


Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Thank you for choosing to download a Toad for Oracle trial. This guide will enable you to evaluate Toad's key technical features and business value. It can be used to evaluate the database development aspects of the Toad Editions to support your development lifecycle.

NOTE: Some recommended features/components have a hyperlink to a brief video clip or additional information.

Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
				Base	Pro	Xpert	Dev Edition
1. Preparation and collaboration			<i>Features which facilitate the proper planning of projects and promote team-working by designing and understanding the database environment, creation and sharing of coding standards and other information. This will save time usually wasted through developers accessing incorrect objects and out-of-date files.</i>				
Manual deployment of coding standards and templates	Project Manager	Main Toolbar	Promotes team working through the sharing of project based assets and standards. Ensures everyone uses correct database objects, files and other data.	✓	✓	✓	✓
Viewing and maintaining database objects	ER Diagram	Main Toolbar Schema Browser Table Right-Click	Generates a graphical representation of schema tables and views to help users better understand object relationships and minimize coding and other errors. HTML and RTF reports can be generated and emailed.	✓	✓	✓	✓
Viewing code – object dependencies	Code Road Map	Main Toolbar Schema Browser Table Right-Click	Enables a graphical representation of the interdependencies between PL/SQL code including Packages and objects like Tables & Views to help minimize coding and other errors. HTML and RTF reports can be generated and emailed.	✓	✓	✓	✓
Standardization of PL/SQL code creation	Editor	Editor Toolbar – Create New PL/SQL Object - 	Using pre-defined templates, developers can create and share new code quicker and to the correct standard. Templates are customizable.	✓	✓	✓	✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
				Base	Pro	Xpert	Dev Edition
2. Writing and maintaining code			<i>Features which provide significant productivity gains over conventional methods. Project specific code templates can be shared with other team members.</i>				
Writing code	Editor	Main Toolbar	Toad's multi-tabbed multi-functional editor makes it easy to create, view or edit SQL, SQL*Plus, PL/SQL, Text, or Hex in a single window. Predictive texting, spell checker and quick access to object information enhances productivity. Many editor right-click options such as formatting, code refactoring and auto SQL extraction from PL/SQL are available.	✓	✓	✓	✓
Sourcing and sharing of re-usable code	Code Templates Code Snippets Make / Strip Code SQL Recall	Editor - <Ctrl> <Spacebar> View Menu Editor – Toolbar Editor Toolbar or F8	Use of pre-written code constructs (cursor blocks, etc) will save developers time. A mini library of constructs (Oracle functions, etc) saving developer time looking up syntax. SQL code capture from application (Java, VB, etc) with automatic removal of non-SQL characters. Retrieve your SQL execution history quickly and copy statements back into the Editor for execution. Can also be shared with others.	✓	✓	✓	✓
Code management	Team Coding with Version Control Integration	Main menu - Team Coding	Enables developers to access schema objects from their VCS directly into the Toad Editor without manually checking out the files as a separate step. Simpler and more robust than conventional methods. Supported systems include MS TFS (inc 2017), Git, Perforce, Mercurial, Rational ClearCase, CVS, Subversion and many others. Now supports PL/SQL unit tests. The Team Coding repository can optionally be hosted on Toad Intelligence Central (Community Edition) to create a truly centralized repository.	✓	✓	✓	✓
Code management	Team Coding with Code Analysis integration (see Section 5)	Main menu - Team Coding	Enables development managers to set a minimum quality standard when developers check code into version control. Code will be rejected until coding violations are corrected.		✓	✓	✓
Code management	Team Coding with Code Tester integration (see Section 4)	Main menu - Team Coding	Enables development managers to enforce a PL/SQL regression test cycle when developers check code into version control. Code will be rejected until bugs are eradicated.				✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
2. Writing and maintaining code (cont)			<i>Features which provide significant productivity gains over conventional methods. Project specific code templates can be shared with other team members.</i>	Base	Pro	Xpert	Dev Edition
Performing routine tasks	Automation Designer	Main toolbar Rerun Menu	Tasks executed in Toad such as code reviews (Toad Pro), unit test executions (Toad Dev Edition), export data and execute script, etc can be saved and built into a workflow which can, itself, be saved, shared with others, scheduled, called from the command line and executed at any time saving time, standardizing on processes and minimizing mistakes.	✓	✓	✓	✓
Efficient SQL statement creation	Type Ahead Object Palette Query Builder	Editor (table <Ctrl> <.> and column <.> View Menu Main Toolbar Table Right-Click E/R Diagram Toolbar	Saves having to know object names, column names, code variables and parameters, etc before composing code. Tokens pop-up contextually based on the scope of what's being typed. Great for code maintenance. A slide-out panel from which tables, views, synonyms and columns can be dragged and dropped into the Editor or a graphical window. Great for Analysts, Managers and Developers, this feature will ensure the creation of a syntactically perfect SQL statement which can be tested and copied into the application. Already generated SQL queries can be reverse-engineered directly from the Editor. Also supports ANSI standard syntax.	✓	✓	✓	✓
3. Data management			<i>Features which enable developers to get a far better understanding of relational data, produce reports and check for data inconsistencies.</i>	Base	Pro	Xpert	Dev Edition
Data manipulation	Any data grid in Toad.	Schema Browser, Editor, Master-Detail Browser, Query Builder and many more	Toad's data grids allow simple selection/de-selection of table columns, sorting and grouping of column headers and data to make location of the correct data even easier and faster. Data grids can have themes (colors, font styles, etc) applied to suit each user. Data can have basic calculations such as Sum, Avg, etc performed. Data belonging to a child table can also be viewed in situ with the parent table.	✓	✓	✓	✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
3. Data management (cont)			<i>Features which enable developers to get a far better understanding of relational data, produce reports and check for data inconsistencies.</i>	Base	Pro	Xpert	Dev Edition
Data querying and reporting	Schema Browser Query Builder	Main Toolbar Main Toolbar Table Right-Click E/R Diagram Toolbar	Query Builder creates a syntactically perfect SQL statement which can be tested and copied into the application. Generated SQL queries can be reverse-engineered directly from the Editor.	✓	✓	✓	✓
Data Generation	Data Generator	Schema Browser – Right Click table – Generate Data Create table ER Diagram – Generate Data	Allows random or real-world data to be generated for a single or group of tables. Referential integrity is respected if it exists and scripts can be saved for re-use. Data refreshes can be scheduled. There is an option to execute on the database server where massive quantities of data are required. Can be automated.		✓	✓	✓
Data sub-setting	Data Subset Wizard	Database Menu – Export – Data Subset Wizard	Let's you copy a portion of data from one schema to another while maintaining referential integrity, so that you can work with a smaller set of data.	✓	✓	✓	✓
Data Import	Import Table Data	Database Menu – Import Table Data	Enables developers to import data from an external file such as Excel or Access or from another database via ODBC into an Oracle table. Operations can be saved as a Toad Action which can be easily replayed or scheduled providing increased productivity and fewer mistakes, using Automation Designer.	✓	✓	✓	✓
Data export	Export Dataset	Data Grid – Right-Click	Oracle table data can be exported into an external format such as Excel, Access or Insert/Merge scripts, etc or into another database via ODBC. Operations can be saved as a Toad Action which can be easily replayed or scheduled providing increased productivity and fewer mistakes, using Automation Designer.	✓	✓	✓	✓
Understanding data relationships	Master-Detail Browser	Database Menu - Report	Enables table data to be displayed in multiple panels representing Parent-Child dependencies. Also supports DB Links to other databases.	✓	✓	✓	✓
Creating data reports	Reports Manager	Any Data Grid – Right-Click Database Menu – Reports – Report Manager	A report wizard enables rapid creation of professional data reports. An advanced report designer lets developers customize the basic structure. Can be saved to HTML, PDF, email, etc. Many canned reports are included.	✓	✓	✓	✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
				Base	Pro	Xpert	Dev Edition
3. Data management (cont)			<i>Features which enable developers to get a far better understanding of relational data, produce reports and check for data inconsistencies.</i>	Base	Pro	Xpert	Dev Edition
Compare and Sync Data (single table pairs)	Compare Data	Database Menu – Compare – Data	Enables data to be compared across a pair of tables in a schema, between 2 databases (e.g. test and prod) and a synchronization script created to make the data in both schemas the same.		✓	✓	✓
Compare and Sync Data (multiple table pairs)	Compare Multiple Tables	Database Menu – Compare – Multiple Tables	Enables data to be compared across multiple tables in a schema, between 2 databases (e.g. test and prod) and a synchronization script created to make the data in both schemas the same.			✓	✓
Checking for duplicate data	Data Duplicates	Database Menu – Compare – Data Duplicates	Enables data to be checked for duplicate data across two tables by specific columns or entire row. Ensures table data is clean and accurate.	✓	✓	✓	✓
Access to Oracle’s Import and Export Utilities	Import/Export Utility Wizard	Database Menu – Import (Export)	Provides all Toad users to a simple interface to these popular Oracle utilities.	✓	✓	✓	✓
Access to Oracle’s Data Pump Utility	Data Pump Utility Wizard	Database Menu – Data Pump Import (D P Export)	Provides Toad users to a simple interface to this popular Oracle utility.		✓	✓	✓
Reusing data from Oracle Export Utility files	Export File Browser	Database Menu – Export – Export File Browser	Toad can read a standard Oracle Export .dmp file and enable developers to selectively rebuild objects and extract exported data. This can save hours of time by obviating the need to import the entire file.	✓	✓	✓	✓
4. Code execution, testing and debugging			<i>Features which will greatly speed up and simplify the task of PL/SQL, SQL and SQL*Plus Code unit testing, debugging and provide expert advice to resolve run-time errors in a timely manner</i>	Base	Pro	Xpert	Dev Edition
Define, store and execute functional/unit tests for PL/SQL (Basic)	Toad unit testing (utPLSQL)	Unit Testing Menu	The Toad Unit Testing feature 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.	✓	✓	✓	✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Define, store and execute functional/unit tests for PL/SQL (Advanced)	Code Tester for Oracle	<p>Editor – PL/SQL Results tab – Create Unit Test</p> <p>Editor Toolbar (Launch Code Tester or Run Code Tester Tests)</p> <p>Schema Browser - Right-Click PL/SQL code (if test definition exists)</p>	<p>Let's you create simple unit tests just by executing your PL/SQL code in the Toad Editor.</p> <p>Code Tester can be used to build more advanced tests.</p> <p>Simply describe expected code behavior (input parameters and expected outcomes) and Code Tester automatically builds and stores your test definition saving hours and ensuring code is thoroughly tested.</p> <p>Test Execution yields a very simple, visual dashboard showing exactly where a test may have failed, allowing the developer to correct the problem.</p> <p>Unit tests can be checked into source control via Team Coding (Section 2) so they remain with the code under test.</p>					✓
PL/SQL code debugging	Debugger	Editor Toolbar Debug Menu	<p>Enables a better understanding of PL/SQL code behavior during execution, identification and resolution of bugs and data validation. Compound conditional breakpoints, modification of variable values on-the-fly and debugging of dependencies gives the developer enormous flexibility. Toad can also perform External debugging by attaching external programs like Oracle Forms, VB, etc. Even conventional DBMS_OUTPUT debugging becomes effortless as Toad can automatically inject output statements into the code.</p>	✓	✓	✓	✓	✓
Access to expertise	Toad World Jump Search	Main Toolbar - Toad World Main Toolbar	<p>Access to Toad World – a huge knowledge base for database professionals with information on Toad solutions, technical articles by industry experts, database platform knowledge, user community discussions and FREE, web-based Toad training courses. Registration can be performed straight from Toad.</p> <p>Direct searches can be performed against Toad World, Toad windows, Toad menus and options, Technical Support's Knowledge Base or Toad's Help by entering a search string in Toad Jump search. Error messages can be clicked on and you are forwarded to solutions on our support portal.</p> <p>Results are in context with the user's problem, enabling a quicker solution to problems.</p>	✓	✓	✓	✓	✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
				Base	Pro	Xpert	Dev Edition
5. Coding best practices			<i>Features which enable an objective and consistent approach to the code review process and enable world-class PL/SQL best practices to be applied.</i>				
Coding format standards	Formatter	Main Toolbar - Toad Options – Formatter	Ensures code is formatted to a controlled standard (Corporate or Project based). Templates can be customized and distributed to other developers.	✓	✓	✓	✓
Static Code Review of PL/SQL code based on pre-defined Rule Sets (customizable). Can be used by both individual developers and Team Leads/Managers	Code Analysis	Schema Browser or Project Manager – Right Click PL/SQL – Send to Code Analysis (code review dashboard) Database Menu - Diagnose Editor Toolbar	Code Analysis supports PL/SQL coding best practices covering Readability, Performance, Maintainability, Program Structure, Naming conventions, etc can be applied to ensure developers build top quality code. Includes code complexity, CRUD and management reporting. Code Analysis rules can be modified to suit different requirements. Code Analysis reports can be generated in a dashboard and sent by email. The results from Code Analysis reviews can also be published to Toad Intelligence Central server and time-based quality reports viewed via its web server.		✓	✓	✓
Dynamic Code Review of PL/SQL code based on pre-defined Rule Sets (customizable)	Code Analysis	Editor, Schema Browser or Project Manager – Right Click PL/SQL – Send to Code Analysis (code review dashboard) Database Menu – Diagnose	Coding violations (shown as blue wavy lines) can be viewed in the Editor as the developer writes or maintains code. Violation explanation windows can be opened directly from the Editor to help the developer understand the violation and write better code in the future.		✓	✓	✓
SQL scan of PL/SQL to identify tuning opportunities. Can be used by both individual developers and Team Leads/Managers	Code Analysis	Right Click PL/SQL – Send to Code Analysis (code review dashboard) Database Menu – Diagnose	SQL Scan will parse the PL/SQL code for embedded SQL, which often cause performance bottlenecks, and classify the SQL found to help determine whether it should be optimized.			✓	✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
6. Application performance			<i>Features which will enable a developer to analyze, identify, assess and make informed decisions on how to improve performance of SQL and PL/SQL code with reduced dependency on DBAs.</i>	Base	Pro	Xpert	Dev Edition
Identify PL/SQL code bottlenecks (Oracle versions up to 19c)	DBMS PL/SQL Profiler	Main Toolbar Database Menu	Quickly profile complex, underperforming PL/SQL code and identify the line of code contributing to poor performance. Also identifies code coverage.	✓	✓	✓	✓
Identify PL/SQL code bottlenecks (Oracle 11g and higher)	Oracle 11g Hierarchical Profiler	Main Toolbar Database Menu	Quickly and simply profile complex, underperforming PL/SQL code and identify the line of code contributing to poor performance	✓	✓	✓	✓
Identification and classification of under-performing SQL from application, Oracle SGA, PL/SQL, etc.	SQL Optimizer for Oracle – Scan SQL	Schema Browser (PL/SQL object) Editor Toolbar Query Builder Toolbar SGA Trace/Optimization Session Browser	SQL Optimizer scans for under-performing SQL statements in the application and classify them according to potential performance impact.			✓	✓
Automatic re-writing and optimization of SQL alternatives (simplified capability)	Auto Optimize SQL	Editor – Toolbar Schema Browser (PL/SQL object) Query Builder Toolbar SGA Trace/Optimization Session Browser	Auto Optimize SQL provides users who are less experienced with SQL the ability to simply optimize it with a couple of mouse clicks within the Editor window itself without launching the SQL Optimizer tool. Great for application developers less familiar with SQL.			✓	✓
Automatic re-writing and optimization of SQL alternatives (full capability)	SQL Optimizer for Oracle – Optimize SQL	Editor Toolbar Schema Browser (PL/SQL object) Query Builder Toolbar SGA Trace/Optimization Session Browser	SQL Optimizer will generate every possible re-write and quickly discard those of minimum benefit. This process will ensure every SQL alternative is considered – a process which would take an average developer many hours to perform. Optimization can be performed at the single SQL level or multiple SQLs or PL/SQL programs can be submitted for batch optimization saving hours of time.			✓	✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
6. Application performance (cont)			<i>Features which will enable a developer to analyze, identify, assess and make informed decisions on how to improve performance of SQL and PL/SQL code with reduced dependency on DBAs.</i>	Base	Pro	Xpert	Dev Edition
Analysis and recommendation of best Indexes	SQL Optimizer for Oracle – Optimize Indexes	Schema Browser (PL/SQL object) Editor Toolbar Query Builder Toolbar SGA Trace/Optimization Session Browser	Optimize Indexes is based on SQL execution workload. It continuously assesses the potential for performance improvement through indexing changes based on current database workload.			✓	✓
Tracking SQL executions from any Windows desktop application for fault finding, performance diagnostics or QA	SQL Tracker (Client)	Database Menu – Monitor	SQL Tracker (formerly SQL Monitor) tracks SQL statements as they leave any Windows desktop application and execute in Oracle. This enables the user to investigate any number of potential SQL-related issues which may be impacting the application.	✓	✓	✓	✓
Checking to see which Oracle sessions are consuming the most resources to help address possible performance problems	Top Session Finder	Database Menu - Monitor	Top Session Finder allows the user to specify a consumer unit to track then view those sessions which are consuming the most. A session can be selected and Session Browser launched to diagnose what the session is doing.	✓	✓	✓	✓
7. Quality Assurance			<i>Features which validate whether the application is ready for production with PL/SQL code regression tested for bugs, reviewed to meet coding quality standards and SQL tested for scalability.</i>	Base	Pro	Xpert	Dev Edition
PL/SQL code regression testing	Code Tester for Oracle	Editor Toolbar (Run Code Tester Tests) Schema Browser - Right-Click PL/SQL code - Run Code Tester Tests (if test definition exists)	Unit test execution runs all test definitions for the project showing where code may have regressed since it was last unit tested, and yields a very simple, visual dashboard showing exactly where a test may have failed, allowing the developer to correct the problem before releasing to production.				✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
7. Quality Assurance (cont)			<i>Features which validate whether the application is ready for production with PL/SQL code regression tested for bugs, reviewed to meet coding quality standards and SQL tested for scalability.</i>	Base	Pro	Xpert	Dev Edition
Test for Production level scalability in Development or Test environment	Benchmark Factory for Databases	Schema Browser or Project Manager – Right Click PL/SQL – Test Performance SQL Optimizer Toolbar	It's impossible to see if tuned SQL will perform as well in production as it does in development. This feature simulates this scenario by scaling the SQL or PL/SQL execution to a user defined number of virtual users.				✓
8. Production deployment			<i>Features which enable development build DDL scripts for the DBAs to use for deployment into production</i>	Base	Pro	Xpert	Dev Edition
Generate deployment scripts based on schema comparison	Schema Compare and Sync NOTE: Sync is available in Xpert Edition and DB Admin Module	Database menu - Compare - Compare Schemas	Enables a source schema to be compared with one or more target schemas using live connections or pre-saved snapshots. NOTE: The generation of a synchronization script requires the Xpert Edition or DB Admin Module.	✓	✓	✓	✓
	Multi Schema Compare and Sync NOTE: Sync is available in Xpert Edition and DB Admin Module	Database menu – Compare – Multiple Schemas	Enables multiple schemas across two database environments (e.g. PROD and TEST) to be compared in a single step NOTE: The generation of a synchronization script requires the Xpert Edition or DB Admin Module.	✓	✓	✓	✓
9. Personal & Sensitive Data Protection			<i>Features which enable the classification, scanning, reporting and protection of personal or sensitive data across multiple Oracle databases to ensure compliance with regulations such as GDPR, CCPA, HIPAA and others.</i>	Base	Pro	Xpert	Dev Edition
Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
Visual notification of sensitive data usage.	Toad Sensitive Data Protection Module – Sensitive Data Awareness	Editor Schema Browser - Alter Table NOTE: add-on module available with Pro and Higher	Ensures developers are notified if they make PL/SQL code or schema changes that access columns containing sensitive data. Important if companies are to comply with Data Privacy Regulations such as GDPR, CCPA, HIPAA, etc.		✓	✓	✓

Customer Evaluation Guide – Toad® for Oracle® Editions 2021 R1

Oracle Database Development



9. Personal & Sensitive Data Protection (cont)			<i>Features which enable the classification, scanning, reporting and protection of personal or sensitive data across multiple Oracle databases to ensure compliance with regulations such as GDPR, CCPA, HIPAA and others.</i>	Base	Pro	Xpert	Dev Edition
Activity	Recommended feature or component	Where to find it	Benefits	Available in these Toad for Oracle Editions			
Scanning and identification of sensitive and personal data	Toad Sensitive Data Protection Module – Sensitive Data Search	Database – Report - Sensitive Data Search NOTE: add-on module available with Pro and Higher	Based on pre-defined rules, automatically scans across Oracle databases and reports on tables and columns that contain personal and sensitive information using meta data search and data polling.		✓	✓	✓
Protection of sensitive and personal data	Toad Sensitive Data Protection Module – Sensitive Data Search	Database – Report - Sensitive Data Search NOTE: add-on module available with Pro and Higher	Leverages Oracle Advanced Security features such as encryption, redaction and auditing to protect data and to implement an audit trail.		✓	✓	✓
10. General			<i>Additional capabilities which extend user knowledge and provide even greater flexibility and control of Oracle development projects.</i>	Base	Pro	Xpert	Dev Edition
FREE Training – Toad Fundamentals (also available for Trial users)	Web-based training courses	Quest Support portal	Ensures users get the full benefit of the product through coverage of most of the key features of the Base product.	✓	✓	✓	✓
FREE Training – Advanced Development using Toad (also available for Trial users)	Web-based training courses	Quest Support portal	Learn how to get the most from the Toad Development Edition for Oracle so you can build high quality, bug-free, high performance applications.	✓	✓	✓	✓
Control access to protected databases	Connection window – Read Only connections	Main toolbar	Ensure developers can't inadvertently change data or database objects	✓	✓	✓	✓
Works with Oracle database versions from 10gR2 to 19c	Connection window	Main toolbar	Provide the necessary flexibility development teams need when using older versions of Oracle	✓	✓	✓	✓
Connect using TNS, Direct or LDAP	Connection window	Main toolbar	Provides the flexibility development teams need for different environments where connection methods may vary	✓	✓	✓	✓