Tosska SQL Tuning Expert Pro for Oracle® 4.8.0 - Release Notes

June 2023

About Tosska SQL Tuning Expert Pro for Oracle®

Tosska SQL Tuning Expert Pro (TSE Pro™) for Oracle® is an automatic SQL tuning product that uses AI technology to tune your SQL statements by proprietary SQL Rewrite, Oracle Hints Injection, and exploring indexes technologies to improve your SQL statements' performance WITH or WITHOUT touching your source code. An intelligent cost-aware Indexes Advisor is also provided to recommend cost-effective indexes for a given SQL workload.

Supported Oracle® versions
Oracle® 11.2 or higher

Known Issues
1. Migration of SQL Patches or Plan Baselines from 12C or higher to 11G is not allowed.

SQL Tuning Expert Pro for Oracle 4.8.0

SQL Tuning Expert Pro 4.8.0 is a minor release that includes enhancements and fixes.

Test Run

Change the default test run Timing Method option to "Run original SQL 2 times and use the second run time, run all other alternative SQL once.".

Update Test Run Executing Method.

Add Reset Default button to reset test run options to default.

Performance improvements

Improved Explain Plan, Deploy SQL Patch, Deploy Plan Baseline, Fetch Actual Plan and Open saved session performance in Tune SQL and Tune Top SQL.

Resolved Issues in 4.8.0

Feature	Resolved Issue	Issue ID
Extract SQL	Fixed an issue that the user might get ORA-06502 error when extracting SQL statements longer than 4000 characters from the Oracle database version 11.2.0.1 or 11.2.0.2.	TSEP-1373

SQL Tuning Expert Pro for Oracle 4.7.0

SQL Tuning Expert Pro 4.7.0 is a minor release that includes enhancements and fixes.

Advise Global Indexes

Redesign the Extract SQL Workload wizard.

Extract SQL Workload

Improved the performance to extract SQL from AWR.

Test Run

Support capturing bind variable values from the database when test-running SQL with bind variables.

Resolved Issues in 4.7.0

Feature	Resolved Issue	Issue ID
Tune SQL	Fixed an issue that failed to deploy a plan for SQL ending with a comment	TSEP-276
Tune SQL	Fixed an issue that the Bind Variable Setting window is too large when there are lots of bind variables in SQL text	TSEP -277

Tune SQL	Fixed the empty text plan for special SQL syntax	TSEP -284
Tune SQL	Fixed the "Value cannot be null" error when tuning SQL.	TSEP -337
Extract SQL	Fixed the wrong elapsed time in the Extract SQL workload wizard.	TSEP -319

SQL Tuning Expert Pro for Oracle 4.6.0

SQL Tuning Expert Pro 4.6.0 is a minor release that includes enhancements and fixes.

Tune SQL

Improved the ability to rewrite SQL.

Resolved Issues in 4.6.0

Feature	Resolved Issue	Issue ID
Tune SQL	Fixed a row count mismatch error when tuning SQL with specific SQL syntax	TSEP-260
Tune SQL	Fixed an error "Value can not be null, parameter name: source" when tuning SQL	TSEP-1513
Tune Top SQL	Fixed an issue that performance improvement is not shown correctly in the SQL list grid of Tune Top SQL after changing the best criteria.	TSEP-239

SQL Tuning Expert Pro for Oracle 4.5.1

SQL Tuning Expert Pro 4.5.1 is a hotfix release that includes bug fixes.

Resolved Issues in 4.5.1

Feature	Resolved Issue	Issue ID
SQL Tuning	Fixed an error when tuning SQL on database 12.1.0.1.	TSEP -1514
SQL Tuning	Fixed an issue when checking if the user has ALTER SYSTEM privilege.	TSEP -1516

SQL Tuning Expert Pro for Oracle 4.5.0

SQL Tuning Expert Pro 4.5.0 is a minor release that includes enhancements and fixes.

Additional database supported

Support Oracle standard edition database.

Connection

Support connecting to the database through a proxy user.

Tune SQL

Improved the performance to load the saved SQL session.

Redesign of Test Run Options window to simplify the setting of tuning criteria and optimization goals.

Test Run All Options

Tuning Goals | Filtering Method & Test Run Order

◉ Use default or user-defined setting Modify
  All SQL alternatives will be executed once.
○ Improve my SQL for slow first-time execution without data cache, although it is fast on the second execution
○ It is a long run time SQL and I am looking for a SQL with a run time within _30_ Minutes
○ Improve my short run time SQL to run even faster since the SQL is executed thousands of times in a minute

What improvement you are looking for:
◉ I want to tune my SQL for better elapsed time
○ I want to tune my SQL for better response time since It is a SQL for online query
○ I want to tune my SQL to use less CPU time since my system is CPU bound
○ I want to tune my SQL to use less IO time since my system is IO bound
○ I want to tune my SQL to use less Logical Reads

Executing Method :

Select a method to measure the performance of your SQL statements.
○ Static
◉ Dynamic

Benchmarking SQL alternatives may affect other SQL statements that executing in the same database. It is recommended to execute this function in development environment or non-peak hours in production database.

OK | Cancel

Recommend Indexes

Improved the ability to recommend indexes for SQL with a specific syntax.

Resolved Issues in 4.5.0

Feature	Resolved Issue	Issue ID
SQL Tuning	Fixed an error when tuning SQL with a system view.	TSEP -1186
SQL Tuning	Fixed an issue that some columns might be invisible in the tree plan.	TSEP -1111
Tune Top SQL	Fixed an error when re-opening the Extract SQL window	TSEP -1154
Advise Indexes	Fixed an issue that new line characters are missing in the copied SQL or exported SQL file in the Advise Indexes Report.	TSEP -1134

Manage Plan Baselines / Manage SQL Patches	Fixed an error when migrating Plan Baselines or SQL Patches from/to 19C or above.	TSEP-1479

SQL Tuning Expert Pro for Oracle 4.4.0

SQL Tuning Expert Pro 4.4.0 is a minor release that includes enhancements and fixes.

Tune Top SQL

Provide a function to export all extracted top N SQL to excel or text file.

Extract SQL

Speed up to browse database performance statistics from AWR in the Extract SQL window.

Resolved Issues in 4.4.0

Feature	Resolved Issue	Issue ID
SQL Tuning	Fixed an error when tuning SQL with a synonym for view.	TSEP-1310
SQL Tuning	Fixed an issue that the Missing Privileges hyperlink is not enabled in the Extract SQL window.	TSEP-1330
SQL Tuning	Fixed an issue that the query plan is empty in Compare SQL window.	TSEP-1327

SQL Tuning Expert Pro for Oracle 4.3.0

SQL Tuning Expert Pro 4.3.0 is a minor release that includes enhancements and fixes.

Common

Improved the UI response performance.

Connection Manager

Improved the speed to login database and check privileges.

Recommend Indexes

Recommend indexes for SQL with READ ONLY view.

Resolved Issues in 4.3.0

Feature	Resolved Issue	Issue ID
SQL Tuning	Fixed an issue that the data buffer is cleared during the Test Run when the "Flush data buffer before executing every SQL alternative" option is selected but the "Run all SQL once" is not selected.	TSEP-1368
SQL Tuning	Fixed a rewrite mistake for the specific syntax of SQL	TSEP-1382
SQL Tuning	Fixed issue that SQL text is wrapped in SQL Editor	TSEP-1397
SQL Tuning	Fixed an error when test run, tune SQL with bind variables in a CASE expression.	TSEP-1424
Common	Fixed an error when remote from Windows PC	TSEP-1383
Tune Top SQL Advise Indexes	Fixed an error when extracting SQL from SGA	TSEP-1423

SQL Tuning Expert Pro for Oracle 4.2.0

SQL Tuning Expert Pro 4.2.0 is a minor release that includes enhancements and fixes.

Common

Provide an option to specify decimal places to display for Seconds in a time value.

Connection Manager

Improved Connection Manager to show TNS names in file tnsnames.ora with an incorrect format.

Tune SQL

Improved the SQL rewrite ability.

Resolved Issues in 4.2.0

Feature	Resolved Issue	Issue ID
SQL Tuning	Fixed an error when Tune SQL with view	TSEP-573
SQL Tuning	Fixed a rewrite mistake for the specific syntax of SQL	TSEP-1350
SQL Tuning	Fixed an error for SQL with USING join condition	TSEP-1356
SQL Tuning	Fixed an issue that SQL syntax is not supported when Windows default language is not English.	TSEP-1362

SQL Tuning Expert Pro for Oracle 4.1.0

SQL Tuning Expert Pro 4.1.0 is a minor release that includes enhancements and fixes.

Connection Manager

Improved Connection Manager to support TNS files with ifile definition inside.

Tune SQL

Improved the SQL rewrite ability.

Resolved Issues in 4.1.0

Feature	Resolved Issue	Issue ID
Connection Manager	Fixed an issue when connecting to 11G if FIPS is turned on	TSEP-568
Connection Manager	Corrected the grid position in the "New or Select Connection" window when no connection was created	TSEP-1324
SQL Tuning	Fixed an error when Tune SQL with trim function	TSEP-569
SQL Tuning	Fixed a rewrite mistake for the specific syntax of SQL with a subquery	TSEP-1335
SQL Tuning	Fixed an error when Deploy Plan Baseline or SQL Patch for Insert into a statement.	TSE-1341

SQL Tuning Expert Pro for Oracle 4.0.0

SQL Tuning Expert Pro 4.0.0 is a major release that includes new features, enhancements, and bug fixes.
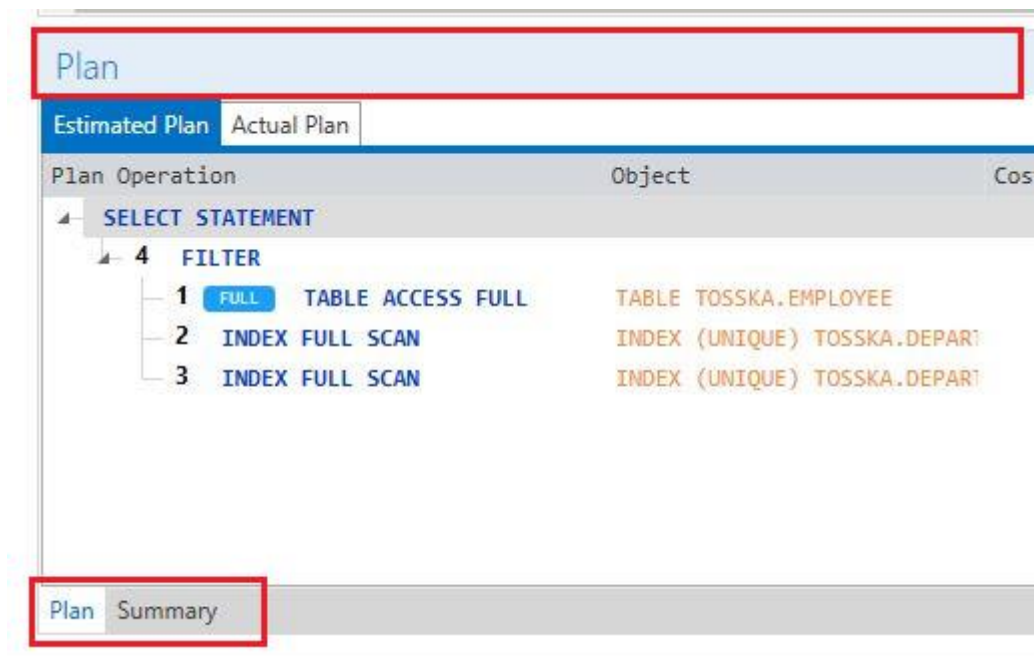
Tune SQL / Tune Top SQL

- Rewrite SQL

  A new powerful A.I. SQL Rewrite Engine to help users to rewrite their problematic SQL statements to potential better semantical equivalent SQL alternatives. Users can select the "Rewrite + Hints", "Rewrite Only" or "Hints Only" method in the "Tuning Method" dropdown menu to tell our A.I. Rewrite Engine which tuning method will be used to tune a given SQL.

- Recommend Indexes for single SQL

  Speed up test run index sets

- Plan and Summary have separate docking panels. You can drag and drop to reorganize your layout.

Common

Support more SQL syntax.

Updated default UI layout.

Change Tree Plan to columns layout with access predicates and filter predicates added.

Resolved Issues in 4.0.0

Feature	Resolved Issue	Issue ID
Tune SQL Tune Top SQL	Fixed issue that DB time statistics is always 0 after test running of SQL alternatives	TSEP-1221
Tune SQL Tune Top SQL	Fixed an error when tune or test run update SQL statement if update table is a subquery	TSEP-1220
Tune SQL Tune Top SQL	Fixed an error when explain, tune or test run SQL with semicolon again after inputting return and new line at the end of SQL.	TSEP-1222
Tune SQL Tune Top SQL	Fixed an error when Explore Indexes if SQL contains functions with DB link.	TSEP-1180
Advise Indexes	Fixed an error when Advise Indexes	TSEP-1252