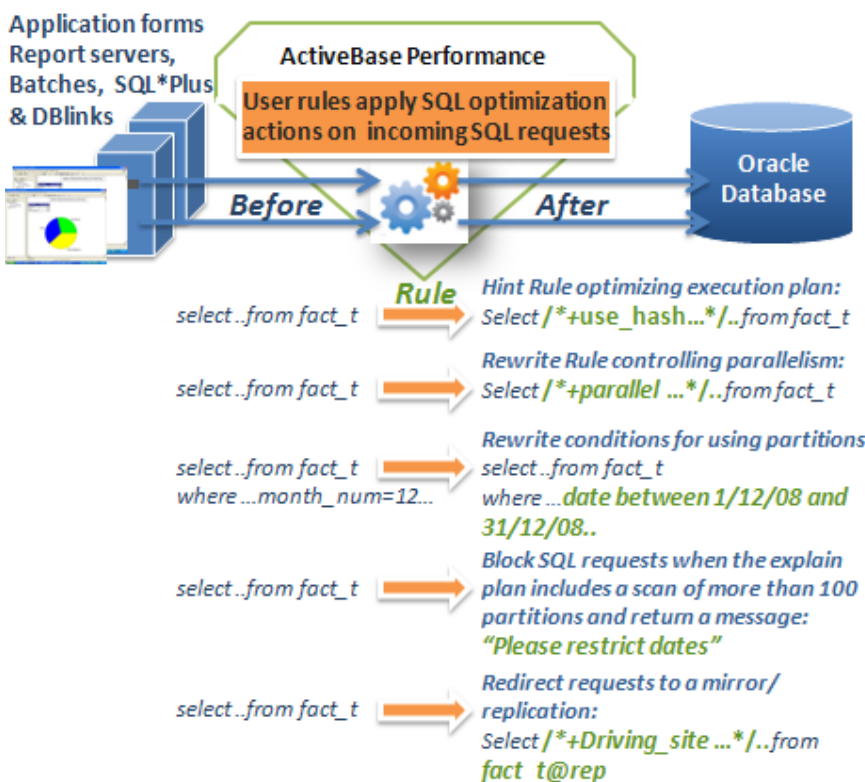
**Datawarehouses** experience an exponential growth of reports and ad-hoc queries coupled with the increase in data volumes causing response time to deteriorate and user dissatisfaction to soar.

**Business applications** suffer from long response times and overall performance degradation caused by untuned source code SQL requests, resource draining 'query-from-hell' generated by requests generated by reporting, development and DBA tools.

## The Solution:

**ActiveBase Performance** unique SQL\*Net Proxy software transparently intercepts long running SQL requests on-their-way to the databases. User-defined Rules identify untuned or never-ending SQL requests and apply powerful tuning actions on them.

- ❖ **Rule identification** capabilities include Oracle expected execution plan, pattern matching, full scan on group of large tables, number of partitioned scans, syntax matching, time of day, Oracle cost, regular expression matching and user defined functions.
- ❖ After incoming SQL request are identified, the following **Rule actions** can be applied *in-real-time*:
  - ✓ **Various SQL optimization techniques**, including rewrites, SQL text 'search and replace' action, or adding Oracle Hints and session settings, resulting in up to x100 faster response time.
  - ✓ **Blocking action**, returning a message back to the user (e.g., *block full scan on a tables like BILLING\_ACCOUNT table*)
  - ✓ **Redirecting** the SQL request to a mirror/replication



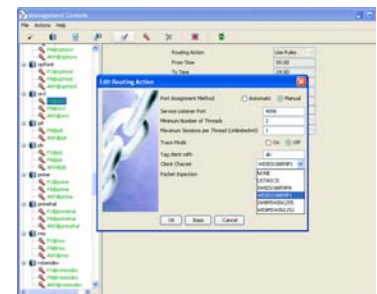
*"Important business reporting accelerated by 27 times!"*

Mr. Svltos Lajos,  
Data Mart Manager  
National Bank of Hungary

Improve SQL even when source code is not available!!



FIX problems before they hit the database!!



Management Console

No changes to application source code or databases!!



How can you improve response time of an application request without touching source code?

How can you block 'query-from-hell' before hurting performance?

## How It Works

ActiveBase Performance includes three layers:

- **A SQL\*Net proxy** that acts as an Oracle listener, where applications, reporting tools and development tools are configured to connect using it (or by simply switching the Oracle listener port with ActiveBase listener port).
  - **A switch** receives incoming connections, to determine which connections will be routed through ActiveBase rules, which connections will be refused and which will reconnect directly to the Oracle listener, bypassing ActiveBase completely.
  - Rule engine automatically applies predefined and user-defined custom performance rules including Oracle hints, rewrites or blocks 'query-from-hell' requests.
- ☞ A single rule can improve hundreds of similar reports, as identification criteria include partial explain plan, regular expression and syntax matching.
- ☞ ActiveBase Performance has negligible overhead of about 150 Microsecond (0.15 millisecond) per SQL, supporting clustering and automatic failover capabilities.

Rule examples:

- ➔ *A rule improves response time of a Siebel application request from 8 minutes to less than 15 seconds by adding the /\*+use\_nl...\*/ hint*
- ➔ *A rule identifies SQL requests that include %column IN% condition, adding a hint to enforce the correct index usage, speeding execution times x10 times faster*
- ➔ *A rule automatically changes predicate date format to use partition key correctly using 'Where' clause rewrite action*
- ➔ *A rule applies 'alter session disable parallel' on Toad users accessing production databases and to block specific activities such as jobs and unauthorized DML commands*

## Highlights

ActiveBase Performance software suite is centrally and transparently installed on the database server or on a dedicated server, supporting hundreds of databases with a single installation.

Full audit is provided with prebuilt Business Objects universe or Cognos reporting.

It is built on multi-threaded high-performance architecture with multiple fail-over and load-balance mechanisms,

Supported platforms:

ActiveBase Performance supports all applications using Oracle databases version 8.0 and higher. It is available on Solaris, AIX, HP-UX, Linux and Windows platforms.