# Toad® for Oracle® 13.0

# Release Notes

**Revised 4/20/2018**

**Contents**

# About Toad for Oracle

Toad for Oracle provides an intuitive and efficient way for database professionals of all skill and experience levels to perform their jobs with an overall improvement in workflow effectiveness and productivity. With Toad for Oracle you can:

- Understand your database environment through visual representations

- Meet deadlines easily through automation and smooth workflows

- Perform essential development and administration tasks from a single tool

- Deploy high-quality applications that meet user requirements; perform predictably and reliably in production

- Validate database code to ensure the best-possible performance and adherence to best-practice standards

- Manage and share projects, templates, scripts, and more with ease

The Toad for Oracle solutions are built for you, by you. Nearly two decades of development and feedback from various communities like Toad World have made it the most powerful and functional tool available. With an installed-base of over two million, Toad for Oracle continues to be the "de facto" standard tool for database development and administration.

# Toad for Oracle resources

The parent site for all Toad family products is ToadWorld.com, where you will find videos, white papers, web-based training, expert blogs and podcasts, as well as beta releases, trial downloads and much more. The Toad for Oracle Community on this site focuses this content specifically on Toad for Oracle.

Two of the most-often used features of Toad World are the Forums and the Idea Pond.

- On the Idea Pond page, you can submit your ideas to improve Toad and vote for or against other customers' ideas. The Toad team takes your suggestions seriously, and you may even hear back from one of our developers on the topic. We encourage all Toad users from new to experienced to let us know how we can improve Toad.

- On the Forum page, you can ask a question or start a discussion and view all other forums within the Toad community.

The Toad World blog pages feature a broad range of information, including topics of interest to our industry, as well as instructions from team members on how to use the latest Toad features.

The Toad for Oracle web-based training is a perfect accompaniment to your product license. This free training walks you through major product features and explains how to perform frequent tasks. You'll also see how to utilize time-saving automation functionality. You'll receive a certificate of completion for each course once you pass the accompanying test.

# About this release

Toad for Oracle 13.0 is a minor release, with enhanced features and functionality.

# About Toad® for Oracle® 2018 Editions

All commercial versions of Toad for Oracle are bundled with additional Quest products, based upon the license that you purchased. These bundles are known as Editions and include the following:

**Toad for Oracle Base Edition**

- Toad® for Oracle®
- Toad™ Data Modeler (free use)

**Toad for Oracle Professional Edition**

- Toad® for Oracle® Professional
- Toad™ Data Modeler (free use)

**Toad for Oracle Xpert Edition**

- Toad® for Oracle® Xpert
  Includes all features in Base and Professional Editions
- SQL Optimizer for Oracle®

**Toad for Oracle Developer Edition**

- Toad® for Oracle® Xpert
- Code Tester for Oracle®
- Benchmark Factory® for Databases - Oracle Edition

**Toad for Oracle DBA Edition**

- Toad® for Oracle® Xpert
- DB Admin Module Add-on
- Spotlight on Oracle®
  Includes Spotlight on Unix/Linux, Spotlight on Windows, and Spotlight on Oracle Data Guard
- Benchmark Factory® for Databases - Oracle Edition
- Toad® Data Modeler

**Toad for Oracle DBA RAC Edition**

- Toad® for Oracle® Xpert
- DB Admin Module Add-on
- Spotlight on Oracle® with RAC Option
  Includes Spotlight on Unix/Linux, Spotlight on Windows, and Spotlight on Oracle Data Guard
- Benchmark Factory® for Databases - Oracle Edition
- Toad® Data Modeler

**Toad for Oracle DBA Exadata Edition**

- Toad® for Oracle® Xpert
- DB Admin Module Add-on
- Spotlight on Oracle® with RAC and Exadata Options
  Includes Spotlight on Unix/Linux, Spotlight on Windows, and Spotlight on Oracle® Data Guard
- Benchmark Factory® for Databases - Oracle Edition
- Toad® Data Modeler

For more information about the products in your Toad for Oracle Edition and the minimum system requirements for running these products, see the Toad for Oracle 2018 Editions release notes at:

https://support.quest.com/technical-documents

# New features and enhancements

## General

- Dual Monitor Support has been added. You can now use Toad in either its standard MDI (Multiple Document Interface) mode or in SDI (Single Document Interface) mode.

    - The default mode for Toad is MDI, where Toad has a single application window, and all other windows that you open are contained within that application window. However, even in MDI mode, Toad lets you selectively choose to "pop out" MDI child windows to move them to a separate screen or a separate portion of the same screen. You can then pop the window back into the Toad application when needed, and it will restore it to its original form. Although a window is popped out, its name still shows on a tab in the Toad task bar, as it would if not popped out. Thus, you can use either keyboard shortcuts or the tabs on the toolbar to switch among windows.

    - Alternatively, you can use SDI mode, where every window opens in its own window, outside the Toad application. This mode provides complete control over where windows are placed. As a result, not only can you move individual windows to other monitors, but you can also dock windows, such as the Project Manager, Team Coding Manager, and Object Palette. You can spread your work out across multiple monitors to work on multiple tasks simultaneously without having to wait for certain processes to finish. When processes are running in background threads, they can be kept visible, rather hidden behind other windows, so you know immediately when they are finished.

        - To use SDI mode, go to **View** | **Toad Options** | **General**, then select the mode under **Application Style**.

        - Floating dock windows automatically realign themselves when starting in SDI mode. To keep them where they were when you last shut down Toad, go to **View** | **Toad Options** | **Startup**, then clear **Realign floating dock sites when starting in SDI mode**.

    **NOTE:** Connection border colors cannot be drawn around forms operating in either SDI or "popped-out" mode; however, the colored status bar will still be shown.

- Toad toolbars are now locked by default to prevent accidental dragging to an unwanted configuration. To unlock a toolbar, right-click any toolbar then clear Lock Toolbars. You can still right-click a toolbar to customize it, even when toolbars are locked.

- The Trace File Browser has the following changes:

    - Renamed the "Seq" column in the main statement listing to "Rel Seq" (for Relative Sequence). It numbers the items within the parent statement.

    - Added a new "Seq" column that is a straight numbering of all statements.

    - Added a "Send to Excel (no units)" option, which leaves the non-numeric data out of the numeric columns so that sorting in Excel is numeric.

# Schema Browser

- The right-hand-side Partitions and Subpartitions tabs (for tables, MVs, and indexes) of the Schema Browser have been combined into a single Partitioning tab. This will allow you to get an overall picture of partitioning for a given object, without having to go back and forth between two separate tabs. By default, partitions and subpartitions are shown in a tree. However, the display can easily be changed to show only partitions or subpartitions, so that you can easily select all of one or the other to perform some operation.

- The Describe option of the Schema Browser options in Toad Options now includes settings for defaulting the Describe window to a popped-out or popped-in position. The Stay on top option has been removed.

# Database

- The Redo Log Manager now supports standby redo logs.

- The Rebuild Table, Generate Schema Script, Compare Databases, and Generate Database Script windows were reorganized as wizards.

- Generate Schema Script in the 32-bit version of Toad has been improved to manage memory better when creating a SQL file.

- Generate Schema Script, Generate Database Script, Compare Schemas, and Compare Databases are now threaded to allow them to run in the background while you work on other things at the same time. This applies only when they are run from the Toad GUI window. If you run them in the Automation Designer, they will not be threaded.

- The performance of generating schema scripts has been improved.

- A new Prebuilt Tables option has been added to the Materialized Views tab of Export DDL to include the table DDL when a materialized view is created on a prebuilt table.

- The Compare Individual Objects feature has been improved:

    - It now supports all object types in same window (check/uncheck **Schema** to toggle between schema-level and database-level objects).

    - Side-by-side viewer and sync scripts now appear within same window rather than launching new windows or popups.

    - Columns only for tables and views is now just a separate tab in the results section, rather than an option.

    - An option to sync tables with DBMS_REDEF has been added.

- The Compare Data feature has been improved:
    - The Minus mode has been removed. You can still use it by editing the Toad.ini file and setting **EnableComparisonMethod=1** under [DataCompare].
    - The buttons to view/edit a query and run each comparison step separately have been removed. You can still use it by editing the **Toad.ini** file and setting **AdvancedMode=1** under [DataCompare].
    - The Compare Table Structure link has been replaced with an icon for Single Object Compare. It is only visible on the Select columns step, at the lower left of the page, when there are differences between the tables being compared.
    - A switch sides icon has also been added (only visible on the "select tables" step) to enable you to switch the source and target tables.
    - The "synchronization complete" message is much shorter now and includes Commit and Rollback buttons. If you simply close the dialog without choosing commit or rollback, a pair of commit/rollback icons appears in the Compare Data window.
    - Toad now does an automatic savepoint at the beginning of syncronization. If user cancels the synchronization, Toad rolls back to the savepoint.
    - The Synchronization step has been replaced with a Sync button. The button determines the fastest sync method and chooses it automatically, so the user no longer has to make this choice. The button is a dropdown that provides choices to synchronize immediately, save a script to file, or send it to editor.
- The Estimate Table Size and Estimate Index Size windows have been combined into one tabbed window called Estimate Table/Index Size.
- The following shortcuts were added to the Refresh in the Session Browser: Press F5 to refresh all. Press F6 to refresh details.

# Team Coding

- You now have the ability to customize how DDL is extracted for Team Coding objects. These settings can be configured under the Team Settings node of the Team Coding Configuration window. By default, the settings mimic what is currently being extracted for Team Coding, with the following exception: NOT NULL constraints have a different format than what is currently being used, because of changes in the export methodology.
- You can now optionally include INSERT statements for table data with your DDL script to save to your version control provider. **NOTE:** This can result in very large scripts being saved to the VCS and can significantly affect the performance of Team Coding. As a result, this option should be used with caution.
- Access to the Folders and Extensions naming dialog has been moved from the toolbar to the General page underneath the Team Settings node.
- A new *Getting Started with Team Coding* guide has been added to the **docs** folder within the Toad installation. A shortcut button has been added to the Team Coding Configuration toolbar, which enables you to launch this guide using the built-in PDF viewer.

- Team Coding VCS debugging has been improved:
  - A Debug Log Viewer window was added, which launches when you click **Open log file**. This window allows easier navigation through the log to locate log entries and view the requests and responses with the version control system. You can also select multiple cells in the viewer grid and press **Ctrl+C** to extract only those entries of the log file (in their original format) to the clipboard.
  - Team Coding context information was added to help identify which specific VCS commands are being executed for which Team Coding steps.
  - You can still view the full raw text file in the text editor by clicking [icon] on the toolbar, or you can click [icon] to open the log folder to select a file to open.
  - You can select multiple cells in the grid and press **Ctrl+C** to copy only those entries to the clipboard. The entries will be copied to the clipboard in the same format as the log file.
- Toad now supports using personal access tokens with Visual Studio Team Services. Simply generate the token and then paste it into the login window when you log in to VSTS from Team Coding. For more information about generating a token, see https://docs.microsoft.com/en-us/vsts/integrate/get-started/authentication/pats.
- Team Coding now supports table rebuilds. A Rebuild Table option has been added to Team Coding Manager for table objects. When you click this option, it launches the Schema Browser, from which you can run the Rebuild Table Wizard (select **Rebuild** | **Table**). The table is automatically updated after you run the rebuild script.
- The Revision History grid of the Object Properties dialog has a new right-click option to **Open Revision in Editor**. This feature enables you to compile a specific revision back into your database, thus providing a path to restore old revisions easily.
- Support was added for cloning, and pulling and pushing between, distributed remote repositories from inside Toad, so that you no longer need to go outside Toad to perform these functions.
- Team Coding support was added for rebuilding tables from the Team Coding Manager, Schema Browser, and Editor.

# Automation Designer

- A *Running* status was added which, when a long running action is executed in the automation designer, notifies the user that the action is still running.
- Support was added for setting the encoding option at an action level:
  - Added encoding to the Generate Database Script and Generate Schema Script actions. Find this option under **Output** | **Scripts** | **Encoding**.
  - Added Encoding and Spool Encoding options for the Execute Script action under the DB Misc tab.

# Connections

- When connection colors are used, Toad combo boxes that display a list of connections now include the colors for each connection shown. These include:
    - Compare Data
    - Compare Databases
    - Compare Schemas
    - Compare Multiple Tables
    - Analyze All Objects (under **Options** -> **Stats Table and Copying**)
    - Trace File Browser (in the **Open trace file on database server** dialog)
    - Export File Browser (DB Compare mode)
    - Single Object Compare
    - Copy object to another schema
    - Data Subset Wizard

# Formatter

- The Formatter now uses less memory during formatting large lumps of SQL text.

- In a stacked named parameter list, whenever a parameter with a large values wraps its value to a next line, it will no longer trigger all other parameters to do so. In addition, text folds better on low right margins. Example:

```
p_partno => r.partno, p_synonym_of => r.synonym_of, p_value_lines => COALESCE
(r.value_lines, 0) + COALESCE (r.repl_value_lines, 0), Former output (5.307): p_
partno => r.partno, p_synonym_of => r.synonym_of, p_value_lines => COALESCE
(r.value_lines, 0) + COALESCE (r.repl_value_lines, 0), New output: p_partno =>
r.partno, p_synonym_of => r.synonym_of, p_value_lines => COALESCE (r.value_
lines, 0) + COALESCE (r.repl_value_lines, 0),
```

- Alignment has been added to "parameter = value" lists.

- Expressions between parentheses are formatted differently, more closely obeying the Expression and Parentheses formatter options. This is due to required internal formatter refactoring. You can mimic to original setting by selecting **Toad Options** | **Formatter** | **List Arrangements** | **Expressions** | **Parentheses options** = **1**, **2** or **3**, combined with **On Overflow** = **None** on that same page.

# Parser

- Support was added for SET SQLFORMAT.

- Support was added for custom analytic functions in PIVOT clause.

- The function DBMS_XMLGEN.GETXMLTYPE(query) was changed: If the parameter is a simple string, a syntax check will be done on that string.

# Code Analysis

- An "Overall Summary" section was added to the top of the Code Analysis HTML report, which contains the counts, run date, and ruleset used.
- A menu item was added to the context menu for rule violations that would allow the user quick access to edit the rule.
- The Code Analysis rule window now allows editing without the need to open a separate edit window.

## New Rules

The following new rules were added:

- Rule 2141 ("Make sure the given Schema Prefix name exists for all objects.")
- Rule 2142 ("Table names should be under N characters.")
- Rule 2143 ("When creating an index or a table then specific tablespaces should be used.")
- Rule 2144 ("When creating a table then a primary key should be created.")
- Rule 2145 ("Avoid using the listed data types.")
- Rule 5903 ("All queries (dynamic and fixed) must leverage bind variables for performance, security, and maintainability purposes.") will not flag simple comparisons with equal left and ride side such as 1 = 1 and 7 < 7 anymore.
- Rule 6702 ("No RETURN statement found in function.")
- Rule 6703 ("Replace IF ... CONTINUE by CONTINUE WHEN.")
- Rule 6705 ("An IF having ELSIF clauses should have an ELSE clause.")
- Rule 6709 ("ROWNUM found in a WHERE clause.")
- Rule 6711 ("Search literal following LIKE should contain wildcards _ or %.")
- Rule 6713 ("Isolated semicolon(s) found.")
- Rule 6714 ("Duplicate CASE WHEN entry found.")
- Rule 6715 ("COMPRESS or NOCOMPRESS specified more than once.")
- Rule 6724 ("Check on PL/SQL block and loop label matching.")
- Rule 6726 ("Consider replacing '(NOT) IN subquery' by '(NOT) EXISTS subquery'.")
- Rule 6727 ("NVL in a WHERE clause may disable the use of an index.")
- Rule 6731 ("A WHERE condition containing the (+) operator cannot be combined with another condition using the OR logical operator.")
- Rule 6740 ("Assigning variable to itself (A := A).") : New rule detecting assignments to itself (A := A).
- Rule 6748 ("Consider writing IF THEN CONTINUE as CONTINUE WHEN.")

# Enhancements from Idea Pond

The following is a list of enhancements requested by Toad for Oracle users on the Toad Idea Pond and implemented in this release.

The Idea Pond on Toad World is a site where you can submit your ideas to improve Toad and vote or comment on ideas submitted by other people. The Toad development team has always been driven by our customers, and the Idea Pond makes it easy for you to tell us what changes are most important. This site is free for all Toad customers.

| Enhancement | Link to Idea Pond |
| --- | --- |
| When creating a user script, there is no option to exclude directory grants. | Link |
| Centralize -invalid objects | Link |
| Export Dataset to default to and find XLSX files | Link |
| Dual Monitor Support | Link |

# Removed items

The following items were removed from Toad in this release:

- The following items were removed from Toad options. Toad will always behave as if the options were checked.
  - **Commit after every statement** option has been removed from features that contained it. If you must use this feature, you can edit the Toad.ini file to add **CommitAfterEachStatement=1** under [SETTINGS] to re-enable it.
  - The **Check for access to DBA** views option has been removed.
- The INI file as a connections export format has been removed. Connections only export to XML. You can still import from an INI file, however.
- The **Autocommit** icon and text has been removed from main status bar.
- The **Stay on Top** option has been removed from the Describe window. You can now right-click on the window and pop it in and out as needed.
- The Unix Job Scheduler and Unix Monitor have been removed from the interface, but are still usable through menu customization.

# Resolved issues

This section contains a list of the issues that were resolved in this release of Toad for Oracle.

# Toad for Oracle

These fixes include issues received from Toad beta and Forum users.

| Issue ID | Link (If from Forums) | Resolved Issue |
| --- | --- | --- |
| TOR-435 | | Session browser resets filters, they don't stay set. |
| TOR-477 | Link | Ctrl+B and Shift+Ctrl+B (comment/uncomment line) do not work in modal dialogs |
| TOR-480 | Link | Left/Right navigation keys do not filter Code Insight |
| TOR-487 | | Query to load packages to the Schema Browser slow in some cases |
| TOR-491 | | Compare current val option not working for sequences |
| TOR-1032 | | Error when running Health check with "FK Constraints with nonmatching column definitions" |
| TOR-1043 | | Cursor results showing numbers in scientific notation |
| TOR-1194 | | SQL Recall not saving Named SQL |
| TOR-1333 | | Export File Browser hanging |
| TOR-1744 | Link | Access Violation pasting large text in 64-bit |
| TOR-1816 | | Out of bounds after removing connections |
| TOR-1835 | | Invalid column suggestion for un-aliased subquery |
| TOR-1842 | Link | Ora-02248 after altering datafile in 12c non-pluggable database |
| TOR-1867 | | DBMS Output for PL/SQL Table (associative array) is not generated |
| TOR-1881 | | Syntax error occurred for dblink in this case. |
| TOR-2020 | | Entering single(s) quote into the check in/out comment box cause errors. |

| Issue ID | Link (If from Forums) | Resolved Issue |
|---|---|---|
| TOR-2042 | | Schema compare synonym bug |
| TOR-2092 | Link | Private synonyms going into wrong schema |
| TOR-2098 | | Invalid command to lock/unlock partition stats |
| TOR-2103 | Link | RAW datatype is incorrectly unsupported for unit test creation |
| TOR-2107 | Link | Search Match transparency results in difficult to read text |
| TOR-2112 | | Toad defaulting to TNS entries, even when LDAP connections are made |
| TOR-2116 | Link | Describe menu does not come to the front |
| TOR-2117 | Link | F4 does not always open DESC |
| TOR-2118 | Link | Ctrl+T causes AV |
| TOR-2122 | | Poor Performance of behind scenes Constraints Query |
| TOR-2127 | | Dropping a type with force option from schema browser does not work |
| TOR-2128 | | "Exact match" not working correctly in Object Search |
| TOR-2129 | | Can't connect from "create login record" window when using direct method |
| TOR-2135 | Link | Paste non-functional in Editor data grid |
| TOR-2138 | | Schema Browser bug in procedure/function query for pre-11g |
| TOR-2144 | | "ORA-12538: TNS:no such protocol adapter" opening workspace |
| TOR-2155 | | set define off in glogin.sql changes escaped characters to UPPERCASE |
| TOR-2161 | Link | Project Manager width not retained |
| TOR-2164 | Link | Object compare - next/previous difference option setting not being saved |
| TOR-2181 | | Primary/Secondary Instances showing incorrectly in Queue Table Ganeral Tab |
| TOR-2185 | | Oracle ODBC connection not working |
| TOR-2186 | Link | Ctrl+C and Ctrl+V not always functioning in SDI mode when Project Manager is open |
| TOR-2193 | Link | DB Links weren't being closed after testing |
| TOR-2209 | Link | Generated join conditions are incorrect |

| Issue ID | Link (If from Forums) | Resolved Issue |
|---|---|---|
| TOR-2211 | | ORA-12154 error when using Direct Connect and calling TSR or Auto Optimize SQL |
| TOR-2215 | | SQL*Loader sometimes not connecting |
| TOR-2219 | Link | Toad forms sometimes opening off-screen when in SDI mode |
| TOR-2224 | Link | Uncomment block does not work in Alter windows |
| TOR-2232 | Link | Code Insight not working for CTE with a union |
| TOR-2237 | | "An invalid character was found in text content" |
| TOR-2240 | Link | Package isn't split |
| TOR-2241 | | Explain Plan columns get reset on editor tab switch |
| TOR-2242 | Link | Words matching selected word not highlighted |
| TOR-2253 | | Improvement Program Window still displays on first launch/close of Toad with RESTRICTIONS=i install |
| TOR-2254 | | The Script Tab not showing NULL values |
| TOR-2263 | | Jump not enabled when Internet is restricted with RESTRICTIONS=i installation |
| TOR-2266 | Link | LIOOB when copying tables with Clobs and logged in as SYSDBA |
| TOR-2272 | | Session Browser doesn't use correct schema for Auto-Optimize |
| TOR-2276 | | Undo checkout is recreating table and therefore all data is lost |
| TOR-2277 | Link | Find Next not working |
| TOR-2280 | | Wrong "Min size" query if non-empty recyclebin |
| TOR-2283 | Link | Can't close Toad when session disconnected |
| TOR-2294 | Link | Rebuild Table fails without SELECT privilege |
| TOR-2308 | Link | Make Schema Compare more responsive |
| TOR-2294 | Link | Rebuild Table fails without SELECT privilege |
| TOR-2435 and TOR-2434 | Link | • Change the default for Spool encoding to ANSI<br>• Add support for setting the encoding option at an action level |
| TOR-2447 | Link | Extend the width of Foreign Column and Sequences in Data Generation |
| TOR-2313 | | Session adds itself to login recently used list every time it is established |

| Issue ID | Link (If from Forums) | Resolved Issue |
|---|---|---|
| TOR-2344 | Link | AV on closing SB or Editor after CLOB edit |
| TOR-2355 | Link | Macro with newline does not observe auto-indent option |
| TOR-2362 | | Object Search treating underscore as a word boundary character |
| TOR-2376 | | ESC to cancel query execution cannot be disabled |
| TOR-2382 | Link | File reopen menu inconsistencies |
| TOR-2391 | | Missing InMemory information for partitioned tables |
| TOR-2403 | | Custom colors in login window don't show in the grid |
| TOR-2421 | Link | AV sorting grid column |
| TOR-2431 | Link | Additional Editor opened unnecessarily |
| TOR-2441 | Link | Output window doesn't automatically scroll to the added line for TC messages |
| TOR-2443 | | Auto Replace activates on whitespace |
| TOR-2497 | Link | Reopen File menu is empty |
| TOR-2499 | | "One/Connection" and "One/Toad" Windows behavior options are not working for Describe window. |
| TOR-2502 | Link | Error due to "Enable FK Lookup" |
| TOR-2507 | Link | Custom dates from excel files don't preview in data import |
| TOR-2529 | Link | Add Schema dialog showing off screen in SDI mode |
| TOR-2537 | | Executing the Generated Query does not return results, but the same query returns results in the Editor. |
| TOR-2561 | | "send selected sync scripts" top panel button does not respect checkboxes below |
| TOR-2586 | Link | Editor hang editing text |

# QP5 (Quest Parser)

The following are fixes made to the parser, formatter, and Code Analysis rules.

| Issue ID | Resolved Issue |
|---|---|
| TOR-2106 | **General:**<br>Fix: Possible stack overflow on very deeply nested code. This will now be handled gracefully.<br>**Code Analysis:**<br><br>• Fix: Rule 4001 ("Avoid using GOTO out of a loop.") did not check that the GOTO actually goes out of the loop. |

| Issue ID | Resolved Issue |
|---|---|

- Fix: Rule 6806 ("Use native execution for PL/SQL that is compute intensive and has little SQL.") : This rule has been removed because when it raises it will raise forever. That nagging behavior cannot be stopped by compiling natively because at this time Code Analysis cannot get to know the actual mode of compilation.

- Fix: Rule 2102 ("Avoid comments that are not explanatory within the body of the code.") : This rule has been removed because the criteria are too vague, too subjective.

**TOR-2093**

**Parser:**

- Fix (-QP-2599-) : MERGE statement: A data-source in the USING clause can now be of the form identifier.identifier@dblink.

- Fix (-QP-2615-) : Support for SQL*Plus multi-line comments following the statement at the right.

  Example:@myproc /* some comment*/

  In Sql*Plus the /* must be followed by a space

- Fix (-QP-2604-) : CREATE TABLESPACE: LOGGING could not be used together with FORCE LOGGING.

**Formatter:**

Fix (-QP-2628-) : Since version 5.311 a end-of-line comment was positioned one space further to the right, leaving two spaces between the statement and the comment. This has be brought back to one space.

Example:

```
p_partno => r.partno, p_synonym_of => r.synonym_of, p_value_lines =>
COALESCE (r.value_lines, 0) + COALESCE (r.repl_value_lines, 0), Former
output (5.307): p_partno => r.partno, p_synonym_of => r.synonym_of, p_
value_lines => COALESCE (r.value_lines, 0) + COALESCE (r.repl_value_lines,
0), New output: p_partno => r.partno, p_synonym_of => r.synonym_of, p_
value_lines => COALESCE (r.value_lines, 0) + COALESCE (r.repl_value_lines,
0),
```

**Code Analysis:**

- Fix (-QP-2299-) : Rule 4002 ("Avoid using a backward GOTO.") was rewritten to take advantage of QP5 XPath.

- Fix (-QP-2306-) : Rule 5804 ("Ensure SELECT COUNT( * ) is being used to check the number of rows and not merely the existence of rows.") was rewritten to take advantage of QP5 XPath.

- Fix (-QP-2579-) : Rule 2831 ("Use PLS_INTEGER instead of INTEGER or equivalent subtypes.") no longer raises for CREATE TYPE.

- Fix (-QP-2600-) : Rule 4503 ("Calls to DBMS_ADDM require optional OEM packs for DIAGNOSTIC + TUNING.") : DBMS_ADM renamed to DBMS_ADDM wherevever applicable.

- Fix (-QP-2601-) : Rule 4204 ("Avoid IF when assigning values to boolean variables.") : Example code fixed.

| Issue ID | Resolved Issue |
|---|---|

- Fix (-QP-2612-) : Rule 4537 ("Consider using a CONTINUE statement to eliminate a backward GOTO to the beginning of the loop.") was renamed from "Utilize the CONTINUE statement rather than a GOTO or an extra level of conditional logic within a looping construct".

**TOR-2217**

**Formatter :**

Fix (QP-2534) : Fix (QP-2689) : Due to a required change all list parentheses will now figure inside their list node. Formerly, they were positioned around the list. As a result, about all list constructs will now obey the List Arrangement formatter options, there should not be any "hard coded" lists anymore. Hence the layout of several lists may be a bit different Work on lists is still in progress on the short term.

**Code Analysis:**

Fix (QP-807) : [ Rule 4403|http://qp5/do/view/QP5/CodeAnalysisRule4403] ("Avoid unlabeled nested blocks.") : Converted to XPath expression.

**TOR-2239**

- Fix (QP 2678) : Support added for user defined analytic functions.
- Fix (QP 2714) : Parse error on Json_objectagg(KEY identifier ...)

**Formatter changes with respect to version 5.319:**

- About all lists now obey the "list arrangement" settings; many infrequently used list resort under "Other" lists.
- Less folding if folding not required, especially single names between parentheses are now output on a same line.
- More SELECT statements will be formatted on a single line when that option is selected.
- SELECT list aliases: when on a same line than room (one indent unit) is left between select list item and index;this should result in a more transparent statement.

- Other enhanced formatting:

CREATE INDEX

CREATE TABLE: data types were not aligned

PARTITION clause

EXECUTE Code Analysis:

Fix (QP 2648) : Rule 5809 ("Ensure elements in the SELECT list (either columns or expressions) are qualified by a table/view name when needed.") This rule will hit in the following cases (subquery and PL/SQL variable cases):

```
SELECT * FROM tab1
  WHERE EXISTS (SELECT * FROM tab2
                    WHERE col2 = 10);    -- hit on col2


<<blck>>
DECLARE
  name   VARCHAR2 (100);
BEGIN
  SELECT
    name,   -- hit
    a,
    blck.b
  INTO e, f
  FROM t;
END;
```

**TOR-2268**

**Parser:**

Fix (QP 2766) : Packages: Chunking fixed when the keyword AS is used in a CAST function.

**Formatter:**

Fix (QP 2768) : Formatter fails to align values in VALUE clause.

**Code Analysis:**

- Fix (QP 2735) : Rule 2746 ("A CASE statement should have an ELSE clause") Rule type, category and severity were missing, causing the rule not to appear in the Toad rule universe.

- Fix (QP 2735) : Rule 6748 ("Consider writing IF THEN CONTINUE as CONTINUE WHEN.") Rule type, category and severity were missing, causing the rule not to appear in the Toad rule universe.

**TOR-2297**

**Formatter**

- Fix (QP 2788) :

- Distance between parameters and data types fixed to become exactly one indent (from one indent + one space). This change is due to a required major refactoring of the parameter declaration formatter code.

| Issue ID | Resolved Issue |
|---|---|

- Stacked parameter declaration lists now have the IN, OUT, INOUT and NOCOPY keywords of their parameter declarations justified.

**Code Analysis**

- Fix (QP 2800): Rule 5914 ("Use untransformed column values in the WHERE clause.")
  - Speedup (around 70 times) fixing possible multi-second delays.
  - Parameter specifications were not taken into account.
- Fix (QP 2786): Rule 5920 ("Apply the invoker rights method to all stored code that executes dynamic SQL")
  - Speedup (around 70 times) fixing possible multi-second delays.

TOR-2352  **Code Analysis**

Fix (QP 2304) :

Rule 4806 ("Avoid use of unreferenced FOR loop indexes.") RULE REMOVED.

Rule 2746 ("A CASE statement should have an ELSE clause") : Topic text added.

Rule 2757 ("A CASE expression should have an ELSE clause to avoid it returning NULL") : Topic text amended.

Rule 5920 ("Apply the invoker rights method to all stored code that executes dynamic SQL") : Example code added.

# Known issues

The following is a list of issues, including those attributed to third-party products, known to exist in this release line at the time of the current release.

## General known issues

| Known Issue | Issue ID |
|---|---|
| Toad's help cannot be opened from an installation path that contains Unicode characters. | 72966 |
| If you check "Indexes" on the Scripts tab for snapshots, then the primary key for the snapshot will be included in the script, even though the CREATE MATERIALIZED VIEW statement implicitly creates this primary key.<br><br>Toad currently does not differentiate between indexes created explicitly on the snapshot and indexes created automatically when the snapshot is created.<br><br>*Workaround:* If you are running the generated script to recreate the snapshot, then you can simply ignore the error that occurs when the script tries to recreate the primary key index for the snapshot. If you do not normally create indexes on snapshots, then you can uncheck "Indexes" when generating the snapshot script. | N/A |
| If you use 11g Oracle ODP.NET client or any other client that does not have the oci.dll in the BIN directory, Toad has the following problems:<br><br>1. Client shows as invalid<br><br>2. Client version is not detected<br><br>3. As a result of #2, columns of the following datatypes are not shown in the Schema Browser table data: CLOB, BLOB, NCLOB, XMLTYPE, TIMESTAMP, INTERVAL, BINARY_DOUBLE, and BINARY_FLOAT | N/A |
| Debugger<br><br>If there is an exception during debugging on a 10Gr2 or greater database, REFCURSOR output and DBMS output will not be available when debugging is completed. This is due to the target session not being available.<br><br>*Workaround*: To see REFCURSOR output and DBMS output, execute the procedure without the debugger. | N/A |
| Connections<br><br>While Toad supports LDAP connectivity, some features of Toad depend on tnsnames.ora file to operate correctly, such as Toad Script Runner (TSR). | N/A |

| Known Issue | Issue ID |
|---|---|
| **Schema Browser**<br><br>Sometimes after pressing "Compile invalid objects", you may get ORA-20000, ORA-06512, or ORA-06512 errors. This could mean that you do not have the privileges to compile the object, but it also happens when the schema contains a package body that does not have an associated spec.<br><br>*Workaround:* Look in the schema that you are trying to compile to see whether there are any orphan package bodies. If it is your own schema, then do:select * from user_objects o1 where object_type = "PACKAGE BODY" and not exists (select "x" from user_objects o2 where o2.object_name = o1.object_name and o2.object_type = "PACKAGE") Then drop any orphan package bodies that are found. | N/A |
| **Virtualization**<br><br>An access violation error may display when you close Toad in a Citrix XenApp environment. | 76354 |
| **Import/Export**<br><br>Constraint scripts from Export DDL do not contain the "using index" or "tablespace" clause. | 59228 |
| **Data Modeler:**<br><br><ul><li>Generation of HTML reports of large diagrams may fail during generation of an image of the ER Diagram.</li><li>Comparison of large models may consume too much memory.</li></ul> | N/A |

# Data Grids known issues

| Known Issue | Issue ID |
|---|---|
| You may receive an "ORA-00902 invalid datatype" error when editing an object, nested table, or varray data if you have redefined the data type for that data during the current session.<br><br>*Workaround:* If you redefine an object type, nested table, or varray and then need to edit data in a table based on that type, end your current connection and begin a new one. | N/A |
| Full table data is not displaying in the live data grid (results from F9) if the data contains "zero" characers (ACII 0). In this case, all data after the zero character will not show in the grid.<br><br>*Workaround*: Double click on the data cell in the data grid to view full contents of data in a popup editor. | |

# Code Analysis known issues

| Known Issue | Issue ID |
|---|---|
| Saving results to a database: When dealing with nested procedures, Code Analysis can only insert run data from procs one level deep. | N/A |

| Known Issue | Issue ID |
|---|---|
| Saving PL/SQL results to a database may fail or save invalid data to the database for invalid PL/SQL objects. *Workaround:* To ensure PL/SQL results are saved to the database correctly, verify the validity of all objects before running Code Analysis. | N/A |

# Editor known issues

| Known Issue | Issue ID |
|---|---|
| Toad errors when you query on a field of Oracle collection types. *Workaround:* Execute using SQL*Plus. | 64373 |
| When spooling to an unpinned output window, the window becomes unresponsive and errors are given when Toad is closed ("Canvas does not allow drawing"). *Workaround:* Keep the output window pinned. | 68523 |
| If you use a non fixed-width font, the results are misaligned in the of Script Output tab in Editor after executing a SQL script. *Workaround:* Go to Options | Scripts and select a fixed-width font for script output. | 62234 |

# Session Browser known issues

| Known Issue | Issue ID |
|---|---|
| The Program name in the Session Browser may be blank or may be the full path to the executable instead of just the executable name. This depends on the Oracle client, not on Toad. | N/A |
| In RAC databases, version 10.1.0.3 (and possibly other 10.1 versions), the query used to populate the "Current Statement" in the Session Browser fails with the following error: Runtime error occurred: 12801 (ORA-12801: error signaled in parallel query server PZ99, instance <instance name> ORA-01008: not all variables bound) This problem does not occur in Non-RAC environments. *Workaround:* Clear the "Use RAC Views" checkbox, and log into the appropriate instance of the database, if necessary. | N/A |

# Team Coding known issues

| Known Issue | Issue ID |
|---|---|
| Creating a new revision or attempting to force a check-in to Visual Studio Team Services may result in a "404: Not Found" error. The current version of Team Foundation Server used by | N/A |

| Known Issue | Issue ID |
|---|---|
| Visual Studio Team Services compares the source being uploaded with the source already in the repository. If the source has not changed, it may incorrectly return an error rather than allowing the forced revision. This appears to be a Microsoft issue. As a result, these two commands may fail. | |
| When using the Team Foundation Server internal client and Team Foundation Server 2012 or 2013 alternate Team Project Collections, workspaces created outside of Toad are not visible from within Toad. A workspace may be created from Toad by clicking the 'New' button during the Team Foundation Server log in.<br><br>This is not an issue when using the Team Foundation Server external client. | **114334** |
| Team Coding is disabled for mixed-case object names. | N/A |
| Team Coding and SourceSafe:<br><br>• Integration via the SCC API is available but not recommended for SourceSafe 6.0<br><br>• SourceSafe 5.0 ignores the "Force revision" flag and "Create a new revision for existing objects" option when exporting. | N/A |
| With CVS, Toad may fail to retrieve the list of projects for you to select from in the CVS browser or in the Code Control Groups configuration.<br><br>*Workaround:* See "Missing CVS\Entries File Error" in the online help. | N/A |
| Team Coding and Clearcase: Dynamic Views are not supported via SCC interface. Snapshot Views must be used instead. (Rational case ID v0830629, Rational Defect # CMBU00053934) | N/A |

# Unicode known issues

| Known Issue | Issue ID |
|---|---|
| The following features in Toad do not support Unicode:<br><br>• ASM Manager<br><br>• Export File Browser<br><br>• Hex Editor<br><br>In addition, Java itself does not allow Unicode class names or file names. This is relevant to the Java Manager, Editor, and Schema Browser. | N/A |
| Editor options to highlight object names may not work for object names that contain Unicode characters. | N/A |
| Script Execution in Editor: Error offset can be incorrect when running scripts with multi-byte object names. | N/A |
| XML (Plain) format creates bad XML if Unicode string values and Unicode column names are exported through Export Dataset. | N/A |
| Import mapping for Unicode characters is incorrect if the characters are not a fixed width (such as Korean). | 63221 |

| Known Issue | Issue ID |
|---|---|
| In Team Coding, objects with Unicode *contents* are supported, objects with Unicode *names* are not. Supported Version Control Providers do not support Unicode names. | N/A |

# Third-party known issues

| Known Issue | Issue ID |
|---|---|
| Help<br><br>(Affects the 64-bit version of Toad only)<br><br>If IE9 is installed, clicking a link in the Help file may crash Toad 64-bit, even if IE9 is not the default browser.<br><br>*Workaround*: Users who have IE9 installed can open Help from outside of Toad. | N/A |
| ODAC<br><br>ODAC does not support Unicode in XMLTYPE (editing of XMLTYPE data is not supported). Querying of XMLTYPE with binary storage will lead to an error. | 62654 |

# System requirements

This section contains the hardware, software, and privileges required to run Toad for Oracle, as well as the database and virtual environments that Toad for Oracle supports.

# Hardware requirements

| Requirement | Details |
| --- | --- |
| Memory | • 1 GB RAM - Toad for Oracle 32 bit<br>• 2 GB RAM - Toad for Oracle 64 bit<br><br>**NOTE:** The memory required may vary based on the following:<br><br>• Applications that are running on your system<br>• Size and complexity of the database<br>• Amount of database activity<br>• Number of concurrent users accessing the database |
| Hard disk space | • 120 MB - Toad for Oracle 32 bit<br>• 150 MB - Toad for Oracle 64 bit |
| Operating system | • Windows Server 2008 R2 (64-bit) - 2 CPU required<br>• Windows 7 (32-bit and 64-bit)<br>• Windows 8 and 8.1 (32-bit and 64-bit)<br>• Windows Server 2012 (32-bit and 64-bit) - 2 CPU required<br>• Windows Server 2012 R1 and R2 (64-bit) - 2 CPU required<br>• Windows Server 2016<br>• Windows 10 |

# Database requirements

| Requirement | Details |
| --- | --- |
| Database client | An Oracle client must be installed and configured on the system where you are running Toad. The following are supported:<br><br>• Oracle Client or Instant Client 10.2.0.5<br>• Oracle Client or Instant Client 11.2.0.1/11.2.0.3<br>• Oracle Client or Instant Client 12c Release 1 and 2<br><br>**NOTE:** You must use the 32-bit version of Toad with the 32-bit Oracle client, and the 64-bit version of Toad with the 64-bit Oracle client. |
| Database server | **Oracle versions**:<br><br>• 10g R2<br>• 11g, 11g R2<br>• 12c Release 1 and 2<br><br>**Exadata:**<br>Toad has been tested on Oracle Exadata 5.0 running Oracle database 12.1.<br>**IMPORTANT:** It is recommended that your client version be of the same release (or later) as your database server. This is an Oracle recommendation to prevent performance issues. |
| Cloud database service | Oracle Database as a Service on Amazon EC2 and Oracle Cloud |

# Network

Internet Protocol Version 6 (IPv6) is being adopted by the US Federal Government and industries around the world. In its most basic format, the new protocol uses 128-bit addresses instead of 32-bit addresses, which are used by the current IPv4 to route packets over the Internet. Toad for Oracle features, such as FTP, access the Internet through third-party vendors that are IPv6 compliant, such as /nSoftware's IP*Works. For access to Web sites by way of the Toad Online window, Toad simply invokes the user-defined or default Web browser.

# Additional requirements

| Requirement | Details |
| --- | --- |
| Additional Software | • Microsoft Internet Explorer 6.0 or later (to view video from the **Jump** list within Toad, and to view the product documentation in HTML format).<br>• Microsoft Office 2016 and recent earlier releases are supported for Word and Excel output.<br>• Adobe Acrobat Reader 7.0 or later (to view the product documentation in PDF format).<br>• Microsoft .NET Framework 4.0 to support the Toad for Oracle Editions Installer. |

# Virtualization support

| Type | Details |
| --- | --- |
| Application virtualization | Citrix® XenApp |
| Desktop virtualization (VDI) | Dell™ vWorkspace™ 7.0 has been tested. |
| Server virtualization | Oracle VM 3.1 has been tested.<br>VMware ESX Server 3.5, 4.0, and 5.5 have been tested. |

**NOTE:** Toad may work in virtualization environments other than the ones listed.

# Windows Privileges

In order to install and run Toad, make a connection, and do basic operations, you must have the following privileges.

| Operating System | Requirements |
| --- | --- |
| Windows 7 | • Read access to the Oracle client folder<br>• Read/write privileges on the Oracle Home directories that you use for your connections |
| Windows 8 and later<br>Windows Server 2012 and 2016 | • Read access to the Oracle client folder<br>• Read/write privileges on the Oracle Home directories that you use for your connections |

**NOTE:** Other functionality in Toad may require additional privileges.

# Product licensing

### To activate a trial

1. Go to the trial download web page: https://www.quest.com/products/toad-for-oracle/software-downloads.aspx, accessed through the product page.

2. Select the Toad for Oracle Edition that you want to try.

3. Log in to your account or register.

4. Accept the license terms.

5. Download the trial file.

### To activate a purchased commercial license

1. Go to the Quest Support website: https://support.quest.com/

2. Type the name of the product that you want to activate in the **Enter your product to find support** field.

3. Select **Download New Releases**.

4. Download the installer file.

**NOTES:**

- License keys compatible with Oracle 9.7 and earlier versions are no longer supported.

- Only the newer 48-character license keys are supported.

- If you have an older license type, the Editions installer points you to the license web page where you can update it.

# Getting started with Toad for Oracle

Toad for Oracle is distributed in the Toad for Oracle 2018 Editions at https://support.quest.com/download-product-select.

# Upgrade and installation instructions

Please refer to the Toad for Oracle *Installation Guide* at https://support.quest.com/technical-documents for installation and upgrade instructions.

Upgrades for Toad for Oracle can install side-by-side with any previous versions you have installed. You can run the new and previous versions concurrently.

The first time you run the new version of Toad, the settings files from the previous version are automatically imported. To start with a clean set of user files, go to **Utilities | Copy User Settings**, then select **Create a clean set of user files from the base installation**.

> **NOTE:** Toad supports importing settings only if the new version is within two releases of the previous version. If your versions are more than two releases apart, you need to install an intermediate version to successfully import the files.

# User instructions

To get started with using Toad for Oracle, see the *Guide to Using Toad* at https://support.quest.com/technical-documents. For detailed information about any Toad window or feature, see the online help, which can be accessed from the **Help** menu.

# Additional resources

Additional information is available from the Toad for Oracle community on Toad World:

https://community.toadworld.com/products/toad-for-oracle

# Globalization

## Global Operation Statement

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. In this release, all product components should be configured to use the same or compatible character encodings and should be installed to use the same locale and regional options. 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.

This release has the following known capabilities or limitations: Toad 13.0 is a Unicode application. As such, it has native support for any Oracle Unicode character set, such as UTF8 or AL32UTF8. There are some features in Toad which use or invoke Oracle Utilities or applications which are not themselves Unicode applications. Their functionality is therefore limited to the character set of the client on which Toad is running, and NLS_LANG must be carefully set to match the Windows character set

We have also observed issues with US7ASCII when used with non Latin characters.

The UI is localized into simplified Chinese. Reports are localized to simplified Chinese and 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.

## Contacting 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