SQL Optimizer for Oracle 9.3.3

Release Notes

Wednesday, May 6, 2020

Contents

About SQL Optimizer for Oracle

SQL Optimizer for Oracle automates the SQL optimization process and maximizes the performance of your SQL statements. SQL Optimizer analyzes, rewrites, and evaluates SQL statements located within database objects, files, or collections of SQL statements from Oracle's System Global Area (SGA). Once SQL Optimizer identifies problematic SQL statements, it optimizes the SQL and provides replacement code that includes the optimized statement.

SQL Optimizer also provides a complete index optimization and plan change analysis solution. It provides index recommendations for multiple SQL statements or a SQL workload, simulates index impact analysis, and generates SQL execution plan alternatives.

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New Features

SQL Optimizer for Oracle 9.3.3

SQL Optimizer for Oracle 9.3.3 is a patch release and includes resolved issues and the following enhancements:

- **New baseline deployment scripts for user review**. From the Plan Control Deploy page, you can now review the deployment script. Click the **Show Script** button before the script is deployed.
- **New options to test run different bind values: "Ignore the cached execution plan" and "Reuse the cached execution plan"**. In Optimize SQL module, you can now select "Ignore the cached execution plan" or "Reuse the cached execution plan" in the Test Run settings window to test run different bind values.
- **Statistics are now shown with greater precision**. SQL Optimizer for Oracle now displays data to 3 decimal places for run time statistics.

See also Resolved Issues and Enhancements.

SQL Optimizer for Oracle 9.3.2

SQL Optimizer for Oracle 9.3.2 is a patch release and includes resolved issues and the following enhancement:

- Support for **Oracle 19c**.

See also Resolved Issues and Enhancements.

SQL Optimizer for Oracle 9.3.1

SQL Optimizer for Oracle 9.3.1 is a minor release and includes resolved issues and the following enhancement.

- **Improved performance when identifying invalid SQL.** This release includes an enhancement to the SQL parsing process which significantly reduces the time required to identify certain invalid SQL statements.

See also Resolved Issues and Enhancements.

SQL Optimizer for Oracle 9.3

SQL Optimizer for Oracle 9.3 is a minor release and includes resolved issues and the following enhancements.

- **Support for Oracle Database 18c.** This release of SQL Optimizer for Oracle includes support for Oracle Database 18c .

See also Resolved Issues and Enhancements.

SQL Optimizer for Oracle 9.2.3

SQL Optimizer for Oracle 9.2.3 is a minor release and includes the following enhancements. See also Resolved Issues and Enhancements.

Optimize SQL

Test Run Different Bind Values

- **Average Logical Reads Column.** An Average Logical Reads column is now included in the Alternatives pane of the results page. In addition, you can select Average Logical Reads as the performance criteria to display in the charts.
- **Export to Excel.** In the Alternatives pane of the results page, when using the right-click **Save As | Excel Document** command, all rows (parent rows and nested rows) are now exported to Excel.
- **Performance Chart - Select SQL to Display.** You can now select which top SQL alternatives to display in the Performance Chart by selecting alternatives from the selection pane.
- **Performance Chart - Customize Colors.** You can now modify the chart line color for each alternative displayed in the Performance Chart (Performance variation view) in the results page. This allows you to customize chart colors for better viewing.
    1. To modify the line color for an alternative, click the color-coded alternative name in the legend/selection pane.
    2. Select a color from the palette.

Additional Enhancements

- **Session Logical Reads Column.** The Session Logical Reads column has been restored to the Alternatives pane in the SQL Details tab. In addition, you can now select Session Logical Reads as the criteria for finding the best alternative in the Test Run Settings dialog.
- **Export to Excel.** When you export an Alternatives grid to Excel using **Save As | Excel Document**, the corresponding SQL text for each alternative is now included in the exported Excel file.

SQL Optimizer for Oracle 9.2.2

SQL Optimizer 9.2.2 is a minor release and includes the following new features and enhancements. See also Resolved Issues and Enhancements.

Optimize SQL

New Option to Ignore Record Count Mismatch. You can now instruct SQL Optimizer to ignore a record count mismatch between alternatives and the original SQL.

- To enable this feature, go to **Options | Optimize SQL | Test Run** and select **Ignore record count difference from original SQL**.

Custom Test Run Settings - SQL Termination Criteria. When using run time of the fastest SQL as the SQL termination time, you can now instruct SQL Optimizer to use the fastest run time in this test run only or to include the fastest run time from tested alternatives.

- To specify one of these options in the Test Run Settings dialog, select **Customize Test Run Settings**. Then select the **Order and Termination** tab. Select one of the options in the SQL Termination Criteria section.

User Interface. A Chinese language version of the SQL Optimizer for Oracle application is not provided for this release. You can find a Chinese language version of the SQL Optimizer documentation (User Guide, Installation Guide, and Release Notes) at: https://support.quest.com/sql-optimizer-for-oracle/technical-documents.

SQL Optimizer for Oracle 9.2.1

SQL Optimizer 9.2.1 is a maintenance release and includes resolved issues and minor enhancements. See Resolved Issues and Enhancements for more information.

# SQL Optimizer for Oracle 9.2

Optimize SQL

Stop and Resume the Optimization Process (SQL Rewrite)

This release of SQL Optimizer includes an exciting new enhancement to the Optimize SQL workflow. You can now interrupt the optimization process without losing the SQL alternatives and test run results generated thus far in your SQL Rewrite session. This is useful if you need to close SQL Optimizer or shut down your computer in the middle of a long-running optimization session. When it is convenient, reopen the saved session and resume running the optimization process, beginning from the point where it was interrupted.

Another important workflow enhancement enabled by this new feature is the ability to increase the intelligence level in the middle of an optimization process. If you find that the current intelligence level is not generating better or sufficient alternatives, you can stop the process, increase the level, and then resume the process. SQL Optimizer will use increased quotas and hints to find additional alternatives without losing the alternatives and results generated thus far.

Note: This new feature is available for SQL Rewrite sessions only. It is not available for Plan Control sessions at this time.

- To stop the optimization process, click the Stop button in the SQL Details toolbar.
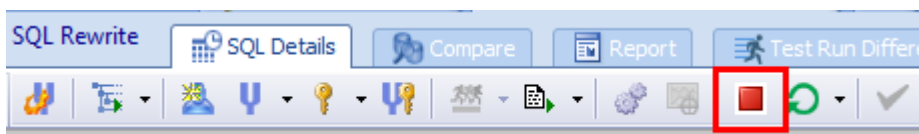
- After the optimization process stops, alternatives that were in the process of executing now display a status of *Stopped* in the Alternatives pane.

- After stopping the process, you can save and close your session. The SQL alternatives and test run results generated thus far are saved with your SQL Rewrite session.
- If you want to increase the intelligence level to find additional alternatives, click one of the Intelligence Level buttons in the upper-right portion of the SQL Rewrite window, increase the level, and then resume the process.

- To resume the optimization process, open the saved session and select the desired action.
  - To continue running the Auto Optimize process, click the **Auto Optimize** button.
  - To continue to find alternatives, select the **Rewrite** command.
  - To continue to test run alternatives, select **Test Run - Non-Tested**.
  - To continue to find index alternatives, click the **Index** button to search for alternatives or select **Test Run - Non-Tested** to test run alternatives.

Test Run Untested Alternatives (SQL Rewrite)

The Test Run button now includes a new command, **Test Run - Non-Tested**. Use this command to test run SQL alternatives that have never been tested. This is useful if you paused the optimization process during the test run phase.

Note: This new feature is available for SQL Rewrite sessions only. It is not available for Plan Control sessions at this time.

- To test run untested alternatives, click the arrow beside the Test Run button and select **Test Run - Non-Tested**.
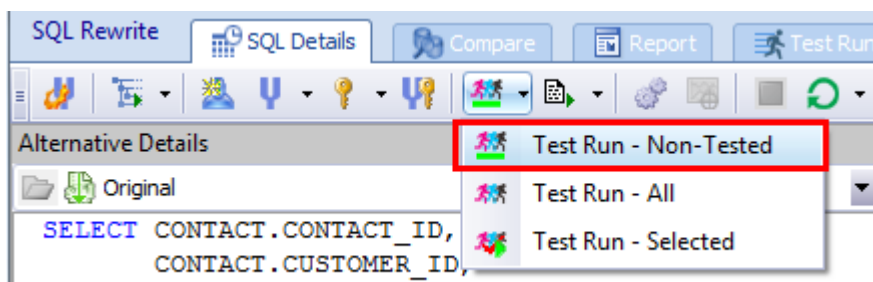

- This action will test run the remaining untested alternatives in a SQL Rewrite session that includes both tested and untested alternatives.
- Alternatives with a status of *Stopped* (stopped by the user) are included in execution with this method. Alternatives with a status of *Aborted*, *Terminated*, or *Error* are excluded from execution.

## Specify Session-Level Optimization Settings

This release of SQL Optimizer provides a way to specify optimization settings for a single session without changing your default settings.

- To change the Intelligence level for the current session (SQL Rewrite or Plan Control), click the **Optimizer Intelligence Level** button. Then select a predefined setting and intelligence level, or customize the settings. Your settings are applied to the current session only. The settings previously specified through **Options | Optimize SQL | Optimizer** or **Options | Optimize SQL | Plan Control** remain unchanged.
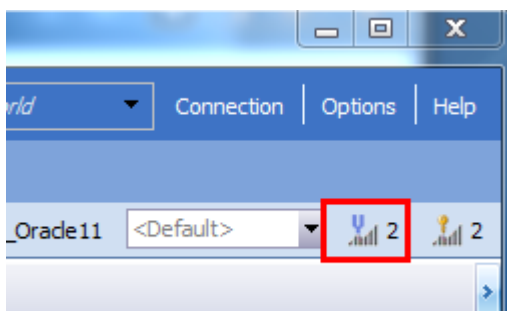
- To change the Intelligence level for index generation for the current session (SQL Rewrite), click the **Index Generation Intelligence Level** button. Then select an intelligence level or customize the settings. Your settings are applied to the current session only. Any settings previously specified through **Options |**

**Optimize SQL | Index Generation** remain unchanged.
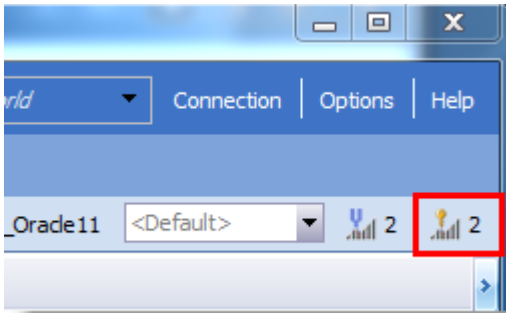
Note: Settings specified through the Options dialog (for example **Options | Optimize SQL | Optimizer**) are now used as the default settings only and are applied to any *new* SQL Rewrite and Plan Control sessions you create. These default settings remain unchanged when you modify optimization settings at the session level.

Enhancements to the Test Run Different Bind Values Feature

This release includes multiple enhancements to the Test Run Different Bind Values feature.

- This feature was introduced in SQL Optimizer 9.1 and can be used when optimizing a SQL statement that includes a least one bind variable.

- To use this feature, generate and test run SQL alternatives using the **SQL Details** tab in Optimize SQL. Then select the **Test Run Different Bind Values** tab where you can test run the best-performing SQL alternatives again, this time using a list of bind values you specify.
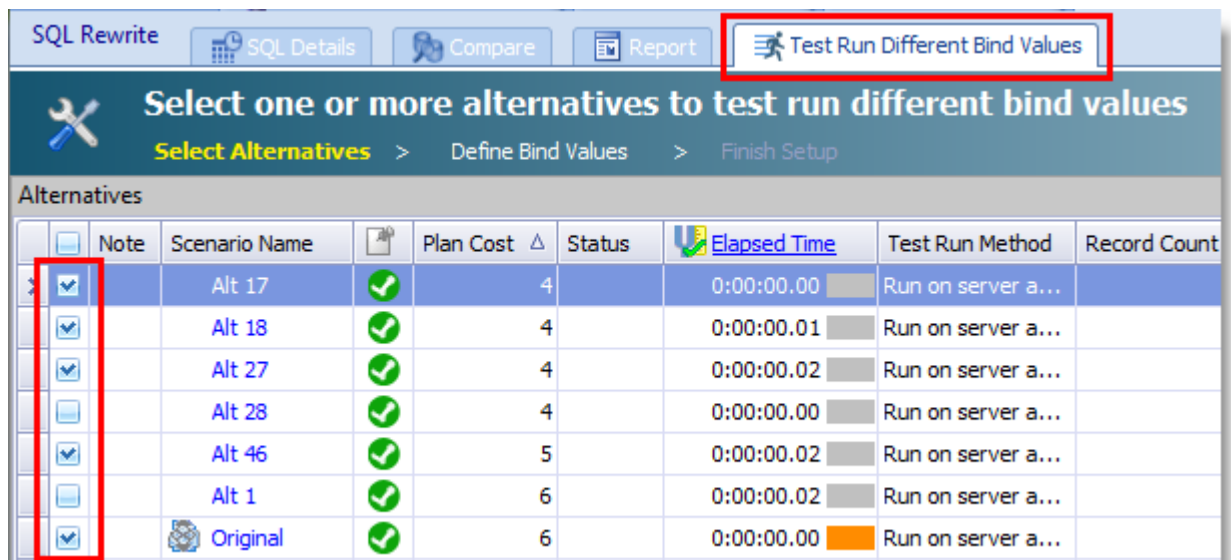
- **Bind value source.** A new column in the Bind Values page identifies the source of the bind value. In addition, when you modify the list of bind values, new entries are highlighted green.
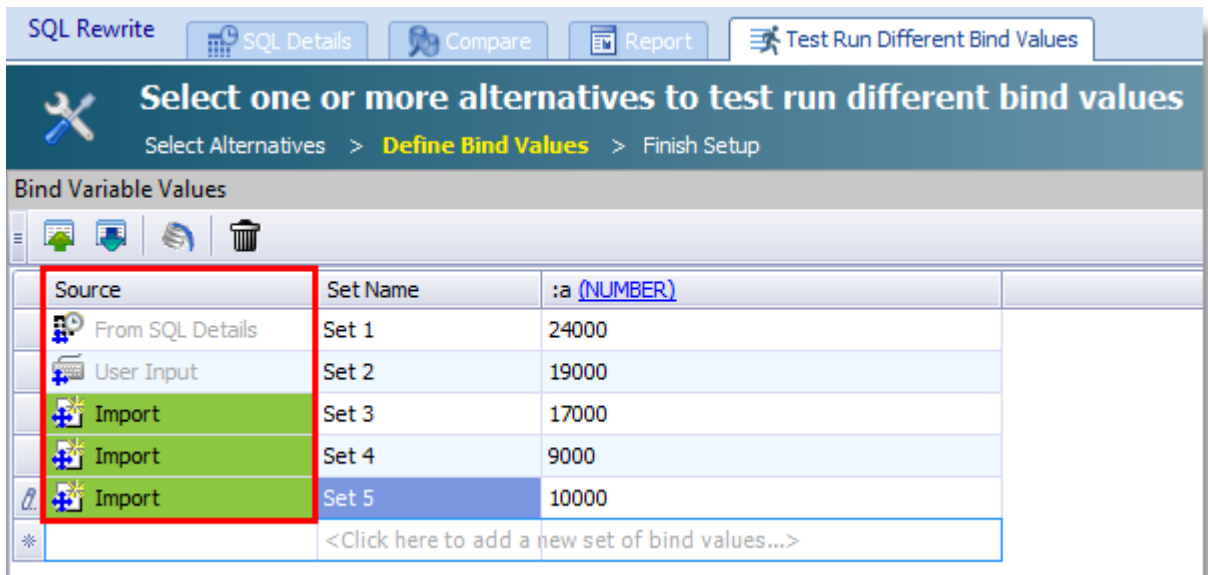
- **Auto Fill finds all available values from Oracle.** When you click the **Auto Fill** button to retrieve bind values from Oracle, all available bind value sets captured by Oracle are now retrieved. In the previous release, only the latest set of bind values captured by Oracle was retrieved. The Bind Variables Values grid is automatically populated with any value sets found that are not currently listed in the grid.


- For testing alternatives using bind value sets, you can now specify a default value for the SQL termination option **Percentage of original SQL total run time** available in the Test Run Settings dialog. Specify this default value through the Options dialog in **Options | Optimize SQL | Test Run**.

General

Execution Plan

- **Display DBMS_XPLAN as plain text.** You can now display execution plans using the DBMS_XPLAN in plain text format. This is the format returned from Oracle. To use this format, in the Execution Plan window right-click the plan and select **View Plan | As DBMS_XPlan (Plain Text)**.
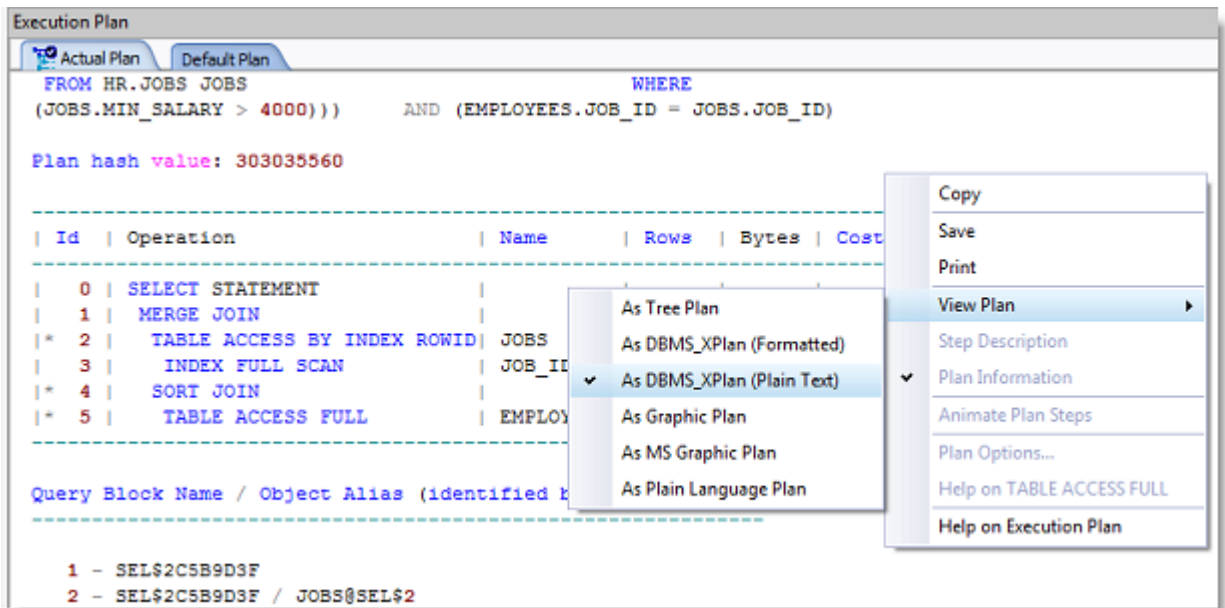
- **Save plan as text file.** You can now save an execution plan as a text file. This feature is available for the *DBMS_XPlan* formats.
  - In the Execution Plan window, select one of the *DBMS_XPlan* formats. Then right-click the plan and select **Save**. Select *Text Files* in the **Save as type** field.

See Resolved Issues for a more complete list of issues resolved and enhancements implemented in this release.

Learn More

Remember, you can find blogs, videos, and forums at the SQL Optimizer for Oracle Community.

- Find answers to your questions in the SQL Optimizer forums.
- Learn tips and tricks from blog posts.

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Discontinued Features

The following features are no longer included in SQL Optimizer for Oracle.

Integration with Foglight Performance Investigator (PI). Beginning with SQL Optimizer for Oracle 9.3, you will no longer be able to gather SQL from a Foglight Performance Investigator repository.

Resolved Issues and Enhancements

The following is a list of issues addressed and enhancements implemented in this release of SQL Optimizer for Oracle.

Resolved Issues in 9.3.3

Feature	Resolved Issue	Defect ID
SQL Syntax	Corrected an issue that bind variables in FETCH clause cannot be recognized.	SOFO-2660

Resolved Issues in 9.3.2

Feature	Resolved Issue	Defect ID
Optimize SQL	Corrected an issue when optimized SQL was not semantically equivalent to the original SQL script.	SOFO-2602

Resolved Issues in 9.3.1

Feature	Resolved Issue	Defect ID
Scan SQL	Corrected an issue that caused an Out-of-Memory error after attempting to scan multiple files in Scan SQL or collecting SQL in Inspect SGA.	SOFO-2016

Resolved Issues in 9.3

Feature	Resolved Issue	Defect ID
Batch Optimize SQL	Corrected an issue that resulted in incorrect data in the "Times of Improvement" column after the SQL List grid was exported to an Excel (or other) file.	SOFO-2214
General	This release of SQL Optimizer for Oracle includes support for Oracle Database 18c .	SOFO-2391
Options	Corrected an issue in which recent custom settings where not retained if the user re-opened the options page and then clicked the **Cancel** button. This issue was encountered in the **Options	Optimize SQL	Plan Control (Intelligence)** page.	SOFO-2386
SQL Syntax	Added support for the PIVOT operator in SQL statements.	SOFO-2081
SQL Syntax	Added support for "sysdate@!" and "user@!" in SQL statements.	SOFO-621
SQL Syntax	Added support for the following syntax pattern: select * from (dual) x.	SOFO-2137

Resolved Issues in 9.2.3

Feature	Resolved Issue	Defect ID
General	Corrected an issue that resulted in unnecessary blank rows when exporting an Alternatives grid to Excel.	SOFO-2158
General	When an Alternatives grid is exported to Excel (**Save As | Excel Document**), the statistics time values are now formatted as HH:MM:SS.	SOFO-1476
Licensing	Corrected an issue that prevented support for the SQL Navigator Development Suite 7.x license key.	SOFO-2168
Optimize SQL	Enhancement: In the Test Run Different Bind Values tab, the Alternatives pane of the results page now includes a column for Average Logical Reads. You can also select Average Logical Reads as the performance criteria to display in the charts.	SOFO-2050
Optimize SQL	Restored the Session Logical Reads column in the Alternatives pane in the SQL Details tab and as criteria for finding the best alternative in the Test Run Settings dialog.	SOFO-2050
Optimize SQL	Test Run Different Bind Values: In the previous release, only the parent rows of the master-detail grid were exported when using the right-click **Save As | Excel Document** command in the Alternatives pane of the results page. Now all rows (parent and nested) of the master-detail grid are exported to Excel.	SOFO-2157
Optimize SQL	Enhancement: When exporting an Alternatives grid to Excel using **Save As | Excel Document**, the SQL text for each alternative is also included in the exported Excel file.	SOFO-2054
Optimize SQL	Enhancement: In the Test Run Different Bind Values tab, you can now modify the chart line color for each alternative displayed in the Performance Chart (Performance variation view) in the results page.	SOFO-2161
Optimize SQL	Enhancement: In the Test Run Different Bind Values tab, you can now select which top SQL alternatives to display in the Performance Chart by selecting alternatives from the selection pane.	SOFO-2165
Optimize SQL	Test Run Different Bind Values: Corrected an issue that caused incorrect statistics to be exported when using the right-click **Save As | Excel Document** command in the Alternatives pane of the result page. The incorrect statistics were found in the Performance Chart and the Elapsed Time and First Row Time columns.	SOFO-2195
User Interface	Clicking **Yes** in the "New Updates Available" message now successfully provides the user with access to the SQL Optimizer for Oracle software download page.	SOFO-2155

Resolved Issues in 9.2.2

Feature	Resolved Issue	Defect ID
General	SQL Optimizer for Oracle was tested with and supports	SOFO-2114

Feature	Resolved Issue	Defect ID
	Windows Server 2016.	
General	SQL Optimizer for Oracle was tested with and supports Oracle Database 12.2 (Oracle Database 12c Release 2).	SOFO-2119
Inspect SGA	Added the metric of Elapsed Time per Execution to the run-time statistics that can be used to collect SQL in Inspect SGA.	SOFO-2053
Optimize SQL	Added support for CAST to varchar with "CHAR" label.	SOFO-2088
Optimize SQL	Added an option (Options | Optimize SQL | Test Run) to ignore record count mismatch between alternatives and original SQL.	SOFO-2084
Optimize SQL	Corrected an issue that resulted in an incorrect value for "Average Physical Reads" in the Test Run Different Bind Values tab. This issue was encountered when the average value was between 0 and 1, and user's Regional Number format specified the comma (,) as the Decimal symbol.	SOFO-2057
Optimize SQL	In the Test Run Different Bind Values tab, when importing bind values from a file, ANSI encoding is now supported.	SOFO-2056
Optimize SQL	In the custom test run settings in the Test Run Settings dialog, when specifying SQL termination criteria you can now use the fastest run time in this test run only or include the fastest run time from previous test runs.	SOFO-2118

Resolved Issues in 9.2.1

Feature	Resolved Issue	Defect ID
Batch Optimize SQL	The Termination Delay option in Options | Batch Optimize SQL | Execution | Termination Criteria now works as expected in the Batch Optimize SQL module.	SOFO-1871
Integration with other products	If the user selects a Beta edition of SQL Optimizer for Oracle as the default to open from Toad for Oracle, when the Beta edition expires, the user can reset the default application back to the commercial edition of SQL Optimizer for Oracle.	SOFO-641
Integration with other products	Corrected an issue that unexpectedly modified the Save Password option when connection information was sent from Toad for Oracle to SQL Optimizer for Oracle where the connection already existed.	SOFO-1939
Optimize Indexes	Corrected an issue in the Optimize Indexes module that resulted in 4 database sessions opened instead of two.	SOFO-1943
Optimize SQL	A bind value set name change is now included in the list of changes when you modify and then rerun a test in the Test Run Different Bind Values tab.	SOFO-1228
Optimize SQL	After generating all alternatives using the "Rewrite" action, clicking the Auto-Optimize button (or Rewrite and Test Run) correctly initiates the test run process, where expected.	SOFO-1845
Optimize SQL	Corrected an issue that caused a connection error when attempting to run an alternative to retrieve the result set (Run	SOFO-1917

Feature	Resolved Issue	Defect ID
	Result) after deploying an alternative as an outline.	
Optimize SQL	You can now abort the original SQL when testing alternatives using the Auto Optimize action. If you selected test run settings that are based on the original SQL, aborting the original could abort all alternatives. If this is the case, SQL Optimizer informs you and prompts you to confirm or cancel the abort.	SOFO-1980
Optimize SQL	Test Run Different Bind Values: When using the right-click **Print** command in the Alternatives pane of the results page, all rows of the master-detail grid are now printed, as expected.	SOFO-1167
Optimize SQL	Test Run Different Bind Values: Corrected an issue that exported only the parent rows of the master-detail grid when using the right-click **Save As	HTML/PDF/TXT** commands in the Alternatives pane of the results page. Now all rows of the master-detail grid are exported to HTML, PDF, or TXT, as expected.	SOFO-1161
User Interface	The Data Browser in the Test Run Different Bind Values tab now includes a Modify button in the Select drop-down pane to modify an added function, as expected.	SOFO-1289
User Interface	Optimize SQL: Corrected an issue that removed the current status in the Status column from an executing test when switching between sessions.	SOFO-1983
User Interface	Corrected an issue that temporarily disabled the Test Run Current button after switching from the Test Run Different Bind Values tab to the SQL Details tab and then back again.	SOFO-1287
User Interface	In the Test Run Different Bind Values tab, after changing the criteria, the Best Alternative shown is now consistent within all the panels, without switching sessions to refresh the screen.	SOFO-1834
User Interface	Manage Plans: Corrected a refresh issue in the Execution Plan pane.	SOFO-1918
User Interface	Plan Control - Test Run Different Bind Values: In the SQL Text pane of the Define Bind Values page, the SQL text is displayed as expected, even if the original SQL was not selected for the test run.	SOFO-1868
User Interface	Optimize SQL: Corrected a highlighting issue in the Scenario Name column when using the Find Panel.	SOFO-1479
User Interface	For a few different windows in the application, corrected an issue that prevented the online Help from opening to the applicable Help topic after pressing the F1 key.	N/A
User Interface	Corrected a refreshing issue that unexpectedly displayed currently executing SQL status for a session in the window of another session, when running multiple sessions.	SOFO-1899
User Interface	Optimize SQL - Reports: When switching between completed sessions, the Optimization Status field in Optimization Details retains the correct value, as expected.	SOFO-1801

Resolved Issues in 9.2

Feature	Resolved Issue	Defect ID
Analyze Impact	In the Impacts tab, the labels on the chart are now consistent with the column names in the grid.	SOFO-1532
Analyze Impact	After sending an index from Optimize Indexes to Analyze Impact, the Tables/Columns drop-down list is pre-populated with tables, as expected, without requiring the user to select the connection again.	SOFO-643
Analyze Impact	Corrected issues with analyzing a user-defined index given a custom name (non-default name).	SOFO-358
General	Improved support for complicated synonym relationships.	SOFO-1626
Inspect SGA	In the SQL Filter page of the Add Inspect SGA Job wizard, if you set the filter to retrieve SELECT statements, then statements that include a WITH clause are now collected as expected.	SOFO-651
Licensing	If SQL Optimizer prompts you for a valid license while attempting to connect in a new session, you no longer encounter an "Invalid license" error after entering a valid license.	SOFO-639
Optimize Indexes	Corrected an issue that caused an error if the user selects the cost option check boxes while a search process is running.	SOFO-1327
Optimize SQL	If the "Transform query to inline view" option is not selected in Optimization Settings, as expected the SQL is not transformed to an inline view.	SOFO-1504
Optimize SQL	Corrected an issue that caused a parser error when attempting to run SQL after creating the Plan table.	SOFO-1457
Optimize SQL	In the Comparison with Original SQL tool tip, the Criteria type is now displayed, as expected.	SOFO-664
Optimize SQL	Enhancement: When connected to an Exadata database, the "Offloading Operation and Bloom Filter" column is now shown in the Test Run Different Bind Values Results page (Alternatives grid).	SOFO-1259
Optimize SQL	SQL Rewrite: Corrected an issue that prevented SQL with no cost from being tested when the "Test Run - All" command was used.	SOFO-1422
Optimize SQL	In the Compare tab, columns are now displayed in the same order as in the Details pane, as expected.	SOFO-1314
Optimize SQL	Corrected an issue that caused the Abort Current command to fail in the Test Run Different Bind Values tab when all SQL were test run.	SOFO-1356
Optimize SQL	In the Test Run Different Bind Values tab, user's column display settings are now retained between sessions, as expected.	SOFO-1367
Optimize SQL	In the Test Run Different Bind Values tab, selections made on the "Finish Setup" and "Let Me Select What to Test Run"	SOFO-1247

Feature	Resolved Issue	Defect ID
	pages are synchronized in some scenarios for a better workflow.	
Optimize SQL	In the Test Run Different Bind Values tab, if you modify the bind sets and then select "Test run only the newly added or modified" the values are now executed in the order specified, as expected.	SOFO-1260
Optimize SQL	Enahancement: In the Test Run Different Bind Values tab, added a few UI enhancements to the Performance Chart.	SOFO-1347
User Interface	The User Defined Alternative Virtual Indexes tab can be displayed and persists during the SQL Rewrite process as expected.	SOFO-1235
User Interface	In a grid, for column headers containing a hyperlink, you can now successfully sort the column by clicking the column header outside the hyperlink.	SOFO-1250

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Known Issues

The following is a list of issues known to exist at the time of this release.

Feature	Known Issue	Defect ID
General	If you select a non-default schema for a SQL statement in SQL Optimizer and send it to Benchmark Factory™, the default schema is preserved in the SQL statement and an error occurs when it is executed. **Workaround:** Select the appropriate schema in Benchmark Factory™.	ST68829
General	SQL Optimizer cannot test run in Exadata DB with 19c client. **Workaround:** User can use other client to connect to Exadata.	SOFO-2628
Scan SQL and Batch Optimize	When you select the "Include Dependants" option while scanning database objects, only first level dependents are retrieved instead of all dependents.	ST40625
Connecting to Database	When the directory where SQL Optimizer is installed has a directory path which contains parenthesis, connecting to Oracle fails when using a pre-11g client. This is a known Oracle issue that we cannot fix. This problem is more common in 64-bit environment because the default directory for 32-bit applications is "C:\Program Files (x86)\". **Workaround:** Install SQL Optimizer in a directory that does not have parenthesis or upgrade the Oracle client to 11g.	ST63421
Installation	If you install SQL Optimizer version 8.8.1 (or later) and then do a side-by-side install of version 8.8.0, version 8.8.0 will fail to launch after it is successfully installed.	ST111404
Installation	If you install SQL Optimizer 8.8.0 (or later) side-by-side with version 8.7.0, then uninstall version 8.7.0, version 8.8.0 (or later) will no longer integrate with other Toad products. This issue is found in side-by-side installations of 8.8 and either 8.5.0, 8.6.0, 8.7.0, or 8.7.1 that are of the same edition (i.e., both Commercial edition) and the same bitness (i.e., both 32-bit). **Workaround 1:** Launch SQL Optimizer 8.8.0 (or later) from the short-cut on the Start menu. **Workaround 2:** Uninstall SQL Optimizer 8.8.0 (or later) and reinstall it.	ST109347
Installation	**Background:** SQL Optimizer 8.7 (or later) does not support an upgrade from the 32-bit version to the 64-bit version (or 64-bit version to 32-bit version). If you attempt to upgrade by using the Quest Software Installer, you *will* receive the appropriate warning message and the installation will not proceed. **Issue:** If you attempt to upgrade from the 32-bit version of SQL Optimizer to the 64-bit version (or from the 64-bit version to the 32-bit version) by using the .msi installer, you will *not* receive a warning message and the installation will appear to proceed. However, you will encounter an error upon launching the upgraded application. **Workaround:** To upgrade to a newer version of SQL Optimizer	ST102226

Feature	Known Issue	Defect ID
	that has a different "bitness" (i.e., from 32-bit to 64-bit), you must first **uninstall** the previous version.	
Installation	A shortcut is not created in the Metro UI on Windows 8 and Windows Server 2012 for limited users in the following cases (when application is installed "for everyone"): • For a user that has never previously logged-in • For a new user created after installation	ST105153
Installation	A shortcut is not created in the Windows Start menu for limited users when upgrading or performing a side-by-side installation of SQL Optimizer 8.5 or later. **Workaround:** Launch SQL Optimizer from Windows Explorer.	ST76887
Installation	The CPM product key is not automatically entered when upgrading or performing a side-by-side installation of SQL Optimizer 7.5 or later. **Workaround:** Manually enter CPM product key in licensing window.	ST73191
Report	Unicode characters do not display correctly in the generated report. **Workaround:** **For PDF:** Select a font that contains the specific Unicode characters. Do this by modifying the font settings that apply to data grids and generated reports. 1. Select **Options | General | Appearance**. 2. Under Font Settings, in the **Other Data** drop-down list, select a font that contains the Unicode characters (for example, Arial Unicode MS). **For HTML and MHT:** When exporting the report, select a **Character set** that contains the Unicode characters. **For CSV and Text:** When exporting the report, select an **Encoding** option that supports the Unicode characters.	ST102639
Help	Currently, you cannot enter Unicode characters in the Index or Search fields of the online help.	ST71331
	When searching the online help for information using the Search bar in SQL Optimizer, topics display in the help window for exact matches found but the related index entry is not highlighted.	ST71433

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System Requirements

Before installing SQL Optimizer for Oracle®, ensure your system meets the following minimum hardware and software requirements:

Requirement	Details
Platform	1 GHz Processor

Memory	1 GB of RAM for SQL Optimizer for Oracle 32-bit
	2 GB of RAM for SQL Optimizer for Oracle 64-bit
	Note: The memory required may vary based on the following:
	  • Applications that are running on your system
	  • Size and complexity of the database
	  • Amount of database activity
	  • Number of concurrent users accessing the database

Hard Disk Space	180 MB of disk space for SQL Optimizer for Oracle 32-bit 217 MB of disk space for SQL Optimizer for Oracle 64-bit **Note:** The disk space required may vary based on options selected for installation.
Operating System	Microsoft Windows Server 2008 R2 Microsoft Windows 7 32-bit and 64-bit Microsoft Windows 8 32-bit and 64-bit Microsoft Windows 8.1 32-bit and 64-bit Microsoft Windows 8.1 (with Update) 32-bit and 64-bit Microsoft Windows Server 2012 R1 Microsoft Windows Server 2012 R2 Microsoft Windows Server 2012 R2 (with Update) Microsoft Windows 10 32-bit and 64-bit Microsoft Windows Server 2016 Microsoft Windows Server 2019
.NET Framework	Microsoft .NET Framework 4.6 Full Profile
Browser	Microsoft Internet Explorer 6.0 or later **Note:** Other browsers may also be used.
PDF Viewer	Adobe Acrobat Reader 7.0 or later (for viewing the Installation Guide)
Database Client	Oracle v10 Client (Net10) Oracle v11 Client (Net11) Oracle 12c Client Oracle 18c Client Oracle 19c Client Oracle Instant Client **Note:** You must use the 32-bit version of SQL Optimizer if you use the 32-bit Oracle Client, and the 64-bit version of SQL Optimizer if you use the 64-bit Oracle Client.
Database Server	Oracle 10g R2, 11g R1, 11g R2, 12c Release 1, 12c Release 2, 18c, 19c SQL Optimizer has been tested on Oracle Exadata 2.0 running Oracle database 11g R2.

Requirement	Details
	Important: It is recommended that you use an Oracle Client of the same release/version (or later) as your database server. This is an Oracle recommendation to prevent performance issues.
Cloud Database Service	Oracle Database as a Service Oracle databases running on Amazon EC2, Amazon RDS, and Microsoft Azure

Virtualization Support

Before installing SQL Optimizer for Oracle®, review the following for virtualization support:

Type	Details
Application Virtualization	SQL Optimizer has been tested with the following: • Citrix XenApp 6.5 on Windows Server 2008 R2 • Microsoft Application Virtualization (App-V) 5.0 on Windows 7 and Windows Server 2012
Server Virtualization	SQL Optimizer has been tested with the following: • Oracle VM 2.2.0 running on Oracle Enterprise Linux 5 Update 2 64-bit with Oracle 10g R2 • Oracle VM 2.2.0 running on Oracle Enterprise Linux 5 Update 3 32-bit with Oracle 11g R1 • Oracle VM 3.1.1 running on Windows Server 2008 R2 with Oracle 11g R2 • Oracle VM 3.2.2 running on Oracle Linux Release 6 Update 4 Media Pack v1 for x86 (32-bit) with Oracle 10g R2. • Oracle VM 3.2.2 running on Windows Server 2008 R2 64-bit with Oracle 11g R1. • Oracle VM 3.2.2 running on Oracle Linux Release 6 Update 4 for x86_64 (64-bit) with Oracle 11g R2.
Note: SQL Optimizer may work in virtualization environments other than the ones in which it was tested.	

Product Licensing

To activate a trial license

1. Enter the Authorization Key included in your Trial Email into the License Key field of the License dialog.
2. Enter the Site Message included with your Authorization Key.

To activate a purchased commercial license

1. Enter the Authorization Key included in your Purchase Email into the License Key field of the License dialog.
2. Enter the Site Message included with your Authorization Key.

Getting Started with SQL Optimizer

Contents of the Release Package

The SQL Optimizer for Oracle release package contains the following products:

1. SQL Optimizer for Oracle
2. Product Documentation, including:
   - Installation Guide
   - User Guide
   - Online Help, which includes tutorials

Installation Instructions

Refer to the *SQL Optimizer for Oracle Installation Guide* for installation instructions.

Upgrade from Previous Release

SQL Optimizer 8.7 (or later) does not support an upgrade from the 32-bit version to the 64-bit version (or 64-bit to 32-bit). To upgrade from the 32-bit version of SQL Optimizer to the 64-bit version, please uninstall the previous 32-bit version. See ST102226 in the Known Issues section for more information.

Note: SQL Optimizer 8.7 (or later) supports side-by-side installation of versions with different "bitness" as long as they are also different releases (e.g., 8.6 and 8.7) or different editions (e.g., Commercial and Trial).

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Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release is Unicode-enabled and supports any character set. It supports simultaneous operation with multilingual data. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, Japan.

The release is localized to the following languages: Chinese (Simplified), Korean.

About Us

We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build community-driven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest's invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation.

Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece—you—to the community, to the new Quest.

Contact Quest

For sales or other inquiries, visit www.quest.com/contact.

Technical Support Resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at https://support.quest.com.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request
- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product

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