



# Toska SQL Tuning Expert for Oracle® 4.0.0 - Release Notes

Release Notes

Sep 2020

## About Toska SQL Tuning Expert for Oracle®

Toska SQL Tuning Expert (TSE™) for Oracle® is a tool to tune your SQL automatically.

## Function with limitations without a license

The software provides up to total 30 automatic SQL alternatives and 30 single SQL's index recommendations for free to solve most common SQL performance problems before you purchase a license.

## Supported Oracle® versions

Oracle® 11.2 or higher

## SQL Tuning Expert for Oracle 4.0.0

SQL Tuning Expert 4.0.0 is a major release which includes new features, enhancements and bug fixes.

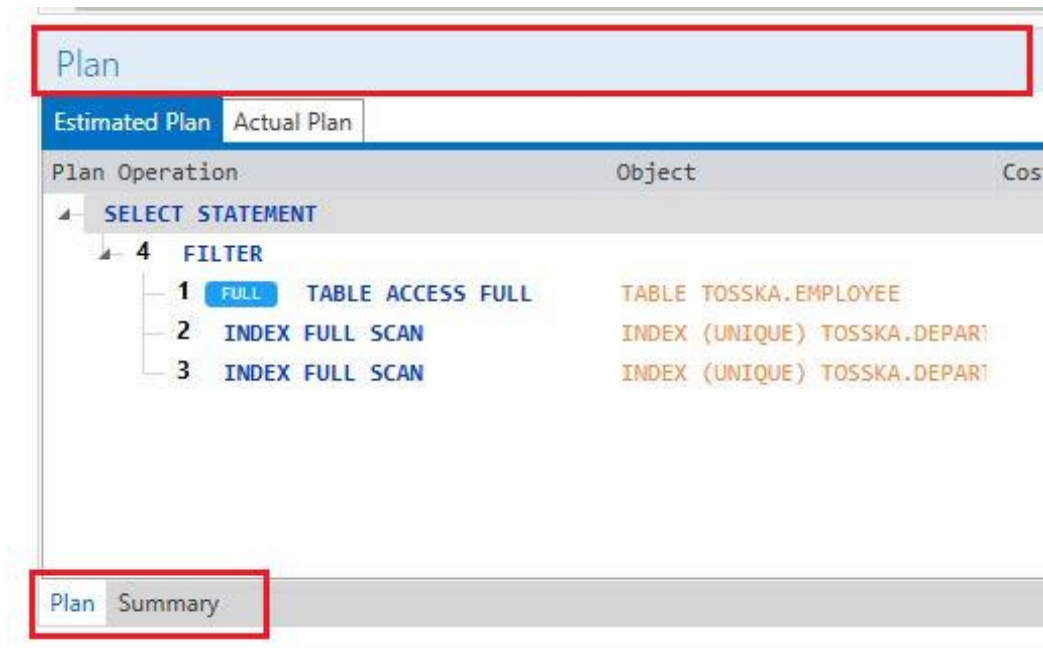
## Tune SQL / Tune Top SQL

- 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. User can select "Rewrite + Hints", "Rewrite Only" or "Hints Only" method in "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.

Show scrollbar if there are too many saved SQL tuning sessions that is not fit in a window.

## Resolved Issues in 4.0.0

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

## SQL Tuning Expert for Oracle 3.2.0

SQL Tuning Expert 3.2.0 is a minor release which includes following enhancements and resolved issues.

### Tune SQL

Provide a new Test Run Order "Intelligent order" to speed up the SQL tuning and test run process.



Test Run All Options

General Filtering Method & Test Run Order Termination Criteria

Filtering Method:  
Use the following methods to select a number of alternatives to test run only.

Number of alternatives with lowest cost

% of all alternatives with lowest SQL cost

All alternatives

Test Run Order:

Natural order

SQL with lower cost runs first

Intelligent order

OK Cancel

Provide an option "Create index with parallel degree" to create physical indexes in parallel to speed up indexes test running process.



Test Run All Options

General Filtering Method & Test Run Order Termination Criteria

Executing Method :

Select a method to measure the performance of your SQL statements.

Static

Dynamic

Skip test run original SQL

Timing Method:

We recommend test run SQL once for long run time SQL. For short run time SQL, such as less than 10 seconds, you can test run multiple times for precise measurement.

Run all SQL once.

Flush data buffer before executing every SQL alternative. (Alter System privilege is required)

Run original SQL 2 times and use second run time, run all other alternatives once.

Run all SQL 2 times and use the second SQL run time.

If original SQL's run time less than 10 seconds, run all SQL 2 times; otherwise, run all SQL once only.  
When run 2 times, the second run time will be used.  
When run more than 2 times, the average run time will be used.

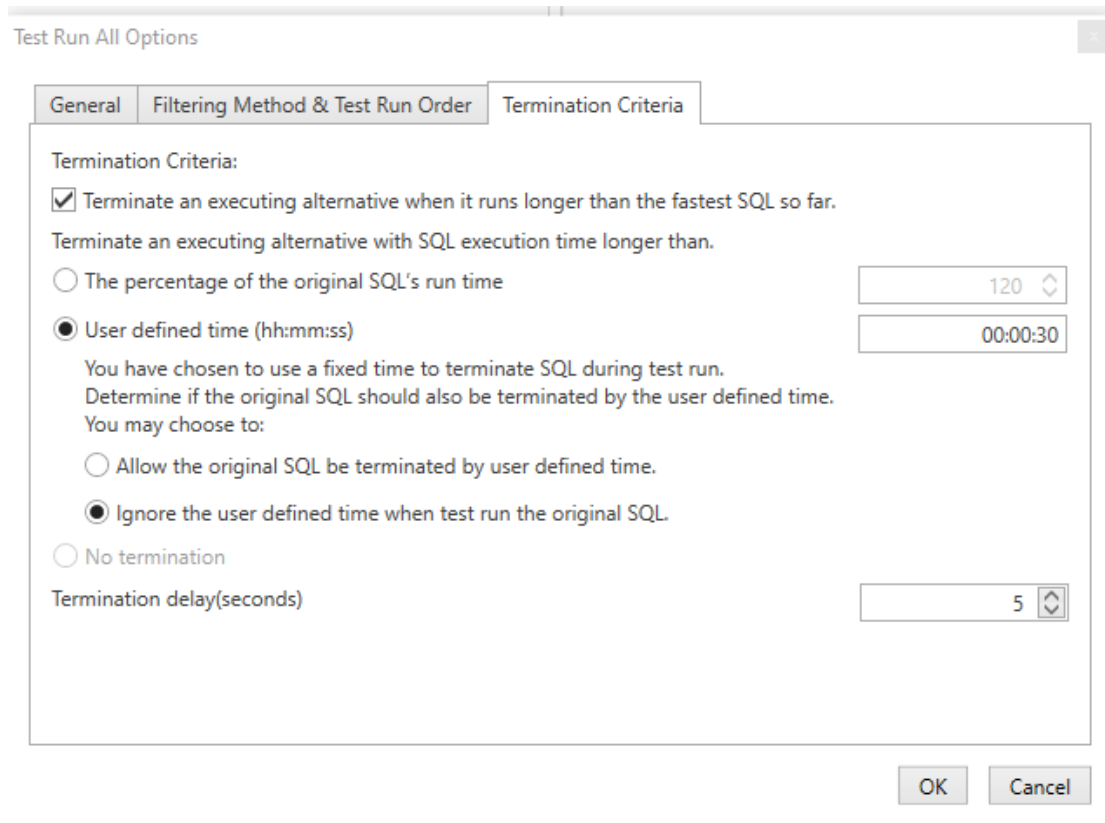
Create index with parallel degree : 2

(Your database CPU Count : 8 & Parallel Threads Per CPU : 2)

Physical indexes will be created and dropped during entire test running process. It may take long time to create indexes for large table. It is recommended to execute this function in development environment or non-peak hours in production database.

OK Cancel

Updated Test Run Termination Criteria to speed up the SQL tuning and index recommendation process.



Removed "Test Run Current" and enhanced "Test Run Selected" to test run one or more selected SQL alternatives.

Improved the intelligence of indexes recommendation for single SQL.

Improved Support Bundle.

## Common

Support docking and user can customize display layout.

Remember column position in all grid windows.

Display datetime with 4 decimals for second in grid columns.

Provide an option "Purge SQL submitted by this tool from SGA" to purge SQL statements fired by this tool.

"Alter System" privilege checking is deferred until it is required for specific function.



## Resolved Issues in 3.2.0

Feature	Resolved Issue	Issue ID
Tune SQL	Fixed an error "Sequence contains no elements" when explore indexes	TSE-1100
Tune SQL	Fixed the issue that the button to show / hide SQL tuning session history disappear in some screen resolution.	TSE-555
Common	Fixed the issue that missing privileges are not updated when click Refresh button in "Check Database Privileges" window after part of privileges are granted.	TSE-1162

## SQL Tuning Expert for Oracle 3.1.0

SQL Tuning Expert 3.1.0 is a minor release which includes following enhancements and resolved issues.

### Tune SQL

Parallel hints are enabled only when intelligence level is set to 4 or 5.

Rename button "Abort" to "Abort All" for aborting "Explore alternatives" or "Test run" process, rename button "Abort" to "Abort Current" for aborting currently running SQL alternative.

Show warning message when test run SQL alternatives or recommend indexes.

## Resolved Issues in 3.1.0

Feature	Resolved Issue	Issue ID
Tune SQL	Corrected an error "Value cannot be null. Parameter name: Value" when explain plan, explore alternatives or tune SQL.	TSE-1074
Common	Corrected the wrong connection name on the status bar when the connection profile is changed.	TSE-566



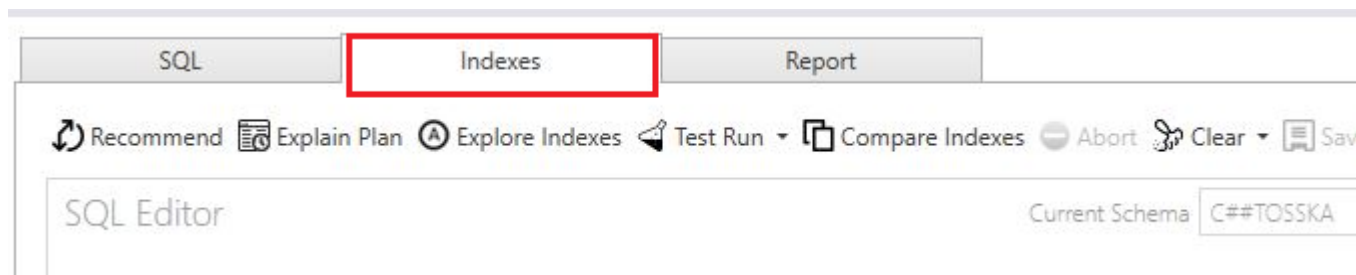
## SQL Tuning Expert for Oracle 3.0.1

SQL Tuning Expert 3.0.1 is a major release which includes new features, enhancements and fixes.

### Tune SQL

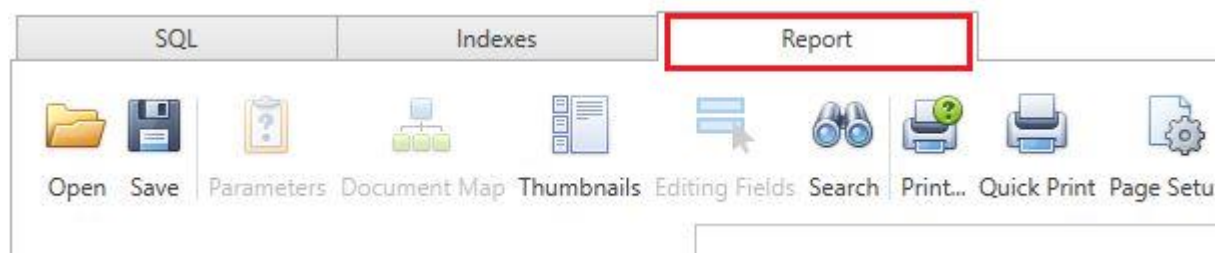
- New recommend indexes for single SQL

You can recommend indexes for single SQL with our AI technologies without compromise. The feature will explore potential best indexes to improve the given SQL speed



- SQL Tuning Solution Report

A SQL tuning report is provided after the SQL tuning and Indexes tuning processes, you can use the report to compare the performance gains of both SQL alternatives and indexes sets and decide which solution is worth implementing.



- Test Run

Provide option to flush data buffer before each execution of SQL alternative when **Run all SQL once** is selected. This is useful for those SQL which are not executed

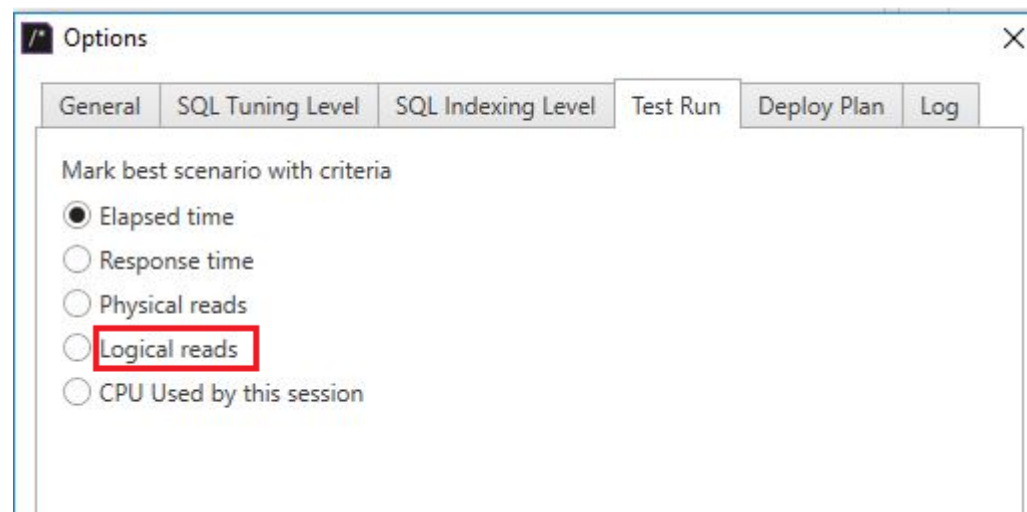




frequently.



New Mark best scenario with criteria – “Logical Reads”.



New option “Skip test run original SQL”. This option is useful when you already know your original SQL's elapsed time or you know it will takes too long to test run the original SQL.



Test Run All Options

General Filtering Method & Test Run Order Termination Criteria

Executing Method

Select a method to measure the performance of your SQL statements:

Static

Dynamic

Skip test run original SQL

Timing Method

Run all SQL once

Flush data buffer before executing every SQL alternative

Run original SQL 2 times and all other alternatives once

Run all SQL 2 times and use the second SQL run time

If original SQL's run time less than 10 seconds, run all SQL 2 times; otherwise, run all SQL once only.

OK Cancel

### Resolved Issues in 3.0.1

Feature	Resolved Issue	Issue ID
Tune SQL	The performance bar is not visible when the SQL performance improvement near to 100%	TSEP-995
Tune SQL	Fixed an exception when tuning a SQL	TSEP-1003
Tune SQL	Corrected an error if unselect all SQL alternatives when exploring SQL alternatives	TSEP-1054
Tune SQL	Fixed the issue that default data type of bind variable is not correct for specific SQL.	TSEP-726
General	Fixed an exception when launch application	TSEP-874
Connection Manager	List the TNS names in connection manager with instant Oracle client	TSEP-821



Connection Manager	Corrected an error when launch application if TNS file with invalid entries.	TSEP-1048
Connection Manager	Corrected an error when launch application without TNS file.	TSEP-1059
Connection Manager	Show message when connect to the database which is not supported	TSEP-855

## SQL Tuning Expert for Oracle 2.0.3

SQL Tuning Expert 2.0.3 is a major release which includes new features, enhancements and fixes.

### Tune SQL

Improve problem-solving ability with more Hints are supported

### General

Export execution plan to PDF or image.

Print execution plan

### Language Support

UI Languages Supported: English, Chinese(simplified) and Japanese

### Resolved Issues in 2.0.3

Feature	Resolved Issue	Issue ID
Common	SQL Text wrongly warped in SQL Editor	TSE-580
SQL Tuning	Improved progress bar style during test run	TSE-336



## SQL Tuning Expert for Oracle 1.5.0

SQL Tuning Expert 1.5.0 is a minor release which includes following enhancements.

### Tune SQL

Support merge statements.

Better problem-solving ability with more SQL alternatives generation

New Bind Variables window

## SQL Tuning Expert for Oracle 1.1.2

SQL Tuning Expert 1.1.2 is a hotfix release which includes following resolved issues.

### Resolved Issues in 1.1.2

Feature	Resolved Issue	Issue ID
SQL Tuning	Corrected an error when attempting to Tune or Test Run a SQL with SELECT statement returning empty string.	TSE-302

## SQL Tuning Expert for Oracle 1.1.1

SQL Tuning Expert 1.1.1 is a hotfix release which includes following resolved issues.

### Resolved Issues in 1.1.1

Feature	Resolved Issue	Issue ID
SQL Tuning	Corrected an error when attempting to Tune or Test Run a SQL with the same bind variable exists multiple times or the bind variable is not associated with any table's column.	TSE-283



## SQL Tuning Expert for Oracle 1.1.0

SQL Tuning Expert 1.1.0 is a major release which includes following new features.

### Tune SQL

It is a very powerful tool to tune your SQL statements in a fully automatic manner without the need of user's expertise involvement. Our AI engine will try most effective hints combinations to your SQL statement to explore potential better execution plans of your SQL statement. You can select the best performance SQL alternative for your application after benchmarking of all or selected SQL alternatives generated by the engine.