

# Toad<sup>®</sup> for Oracle 13.1.1

## 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 13.1.1 includes component and requirement upgrades. These upgrades address security vulnerabilities previously identified in the third party component.

# About Toad<sup>®</sup> for Oracle<sup>®</sup> 2018 R2.1 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:

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## Toad for Oracle Base Edition

- Toad<sup>®</sup> for Oracle
- Toad<sup>®</sup> Data Modeler (free use)

## Toad for Oracle Professional Edition

- Toad<sup>®</sup> for Oracle Professional
- Toad<sup>®</sup> Data Modeler (free use)

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## Toad for Oracle Xpert Edition

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

## Toad for Oracle Developer Edition

- Toad<sup>®</sup> for Oracle Xpert
- Code Tester for Oracle
- Benchmark Factory<sup>®</sup> for Databases - Oracle Edition

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## Toad for Oracle DBA Edition

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

## Toad for Oracle DBA RAC Edition

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

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## Toad for Oracle DBA Exadata Edition

- Toad<sup>®</sup> for Oracle Xpert
- DB Admin Module Add-on
- Spotlight<sup>®</sup> on Oracle with RAC and Exadata Options  
Includes Spotlight on Unix/Linux, Spotlight on Windows, and Spotlight on Oracle Data Guard
- Benchmark Factory<sup>®</sup> for Databases - Oracle Edition
- Toad<sup>®</sup> 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 R2.1 Editions release notes at:

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

# New Features and Enhancements

## Toad for Oracle 13.1.1

### Third Party Component Requirement

This release includes component and requirement upgrades. This enhancement addresses security vulnerabilities previously identified in the third party component. See [Resolved issues](#) for more information.

### Sensitive Data Protection Module

You must upgrade to Toad for Oracle 13.1.1 prior to entering your Sensitive Data Protection module license key.

- The Sensitive Data Protection module is a Toad for Oracle Add-On. You must have the Professional Edition or higher to use the Sensitive Data Protection module.
- To add a Sensitive Data Protection module license key, select **Help | Licensing**. In the Licensing dialog, click **Add** and enter your license key.

## Toad for Oracle 13.1

### Oracle Database 18c Support

This release of Toad for Oracle supports Oracle Database 18c. The following new options and features have been included in Toad to support Oracle 18c. See the [Oracle documentation](#) for a description of new features in Oracle 18c.

- **Alter partitioning strategy for a partitioned table.** In the Alter Table dialog, you can now modify the partitioning strategy applied to an existing partitioned table within an Oracle 18c database. To use this new feature, open the Alter Table dialog for a partitioned table. Select the Partitions tab and click the Change Partitioning Strategy button. The Partitions tab switches to display the same partitioning interface used in the Create Table dialog allowing you to create a new partitioning strategy.
- **Create User with NO AUTHENTICATION.** You can create a user with the NO AUTHENTICATION clause. These users can be used as schemas in that they can contain objects, but cannot be used to log in to the database. In the Create User dialog (Database | Create | User), you can select the **No Authentication** option to create a user with no authentication. In addition to Create/Alter User, No Authentication is also supported in Export DDL, the Schema Browser Script tab, and the Compare Databases feature.

- **Enable Lost Write Protection and specify Shadow Tablespace.** For an 18c database, you can enable shadow lost write protection and specify a shadow tablespace to be used. To specify the shadow tablespace, in the Create Tablespace dialog (Database | Create | Tablespace | Basic Info tab) select **Lost Write Protection** as the Content type. Then for each tablespace you want to protect, select *Enabled* in the **Lost Write Protection** field in the Create (Alter) Tablespace dialog.
- **Create Role or User with GLOBALLY AS clause.** The Create (Alter) Role dialog supports the GLOBALLY AS clause. Select **Globally** from the **Identified** drop-down list (Create Role | Role Info tab) and then specify the user to map to this role. The Create (Alter) User dialog also supports the GLOBALLY AS clause.
- **Memoptimize for Read.** The Create (Alter) Table dialog supports the Memoptimize for Read attribute for tables in Oracle 18c. To enable this feature for a table, select the **MemOptimize for read** check box on the Additional Attributes tab (Alter Table).
- **Inmemory compression for external tables.** Inmemory compression is now supported for external tables in Oracle 18c. This feature is supported in the Export DDL and Create/Alter table actions.
- **Merge partitions ONLINE.** An ONLINE option is available for merging partitions and subpartitions for Oracle 18c. This feature is supported in the Alter table dialog.
- **Create snapshot and create pluggable database from snapshot.** In Oracle 18c you can create a snapshot in a pluggable database. You can also create a pluggable database from a snapshot. Toad supports both of these features in an Oracle 18c database.
- **Cancel SQL in a session.** Toad supports the ALTER SYSTEM CANCEL SQL command introduced in Oracle 18c. To use this feature, select a session in the Session Browser and click the "Cancel SQL for selected sessions" button.

## Additional Support for Oracle Database 12c R2

**Support for Collation.** Toad now supports the 12c R2 feature Collation, which controls grouping and sort order for string-type columns. You can specify the Collation property at the column level, table level, or user level. You can also specify a default setting for DDL in the Script Options dialog on the Schema Browser Script tab toolbar. Support for Collation can be found in the Schema Browser, Create (Alter) User/Table/View/Materialized View, Compare Schemas, Rebuild Table, and script generation.

**Support for the INACTIVE\_ACCOUNT\_TIME profile parameter.** The INACTIVE\_ACCOUNT\_TIME parameter is supported. You can specify a value for **Inactive Account Time** in the Create (Alter) Profile dialog.

**Support for HTTP Digest.** The Create (Alter) User dialog now supports the ability to enable/disable HTTP Digest authentication. To enable, select **HTTP digest enabled** on the User Info tab of the dialog.

**Create Pluggable Database options.** Toad now supports two additional storage limit options for a pluggable database. You can now specify a Maximum Audit Size and Maximum Diagnostic Size on the Storage page of the Create Pluggable Database wizard.

**Support for encryption algorithms.** The Create (Alter) Table and Create (Alter) Tablespace dialogs now provide support for the following new encryption algorithms for Oracle 12c R2 (or later): ARIA 128, ARIA 192, ARIA 256, GOST 256, and SEED 128.

**Enable audit policy by roles.** The Create (Alter) Unified Audit Policy dialog now includes support for the **by\_users\_with\_roles** clause for Unified Auditing.

**Support for Oracle Sharding.** Toad now provides limited support for sharded and duplicated tables and tablespace sets. The following functionality is supported:

- You can extract DDL for sharded and duplicated tables using the Schema Browser, Export DDL, and Generate Schema Script.
- You can alter (not create) tablespace sets in the Alter Tablespace dialog.
- You can execute a script to create a sharded or duplicated table.

## Additional Support for Oracle Database 11g R2

**Support for IDENTIFIED USING *package\_name*.** The Create (Alter) Role dialog now supports the **IDENTIFIED USING *package\_name*** feature. To use this feature, select **Using package** from the **Identified** drop-down list (Create Role | Role Info tab). Then select which package is authorized to enable the role. You can select a different schema, if necessary.

## General

**Enhancements to Create User window.** The **User Info** tab of the Create (Alter) User window is now easier to use. Review the following enhancements:

- Related options are now grouped into drop-down lists.
- Dependent options display only when applicable.
- New options have also been added to support the Oracle features listed in the preceding sections.
- Similar enhancements have been made to the **Role Info** tab of the **Create (Alter) Role** window.

**Enhancements to Create Table window.** (Columns tab) The column encryption options are now displayed in the basic view. You are no longer required to select "Display advanced features" to access encryption options.

In addition, a new Encryption dialog is used to provide available encryption options for a column. On the **Columns** tab, click the browse button in the **Encryption** field to open the **Encryption Options** dialog. Select **Encrypt** and specify encryption options:

- Select an **Encryption Algorithm** from available algorithms.
- Enter a password in order to use **Identified by**.
- Select an **Integrity Algorithm**.

**Create Redaction Policy includes policy expression examples.** Toad helps you create a redaction policy expression by providing some sample values. In the **Create/Alter Redaction Policy** window, right-click within the **Policy Expression** field to select from a number of sample values.

**Export Query to Flat File.** The Export Query to Flat File wizard is now easier to use. It has been redesigned to provide visibility and easy access to all available options.

**Restore desktop defaults.** You can now right-click the main toolbar to select **Restore desktop defaults**. To restore toolbars, right-click the main toolbar and select **Restore toolbar defaults**.

**Compare two cells in a data grid.** You now have the ability to compare two cells in a data grid. Select two adjoining cells (side-by-side or stacked), then right-click and select **Compare Selected Values**.

## Sensitive Data Search and Sensitive Data Awareness

This release includes an exciting new feature. Toad now provides new ways to help you easily identify and manage sensitive data. This new enhancement is designed to simplify the tasks related to identifying and

protecting sensitive data in your database. With this new feature, Toad can help you implement your existing data protection policies and strategies.

This new feature has two main components: Sensitive Data Search and Sensitive Data Awareness.

- Use **Sensitive Data Search** to search for potentially sensitive data in your database based on search rules provided by Toad and/or defined by you. Set up and run a search on-the-fly or create a Sensitive Data Search app to run in the Automation Designer or on a scheduled basis.

When a search process is finished, you can view results, apply Oracle protection measures to the sensitive data found, or export a report containing results of the search.

To perform a search, select **Database | Report | Sensitive Data Search**.

**NOTE:** The Sensitive Data Search feature is only available with the Sensitive Data Protection module.

- Use **Sensitive Data Awareness** to highlight sensitive data as you write code in the Editor or as you create and alter tables in the Create/Alter Table window. By increasing the visibility of potentially sensitive data, Toad facilitates awareness of data protection levels and scope in your database as you work and warns users of the possibility of sensitive data as they access data.

You can customize the style of highlighting used in the Editor for sensitive data awareness.

To enable sensitive data awareness, select **View | Toad Options | Sensitive Data | General** and then select **Enable Sensitive Data Protection**.

**NOTE:** The Sensitive Data Awareness feature is available in the Professional Edition (or higher) and in the Sensitive Data Protection module.

### Additional Highlights:

- The Sensitive Data Search feature is also included as a check in DB Health Check. To enable it, select the **Checks** tab and filter by **Search for sensitive data**.
- Run a Sensitive Data Search on-the-fly to protect data when requested by users.
- After identifying columns with potentially sensitive data you can proactively apply available Oracle protection measures as you create and edit objects.
- You can create a Sensitive Data Search app and run it manually or on a scheduled basis or incorporate a search into your DevOps continuous integration / continuous testing process.
- You can create global rules for identifying sensitive data based on your specific data protection policies and strategies. These rules are created and managed in the Options dialog. Go to **View | Toad Options | Sensitive Data | Search Rules**.
- You can create and customize rules to fit the characteristics specific to your data and database. Toad's regular expression pattern matching functionality is based on the PCRE (PHP) engine. You can test your customized rules at <https://regex101.com>.

**NOTE:** The Sensitive Data Search feature is only available with the Sensitive Data Protection module.

## JDWP Debugger

This release of Toad for Oracle includes a JDWP Debugger. The JDWP Debugger provides advantages over the DBMS Debugger, including the following:

- With the JDWP Debugger, users can view the values of user-defined data types.
- The JDWP Debugger provides descriptive exception reporting.
- Users can move between call stack frames to view variables in different scopes.

To use the JDWP Debugger, select **Debug | JDWP Debugger** or select **View | Toad Options | Debugger | General** and then select **JDWP**.

Toad provides a **JDWP Debug Setup** wizard to help you easily configure the JDWP Debugger. To open the JDWP Debug Setup wizard, select **Debug | JDWP Configuration**. See the Toad Online Help for instructions for using the wizard.

The DBMS Debugger is still available in Toad.

**NOTE:** The JDWP Debugger requires Java Development Kit 9 or 10 and supports JDK versions up to 10.0.2.

## Schema Browser

**Export to JSON.** JSON is now a supported export file format in the Export Dataset dialog. You can select *JSON* from the **Export format** drop-down list in the Export Dataset dialog. This is useful if JSON is your data portability file standard.

**Identify Invalid Synonyms.** The Schema Browser now provides an option that, when enabled, identifies an invalid Synonym. To clear the invalid synonym status, right-click the synonym and select **Compile**.

## Database

**Preview Panel for Schema Compare Difference Details.** In the Compare Schemas wizard, the **Difference Details** tab now allows you to preview differences in a Preview panel. For objects in both schemas but with differences, objects display side-by-side with differences highlighted. For objects in only one schema, the DROP/CREATE statement is displayed.

- To show the Preview panel, select the **Preview** check box in the Differences Details tab. Then select an object to display differences in the Preview panel.

**Spool SQL - new features.** The Spool SQL window (Database | Spool SQL to Screen) now includes two new options. You can include elapsed time or row count in the spool SQL output. Click the "Options" button in the Spool SQL window and select your options from the drop-down list.

**Generate Schema Script. Output | Scripts**—If you select **Create Individual Object DDL Files**, you can now right-click within the **Top Level Directory** field to select either *<Schema>* or *<Schema@DB>* as the format.

## Automation Designer

**Export Dataset action.** You can now export a dataset based on a query stored in a SQL file. You can specify the file name and location in the **Dataset** tab of the Export Dataset action. See the Toad online Help for detailed instructions.

## Code Analysis

### Changes to Predefined Rules

You can no longer edit the predefined rules in Code Analysis, except to change an XPath Expression parameter value. If you want to change a predefined rule, clone the rule and make your modifications to the cloned rule. You can continue to create new user-defined rules and edit your existing user-defined rules.

Any previously-modified predefined rules will be migrated to new user-defined rules when you upgrade to Toad for Oracle 13.1. Your existing user-defined rules will remain unchanged.

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	<a href="#">link</a>
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	<a href="#">link</a>

# 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 13.1.1

Issue ID	Resolved Issue
TOR-3460	Upgraded SQL Tracker requirement to Microsoft Visual C++ Redistributable for Visual Studio 2017.

## Toad for Oracle 13.1

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-1052		Creating a new trigger gets TC out of sync
TOR-1158		Can't delete a folder after Toad has loaded a file from it
TOR-1208	<a href="#">link</a>	Code Template window size does not adjust as needed
TOR-1262		Script engine fails to handle parameters properly
TOR-1264	<a href="#">link</a>	Asterisk in Editor tab name remains when it should not
TOR-1335	<a href="#">link</a>	TC doesn't auto-add constraints/indexes to TC when run from the Editor
TOR-1393		Code Assist does not bring up filtered column list for more complicated queries (APPS)
TOR-1534	<a href="#">link</a>	"Show recyclebin" command does not work in Editor
TOR-1745	<a href="#">link</a>	Navigator panel closes unexpectedly
TOR-1976	<a href="#">link</a>	On script execution, <F5>, the reported statement being executed is off by one.
TOR-1996		TIMESTAMP(0) columns have a unnecessary period (.)
TOR-2230	<a href="#">link</a>	Code Insight list filtering slow against a large schema (APPS)

Issue ID	Link to Forum Post	Resolved Issue
TOR-2270		If a nested table has timestamps and intervals, the nested table popup throws an access violation.
TOR-2427		Enhancement: You can now specify whether or not the ESC key cancels a query when the threaded queries feature is enabled in Options   Oracle   Transactions. The specified behavior applies in the Editor and Schema Browser Data tab.
TOR-2479	<a href="#">link</a>	ORA-01756 executing Q-Quote
TOR-2589	<a href="#">link</a>	Data Generation generates incorrect SQL when using foreign columns
TOR-2613	<a href="#">link</a>	When "Use lower case object names from select windows" in Options   Editor   Behavior is selected, the behavior is now applied to inline parameter assistance.
TOR-2624		Different NLS_SORT setting causes Data Compare to lock up
TOR-2626		Triggers from other schemas are not shown on Tables>RHS Triggers.
TOR-2646	<a href="#">link</a>	Schema Browser Treeview scrolling too slowly
TOR-2656	<a href="#">link</a>	Switching between packages slower in 13.0 than 12.12
TOR-2663		Export Dataset not switching to current schema
TOR-2664	<a href="#">link</a>	Possible attempt to use wrong connection for EP in Session Browser
TOR-2672	<a href="#">link</a>	Code Template improperly prompting for variable
TOR-2686		Saving package with dot in name can cut off part of name
TOR-2688	<a href="#">link</a>	AV in Schema Browser Treeview after compile
TOR-2690	<a href="#">link</a>	Policies sometimes excluded from Generate Schema Script
TOR-2692		"Path not found" exception raised preventing startup
TOR-2695	<a href="#">link</a>	Toad extension for 'Grant' didn't work
TOR-2708		Enhancement: Add ability to compare cell values
TOR-2730	<a href="#">link1</a> , <a href="#">link2</a>	Enhancement: In the Export Dataset action, you can now specify a source file for your SQL query.
TOR-2744		Can't compare PUBLIC schema
TOR-2749		Generate Schema Script creates different output paths in Toad 13 than prior versions
TOR-2750		Cannot determine which schemas are not included
TOR-2751	<a href="#">link</a>	Missing SQL Wait cursor on script generation
TOR-2753	<a href="#">link</a>	Multiple "wake up" prompts on multiple sleep cycles
TOR-2755		Enhancement: Add option to ignore constraint validity in Schema Compare
TOR-2769		Improve query to load users
TOR-2777	<a href="#">link</a>	Schema Browser Constraint Script wrong for not null constraints
TOR-2784		Windows bar not being ordered under connection

Issue ID	Link to Forum Post	Resolved Issue
TOR-2790		Enhancement: Record Count for Query Builder results grid now displays the total record count rather than just the number of records fetched
TOR-2816	<a href="#">link</a>	Beta update dialogs show off-screen in SDI mode
TOR-2821	<a href="#">link</a>	Partial painting when Triggers selected in "Load Database Object" window
TOR-2830		Incorrect Code Analysis Validation on Package Specifications
TOR-2860	<a href="#">link</a>	AV encountered after sleep-wake cycle and then reconnecting.
TOR-2889		Team Coding incorrectly report fail conditions when CA settings are low
TOR-2907	<a href="#">link</a>	Loading workspaces causes window list to be out of order
TOR-2908	<a href="#">link</a>	Trace File Browser not handling multiple deadlocks
TOR-2912		ORA-29275 in Session Browser
TOR-2916		File Save and Save As menu items disabled in Query Builder and ERD
TOR-2917		File entries corrupted in the "File   Reopen File" menu.
TOR-2918		If you double-click a column in the Describe dialog (F4) it is not sent to Editor, as the user expects.
TOR-2919	<a href="#">link</a>	Add copy to clipboard and improve text display of error dialog
TOR-2942		Workspaces don't import from 12.12
TOR-2977	<a href="#">link</a>	Stream read error from CLOB columns
TOR-2981	<a href="#">link</a>	Missing "By default" in identity columns
TOR-3048	<a href="#">link</a>	LISTAGG function gets rewritten in Query Builder
TOR-532		Drag-n-Drop not working from Editor to Project Manager
TOR-885		Splitting in chunks doesn't work with saved workspaces.

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
<p>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.</p> <p>Toad currently does not differentiate between indexes created explicitly on the snapshot and indexes created automatically when the snapshot is created.</p> <p><i>Workaround:</i> 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.</p>	N/A
<p>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:</p> <ol style="list-style-type: none"><li>1. Client shows as invalid</li><li>2. Client version is not detected</li><li>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</li></ol>	N/A
<p>Debugger</p> <p>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.</p> <p><i>Workaround:</i> To see REFCURSOR output and DBMS output, execute the procedure without the debugger.</p>	N/A
<p>Connections</p> <p>While Toad supports LDAP connectivity, some features of Toad depend on tnsnames.ora file to operate correctly, such as Toad Script Runner (TSR).</p>	N/A

Known Issue	Issue ID
<p>Schema Browser</p> <p>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.</p> <p><i>Workaround:</i> 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.</p>	N/A
<p>Virtualization</p> <p>An access violation error may display when you close Toad in a Citrix XenApp environment.</p>	76354
<p>Import/Export</p> <p>Constraint scripts from Export DDL do not contain the "using index" or "tablespace" clause.</p>	59228
<p>Data Modeler:</p> <ul style="list-style-type: none"> <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
<p>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.</p> <p><i>Workaround:</i> 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.</p>	N/A
<p>Full table data is not displaying in the live data grid (results from F9) if the data contains "zero" characters (ASCII 0). In this case, all data after the zero character will not show in the grid.</p> <p><i>Workaround:</i> Double click on the data cell in the data grid to view full contents of data in a popup editor.</p>	

## Code Analysis known issues

Known Issue	Issue ID
<p>Saving results to a database: When dealing with nested procedures, Code Analysis can only insert run data from procs one level deep.</p>	N/A
<p>Saving PL/SQL results to a database may fail or save invalid data to the database for invalid</p>	N/A

Known Issue	Issue ID
<p>PL/SQL objects.</p> <p><i>Workaround:</i> To ensure PL/SQL results are saved to the database correctly, verify the validity of all objects before running Code Analysis.</p>	

## Editor known issues

Known Issue	Issue ID
<p>Toad errors when you query on a field of Oracle collection types.</p> <p><i>Workaround:</i> Execute using SQL*Plus.</p>	64373
<p>When spooling to an unpinned output window, the window becomes unresponsive and errors are given when Toad is closed ("Canvas does not allow drawing").</p> <p><i>Workaround:</i> Keep the output window pinned.</p>	68523
<p>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.</p> <p><i>Workaround:</i> Go to Options   Scripts and select a fixed-width font for script output.</p>	62234

## Session Browser known issues

Known Issue	Issue ID
<p>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.</p>	N/A
<p>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 &lt;instance name&gt; ORA-01008: not all variables bound) This problem does not occur in Non-RAC environments.</p> <p><i>Workaround:</i> Clear the "Use RAC Views" checkbox, and log into the appropriate instance of the database, if necessary.</p>	N/A

## Team Coding known issues

Known Issue	Issue ID
<p>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</p>	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. <i>Workaround:</i> 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: <ul style="list-style-type: none"> <li>• ASM Manager</li> <li>• Export File Browser</li> <li>• Hex Editor</li> </ul> <p>In addition, Java itself does not allow Unicode class names or file names. This is relevant to the Java Manager, Editor, and Schema Browser.</p>	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 <i>contents</i> are supported, objects with Unicode <i>names</i> are not. Supported Version Control Providers do not support Unicode names.	N/A

# Third-party known issues

Known Issue	Issue ID
<p>Help</p> <p>(Affects the 64-bit version of Toad only)</p> <p>If IE9 is installed, clicking a link in the Help file may crash Toad 64-bit, even if IE9 is not the default browser.</p> <p><i>Workaround:</i> Users who have IE9 installed can open Help from outside of Toad.</p>	N/A
<p>ODAC</p> <p>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.</p>	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	<ul style="list-style-type: none"><li>• 1 GB RAM - Toad for Oracle 32 bit</li><li>• 2 GB RAM - Toad for Oracle 64 bit</li></ul> <p><b>NOTE:</b> The memory required may vary based on the following:</p> <ul style="list-style-type: none"><li>• Applications that are running on your system</li><li>• Size and complexity of the database</li><li>• Amount of database activity</li><li>• Number of concurrent users accessing the database</li></ul>
Hard disk space	<ul style="list-style-type: none"><li>• 120 MB - Toad for Oracle 32 bit</li><li>• 150 MB - Toad for Oracle 64 bit</li></ul>
Operating system	<ul style="list-style-type: none"><li>• Windows Server 2008 R2 (64-bit) - 2 CPU required</li><li>• Windows 7 (32-bit and 64-bit)</li><li>• Windows 8 and 8.1 (32-bit and 64-bit)</li><li>• Windows Server 2012 (32-bit and 64-bit) - 2 CPU required</li><li>• Windows Server 2012 R1 and R2 (64-bit) - 2 CPU required</li><li>• Windows Server 2016</li><li>• Windows 10</li></ul>

## 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:

Requirement	Details
	<ul style="list-style-type: none"> <li>• Oracle Client or Instant Client 10.2.0.5</li> <li>• Oracle Client or Instant Client 11.2.0.1/11.2.0.3</li> <li>• Oracle Client or Instant Client 12c Release 1 and 2</li> <li>• Oracle Client or Instant Client 18c</li> </ul> <p><b>NOTE:</b> 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.</p>
Database server	<p><b>Oracle versions:</b></p> <ul style="list-style-type: none"> <li>• 10g R2</li> <li>• 11g, 11g R2</li> <li>• 12c Release 1 and 2</li> <li>• 18c</li> </ul> <p><b>Exadata:</b></p> <p>Toad has been tested on Oracle Exadata 5.0 running Oracle database 12.1.</p> <p><b>IMPORTANT:</b> 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.</p>
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	<ul style="list-style-type: none"> <li>• Microsoft Internet Explorer 6.0 or later (to view video from the <b>Jump</b> list within Toad, and to view the product documentation in HTML format).</li> <li>• Microsoft Office 2016 and recent earlier releases are supported for Word and Excel output.</li> <li>• Adobe Acrobat Reader 7.0 or later (to view the product documentation in PDF format).</li> </ul>

**Requirement****Details**

- 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	<ul style="list-style-type: none"><li>• Read access to the Oracle client folder</li><li>• Read/write privileges on the Oracle Home directories that you use for your connections</li></ul>
Windows 8 and later	<ul style="list-style-type: none"><li>• Read access to the Oracle client folder</li></ul>
Windows Server 2012 and 2016	<ul style="list-style-type: none"><li>• Read/write privileges on the Oracle Home directories that you use for your connections</li></ul>

**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 R2.1 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.

# 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](http://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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