Toad® for Oracle 13.2

Release Notes

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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

Toad World is a unique and valuable resource available to all Toad users. Toad World provides forums, blogs, videos, product information, Beta releases (when available), and Trial downloads for Toad products. Visit Toad World at: https://www.toadworld.com.

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 comment on other 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 13.2 includes component and requirement upgrades. These upgrades address security vulnerabilities previously identified in the third party component.

About Toad® for Oracle® 2019 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:

Edition	Licensed
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 2019 Editions release notes at:
https://support.quest.com/technical-documents

New Features and Enhancements

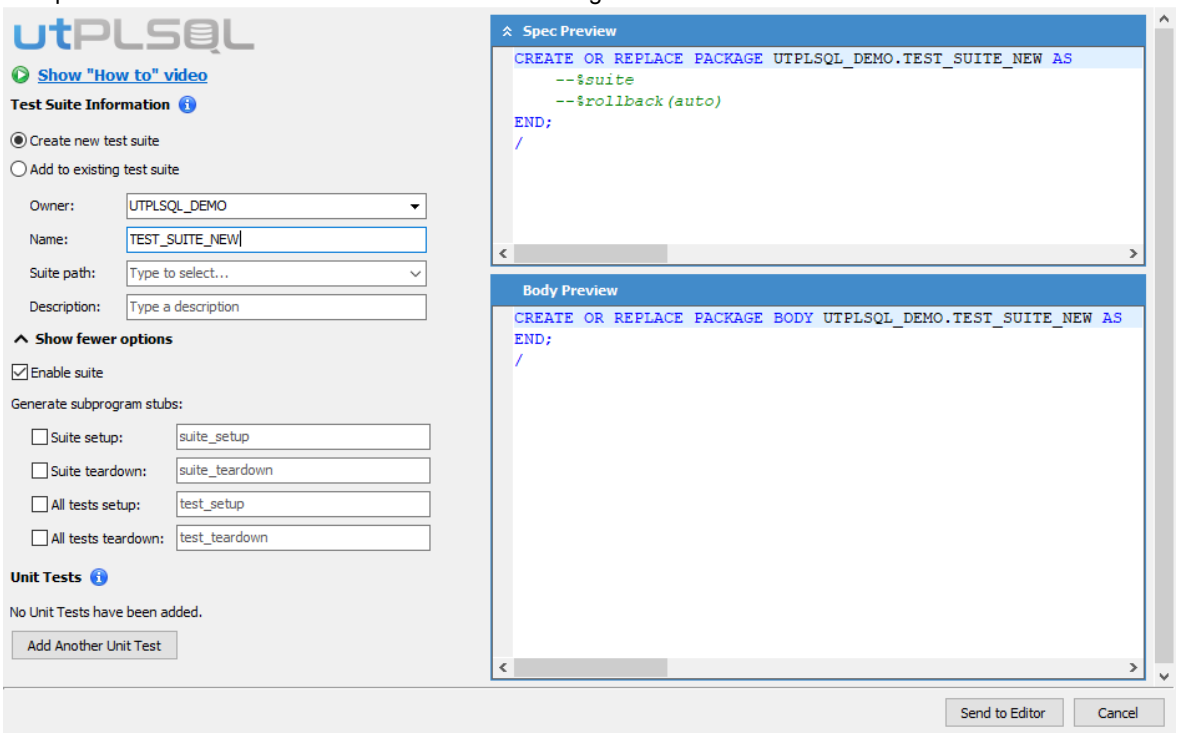
Toad for Oracle 13.2

Unit Testing

This release of Toad for Oracle includes a new feature that allows you to easily create unit tests to test your PL/SQL code. Testing PL/SQL objects, such as packages and procedures, is an integral part of the agile development process and helps ensure that your code functions as designed.

Toad's unit testing feature is built on the utPLSQL open source framework.

- A new window guides you through the process of defining a test suite containing one or more unit tests. This process creates suite and test stub code which is generated and sent to the Editor.



- In Editor, you can modify the code, add input values, edit setup and teardown subprograms, and finalize your unit tests.
- A Unit Test Manager allows you to view, access, and run existing unit tests. Test suites and unit tests are displayed in a tree view. From the Unit Test Manager, you can send tests to the Editor.

- Test and suite configuration information is stored within the tests and test suites in the form of annotations. The utPLSQL framework uses these annotations to identify and run tests.
- You can run unit tests from the Editor or from the Unit Test Manager.
- You can select one or more reports to be generated during the run. Reports fall into one of two categories:
    - **Run Results** — Reports on test pass/fail status.
    - **Code Coverage** — Reports on the percentage of tested object code covered (i.e. executed) by your tests.

  Note: Reports are available in many formats suitable for consumption by modern CI/CD and code quality systems.

Connections

Connection Toolbar Buttons

Toad now allows you to rearrange connection bar buttons by drag and drop. Right-click on Toad's toolbar and choose Customize. When the customization dialog is shown you can drag and drop any menu item or toolbutton to reposition it, including the buttons for each active connection.

Database Login Window

In the Database Login window, if you display connections in tabs (e.g., Tabbed by User), you can now filter the tabs. This is useful if you have a large number of connections.

- To filter the tabs displayed, right-click a tab and select **Filter Tabs**. Then enter a text string in the search box. The filter persists while the Database Login window is open.

Export Encrypted Connection Passwords

Toad now allows you to include connection passwords when exporting Toad connections. Encryption is applied to protect the passwords. A master password is used to decrypt when importing the connections from the export file.

Filter Connection Tabs

You now can easily filter tabs to display less connections in **New Connection**. Right-click any connection tab and select Filter Tabs.

Database and Data Management

ASM Flex Disk Groups

The **Create Disk Group** window now supports Oracle ASM flex disk groups. **Create Disk Group** is available from the **ASM Manager** (**Database | Administer | ASM Manager**).

Note: Flex disk groups are available in Oracle Database 12c Release 2 and newer.

Compare Databases

When comparing single objects (**Database | Compare | Single Objects**), you now have the option to compare the triggers on the table. To compare triggers, select the Options tab and then select the **Include Triggers** check box.

When comparing data (**Database | Compare | Data**), Toad now supports BLOB, CLOB, NCLOB, and XMLTYPE data types. You must have the EXECUTE privilege on the DBMS_CRYPTO package.

Note: The BLOB data type is not supported for synchronization using a sync script. You must use the Compare Data window.

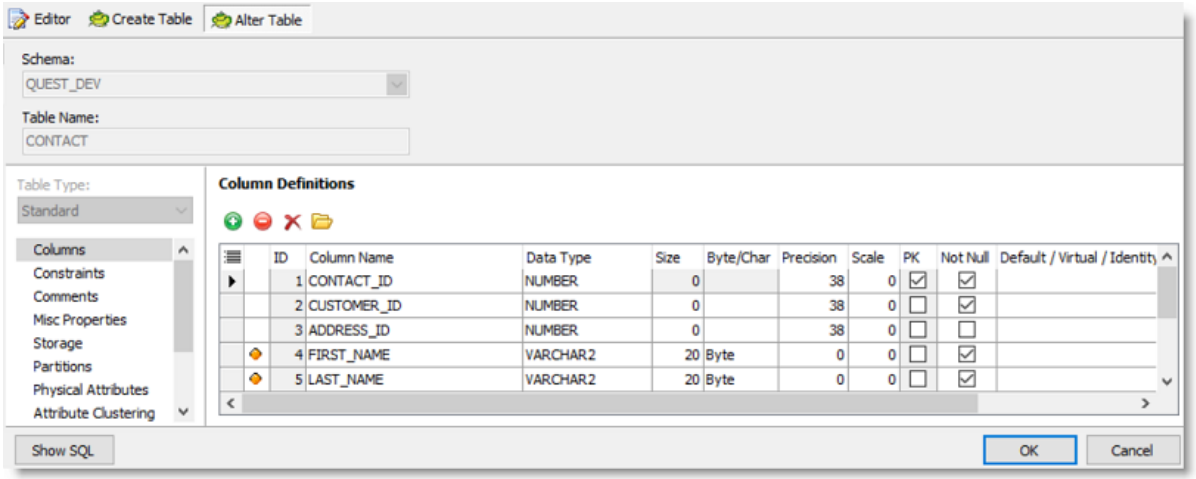
Compare Schemas

Improved handling of mismatched table columns. When a table in the target schema differs from a table in the source schema by name alone, i.e. datatype, scale, precision, and column position are the same, the sync script will default to rename the column. You can override the rename and opt to drop/create the column, instead, when viewing the **Difference Details**.

Create Object Window Enhancements

This release includes an enhanced Create (Alter) Object window. New layout and appearance make this window easier to use while functionality remains unchanged. Review the following details:

- Each window includes a toolbar for frequently-used actions. Where applicable, buttons are now intuitive icons for easy identification.
- The tabs have been replaced by a streamlined panel on the left side where applicable categories are listed. Select a category on the left-hand side to display options on the right-hand side.
- Windows that were modal, such as the Create User window, are now modeless.
- The format follows enhancements made to other windows in Toad, such as Compare Schemas.



DBMS Auto Index

Support for Oracle's DBMS_AUTO_INDEX package has been added. This feature allows Oracle to automatically create indexes as needed to achieve optimal performance by analyzing user queries.

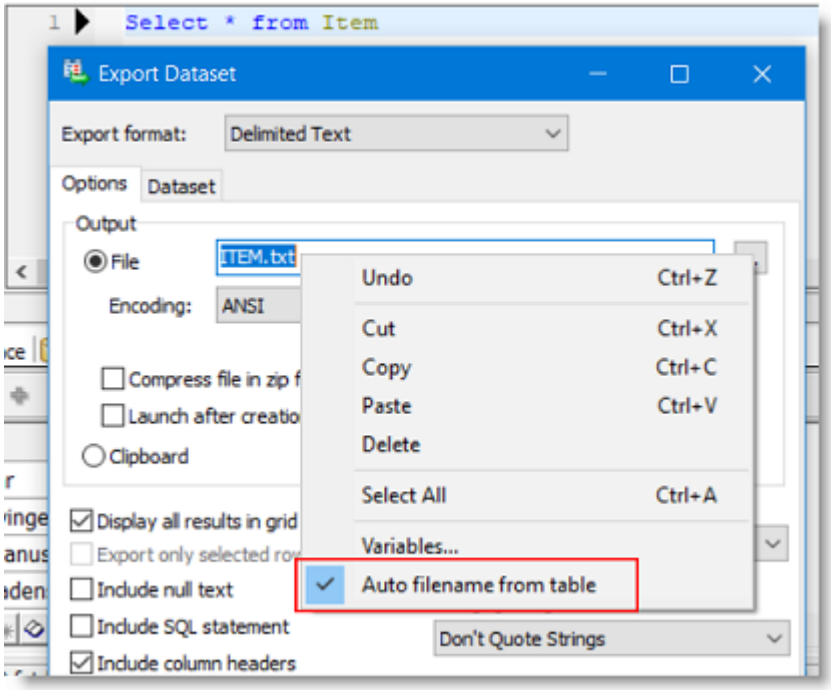
Note: DBMS_AUTO_INDEX is available on Oracle Database 19c, Enterprise Edition on Engineered Systems and Exadata Cloud Service, only.

Export Dataset

Use Table Name as Filename

When you export data from a data grid, the Export Dataset dialog allows you to enter a name for the export file. You can now specify whether or not to automatically create a file name based on the name of a table in the query.

- To enable this option, right-click within the **File** field and select **Auto filename from table**.



- When this option is disabled, the last export file name is used. The option is disabled by default.

Export to XML as Non-Encoded Data

Now when exporting data to XML, if you select an encoding method other than ANSI, certain data is not encoded. Specifically, all the characters listed in “Non-restricted characters” in Valid characters in XML will be exported as clear text instead of using the "&#*nnnn*;" encoding format.

Export DDL

Include Sequences Used by Triggers

When exporting DDL for a table, if you select to include triggers, you now have the option to include the sequences used by the triggers.

- In the Export DDL dialog (**Database | Export | Export DDL**), select the Script Options tab and then the Tables tab. After selecting **Triggers** on the Tables tab, select **Sequences used by triggers**.

Hybrid Partitioned Tables

Toad supports hybrid partitioned tables in the following areas:

- Script Generation
- Create/Alter Table windows
- Compare Schemas

Note: Hybrid partitioned tables are a new feature of Oracle Database 19c.

Schema Browser

View Objects without Segments

When viewing Tablespaces in the Schema Browser, the Objects tab now includes a new option to view objects that do not have segments. Because Oracle does not always create a segment for a new object until a row is added, these objects do not display in the Segments list. This new option allows you to display a list of objects without segments.

- In the Schema Browser, when viewing Tablespaces, select the **Objects** tab and then select **Objects without Segments** from the drop-down list.

Resetting Sequence Value

When altering a sequence (right-click, Alter) you can reset the sequence back to its start value by checking **Reset** and clicking OK.

Copy Table Data

XMLTYPE is now supported when copying data from one table to another. Copy Table Data is accessible from the Schema Browser's right-click menu, **Data | Copy to another schema**, and as an action in the **Automation Designer**.

Sensitive Data Awareness and Protection

Expanded Sensitive Data Detection

New rules have been added to extend sensitive data detection to common European Union personal data formats.

Copy Default Policies to Other Rules

You can configure default policies once and apply them to other rules of the same Category or Severity.

Identify Sensitive Data in Grids

When **Sensitive Data Awareness** is enabled, Toad identifies sensitive data columns in grids used to display table/view data and query results.

Samples of Matched Values

When viewing rules (**View | Toad Options | Sensitive Data | Search Rules**) all built-in rules (RuleID < 4000) display a list of sample values the rule will match.

Automation Designer

Analyze Objects Action

Updated GUI is easier to use and still fully featured.

General

Workspace Enhancements

Display the **Workspaces** toolbar to view the following enhancements:

- You can now rename the current saved workspace.
- Workspaces are now sorted alphabetically, by default. You can toggle this feature on or off in **Options | Toolbars/Menus | Toolbars**.

Migrate Tasks in the Task Scheduler

You can now easily migrate tasks scheduled to run using a previous version of Toad.

1. Select **Utilities | Task Scheduler** to open the Task Scheduler.
2. Tasks that are specified to run using a previous version of Toad are marked in red text. To migrate these tasks to run using your current version of Toad, right-click the task and select **Migrate Tasks**.

Schema Chooser Enhancement

Right-click on Toad's schema chooser control to view the following enhancement:

1. From the **Users to Load** sub-menu you can opt to **Hide Oracle-maintained** schemas on Oracle Database 12c and newer. Oracle-maintained schemas are internally managed by the database and identified by having a value of 'Y' for the ORACLE_MAINTAINED column in ALL_USERS.

You can find the most up-to-date list of new features for this release in the *Toad for Oracle Release Notes* found at: https://support.quest.com/toad-for-oracle/technical-documents.

Enhancements from Idea Pond

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

The Toad for Oracle 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 users. The Toad development team has always been driven by Toad customers, and Idea Pond makes it easy for you to tell us what changes are most important.

- To visit Idea Pond, **log in** to the Toad Forums at: https://forums.toadworld.com. Select the **Categories** tab. Then click **Idea Pond** in the **Toad for Oracle** category.

Enhancement	Issue ID	Link to Idea Pond
You can now include elapsed time or row count in the spool SQL output. In the Spool SQL window, click the "Options" button and select your options from the drop-down list.	TOR-2681	link
Editor: Matching parentheses ( ) and brackets [ ] are now highlighted when your cursor is placed anywhere within the range of the opening and closing brackets. If a bracket does not have a match, it is highlighted red (by default). You can customize highlighting in Options | Editor | Font and Styling.	TOR-2682	link

Discontinued Features

Knowledge Xpert. Knowledge Xpert is no longer available on Toad World. Beginning with release 13.1, Toad components no longer reference the online Knowledge Xpert.

Ask a Question. The **Go to Toad World** and **Ask a Question** commands on the Toad World toolbar have been replaced. To ask a question, click the **Forums** toolbar button to go directly to the forum. To go to Toad World, click the **Forums** or the **Browse Blogs** toolbar buttons. You can also use the Help menu: **Help | Toad World | Forums**. This change is found in Toad for Oracle 13.1 or later.

Integration with Toad Intelligence Central. Beginning with Toad for Oracle 13.1, Toad no longer provides integration with Toad Intelligence Central. The Toad Intelligence Central window is not available and you cannot publish scripts, files, Code Analysis results, and other resources to a Toad Intelligence Central server using Toad for Oracle. You cannot connect to Toad Intelligence Central through Toad for Oracle.

Resolved issues

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

Toad for Oracle 13.2

The following list of resolved issues includes issues received from the Toad for Oracle forum and Toad Beta users.

Issue ID	Link to Forum Post	Resolved Issue
TOR-822		Generated block produces variable names exceeding 30 chars
TOR-1176		Can't use Korean font
TOR-1263	link	Breakpoint positions are lost when formatting
TOR-1831	link	Impossible to CTRL+Click on package name
TOR-2105		Toad 12.12 menu font size does not change with Windows Control Panel display setting at 125%
TOR-2249	link	SQL using ANSI join within PL/SQL doesn't execute when selected
TOR-2254		The Script Tab not showing NULL values
TOR-2603		overloaded procedure always selects the first instance when executing from the Schema Browser
TOR-2617		Default schema does not work in Editor as it used to.
TOR-2647		SVN: object fails if the comment matches the VCS Project name
TOR-2661		Rule 6405 is not triggered
TOR-2671		LIOOB querying tables with nested column types
TOR-2731	link	Format Case Only replaces tab with space
TOR-2789		Opening Saved SQL from SQL Recall no longer displaying the name of the Saved SQL
TOR-2853		TSR prompts for password if it contains a space
TOR-2911		Connection colors not changing in windows - requires restarting Toad
TOR-3013		show pdbs command does not work in F5

Issue ID	Link to Forum Post	Resolved Issue
TOR-3056		" Alt+/" not working for Upper case
TOR-3068		ORA-01017 error occurred when Toad recovers after crashing and reconnects.
TOR-3080		Cannot modify menu shortcut if it conflicts with another command
TOR-3106		Can't type € into the Toad Editor, Schema Browser, Import Filter, stc.
TOR-3114		When closing password prompt for connection, connection window closes
TOR-3128		Error and AV when altering a table when not restricted through Toad Security
TOR-3130		Compare Objects - Ignored Object Names cause false differences
TOR-3149	link	Editor not opening correctly in SDI and One/Connection
TOR-3152	link	Editor removes unprintable characters
TOR-3161	link	Run Proc changing Toad's date format.
TOR-3164		SB Data filtering not working properly for certain tables
TOR-3167		Editor wrongly changing current schema after query when logged in as SYSDBA
TOR-3168		File splitting adds additional tags and open tabs with every save and split
TOR-3186	link	Java name not shown on tab caption after compile
TOR-3194		Custom Data Filter in schema browser not working correctly
TOR-3195	link	No way to include leading spaces on data import
TOR-3196		F4 Does not work in Current Statement tab
TOR-3214	link	ORA-01719 during Schema compare
TOR-3245		Oracle Compatible Version handled incorrectly
TOR-3248	link	Unchecking columns still includes them in SQL*Loader Control File
TOR-3250		OS Date settings not correctly detected
TOR-3251		ORA-00922 running tablespace script in Exadata 18c
TOR-3252		Data Generation - Commit Every option not saved in SQL*Loader file
TOR-3261	link	CTRL+Insert not working in all grids
TOR-3265		/EXEC comman line parameter non-functional
TOR-3266		Toad's date format changing when windows date format changing
TOR-3280		Script generation queries against V$IM_COLUMN_LEVEL even when "In Memory" option is set to "Never"
TOR-3282		"Display all results in grid" not remembered in Export Dataset
TOR-3283		Auto Optimize won't connect EXTERNAL or Proxy connection
TOR-3285		F9 can stop working in the editor in SDI mode

Issue ID	Link to Forum Post	Resolved Issue
TOR-3296	link	Explain Plan not switching RAC instances in session browser
TOR-3297		Tables skipped if different PK but "Use DB Link" option checked
TOR-3299	link	Access Violation with cursor bind variable
TOR-3304		Toad slow to start
TOR-3309		Full snippet is not detected correctly
TOR-3313		Large VARCHAR2 columns (>4000 chars) not copied
TOR-3315		Cntrl+Enter not working correctly when code includes Tabs
TOR-3341		Temp tbs of pluggable does not show while on container
TOR-3343		Missing support for LOW lob compression in GUI
TOR-3351		Spotlight essentials login fails
TOR-3360		Collation clause sometimes appears when not valid
TOR-3371	link	Navigator not sorting alphabetically
TOR-3375		Toad Schema Browser access violation when refreshing job details in treeview
TOR-3376	link	SQL Recall allowing duplicate statements to stack up
TOR-3384		Auto commit option reinstated
TOR-3387		Script is missing constraint references
TOR-3388	link	Import Table Data looking at wrong decimal/thousand separator settings
TOR-3415	link	Ctrl+Right does not stop on period
TOR-3433	link	Fetch can't be cancelled on "group by"
TOR-3439	link	DBMS Output polling not working
TOR-3448	link	SB LHS and RHS can get out of sync
TOR-3452		Ctrl+Del behavior differs from Toad 12.7 and earlier
TOR-3453	link	Editor dock layout is not remembered
TOR-3454		Can't always choose target table for export
TOR-3456		Access Violation when closing tab
TOR-3457		F5: Invalid data for a node of type 'CDATA' when running a query against dba_hist_sql_plan
TOR-3519		Error when trying to get index size from LHS Indexes
TOR-3557		Code Analysis messages window not being shown when no violations exist and manually launched
TOR-3587		SQLLoader can't run control files that specify datafile w/o path
TOR-3564		Script generation of Unified Audit Policies throws exception in Oracle 19c
TOR-3600	link	Grid Find Dialog difficult to select rows

Issue ID	Link to Forum Post	Resolved Issue
TOR-3602	link	Error message is corrupr
TOR-3610		Use ALTER instead of CREATE OR REPLACE when possible with TYPES
TOR-3615	link	Can't get past first nested object in grid popup editors
TOR-3618		DESC command is reporting wrong column size
TOR-3648	link	Trigger Scripts: Schema name not getting added/removed in FOLLOWS
TOR-3701	link	Next run date calculation sometimes showing wrong timestamp
TOR-3784	link	Negative values appearing in Wait Event chart
TOR-3796		ORA-00942 in Schema Browser with Oracle Cloud ATP and SELECT ANY DICTIONARY privilege
TOR-3853	link	Import Table Data GUI problem importing from multi-sheet excel file
TOR-3863	link	Excessive white space at bottom of grid with vertically oriented monitor
TOR-3929	link	File Compare/Merge window cuts off underscores when font size is increased
TOR-3970	link	Object Type list is empty when compare single object is launched from DESC window
TOR-4013		RETENTION clause wrong in scripts with securefille LOBs.

You can find the most up-to-date list of resolved issues for this release in the *Toad for Oracle Release Notes* found at: https://support.quest.com/toad-for-oracle/technical-documents.

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. Toad currently does not differentiate between indexes created explicitly on the snapshot and indexes created automatically when the snapshot is created. *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: 1. Client shows as invalid 2. Client version is not detected 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 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. *Workaround*: To see REFCURSOR output and DBMS output, execute the procedure without the debugger.	N/A
Connections 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 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. *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 An access violation error may display when you close Toad in a Citrix XenApp environment.	76354
Import/Export Constraint scripts from Export DDL do not contain the "using index" or "tablespace" clause.	59228
Data Modeler: • Generation of HTML reports of large diagrams may fail during generation of an image of the ER Diagram. • Comparison of large models may consume too much memory.	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. *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. *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
Saving PL/SQL results to a database may fail or save invalid data to the database for invalid	N/A

Known Issue	Issue ID
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.	

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 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	N/A

Known Issue	Issue ID
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. 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
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. *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: • ASM Manager • Export File Browser • Hex Editor 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
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 (Affects the 64-bit version of Toad only) If IE9 is installed, clicking a link in the Help file may crash Toad 64-bit, even if IE9 is not the default browser. *Workaround*: Users who have IE9 installed can open Help from outside of Toad.	N/A

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
Processor	1 GHz processor
Memory	• 1 GB RAM - Toad for Oracle 32 bit • 2 GB RAM - Toad 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	• 120 MB - Toad for Oracle 32 bit • 150 MB - Toad for Oracle 64 bit
Operating system	• Windows Server 2008 R2 (64-bit) - 2 CPU required • Windows 7 (32-bit and 64-bit) • Windows 8 and 8.1 (32-bit and 64-bit) • Windows Server 2012 (32-bit and 64-bit) - 2 CPU required • Windows Server 2012 R1 and R2 (64-bit) - 2 CPU required • Windows Server 2016 • 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: • Oracle Client or Instant Client 10.2.0.5 • Oracle Client or Instant Client 11.2.0.1/11.2.0.3 • Oracle Client or Instant Client 12c Release 1 and 2 • Oracle Client or Instant Client 18c • Oracle Client or Instant Client 19c **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:** • 10g Release 2 • 11g Release 1 and 2 • 12c Release 1 and 2 • 18c • 19c **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). • Microsoft Office 2016 and recent earlier releases are supported for Word and Excel output. • Adobe Acrobat Reader 7.0 or later (to view the product documentation in PDF format). • Microsoft .NET Framework 4.0 to support the Toad for Oracle Editions Installer.

Virtualization support

Type	Details
Application virtualization	Citrix® XenApp
Desktop virtualization (VDI)	vWorkspace™ 7.0 has been tested.
Server virtualization	Oracle VM 3.1 has been tested. 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 • Read/write privileges on the Oracle Home directories that you use for your connections
Windows 8 and later Windows Server 2012 and 2016	• Read access to the Oracle client folder • 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.
- Toad supports cumulative licensing. You can add multiple licenses, including those for add-ons like Sensitive Data Protection, to Toad. Toad will use the licenses providing the highest degree of features.

Getting started with Toad for Oracle

Toad for Oracle is distributed in the Toad for Oracle 2019 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://www.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 was not enabled and tested for international operation. Only U.S. English configurations of this product and U.S. English datasets are fully supported. Support for non-ASCII characters or non-English configurations may work appropriately, but these configurations have not been tested and this release should be used with caution in these environments.

This release has the following known capabilities or limitations: Toad 13.1 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.

Toad for Oracle Editions

Each Toad for Oracle Edition is packaged with additional Quest products to expand your experience. The following products may be part of your Toad for Oracle Edition:

- Toad for Oracle 13.2
- Benchmark Factory for Databases
- Code Tester for Oracle
- Spotlight on Oracle
- SQL Optimizer for Oracle
- Toad Data Modeler

The following Toad for Oracle Editions are available:

Edition	Licensed
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

Edition	Licensed
	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

NOTE: The DB Admin Module can be added to any Toad Edition.

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

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Toad for Oracle Release Notes
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Version - 13.2