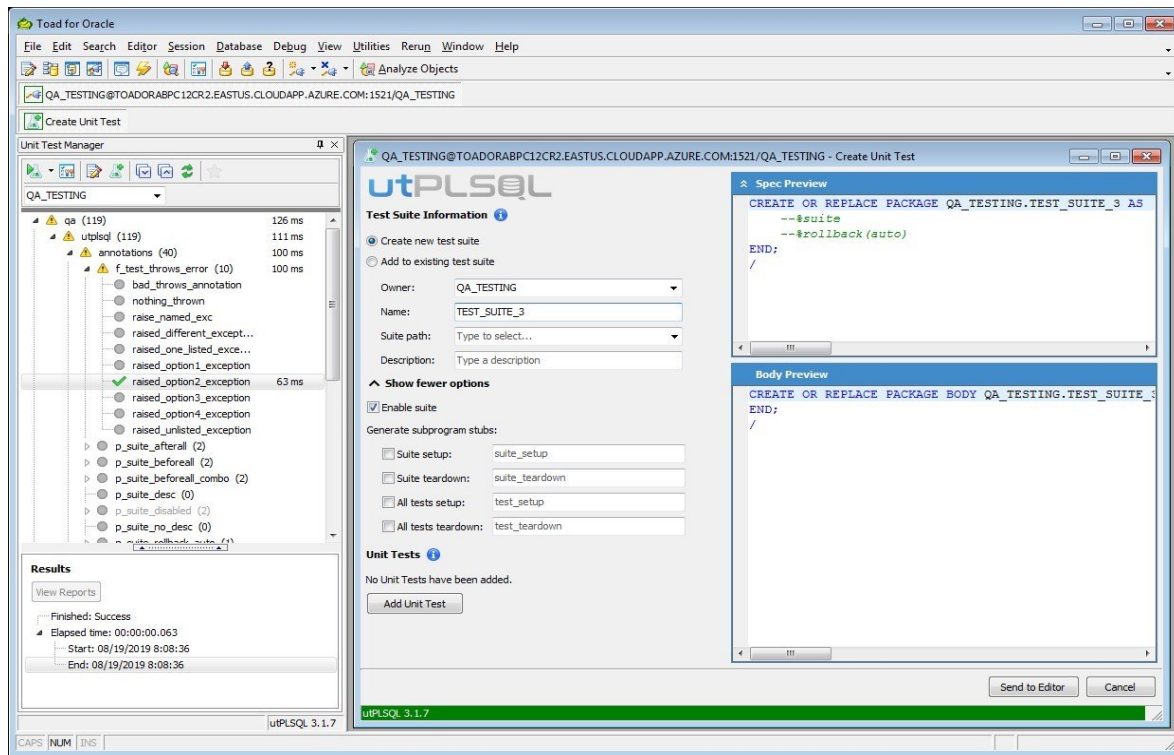




What's New in Toad Editions 2019

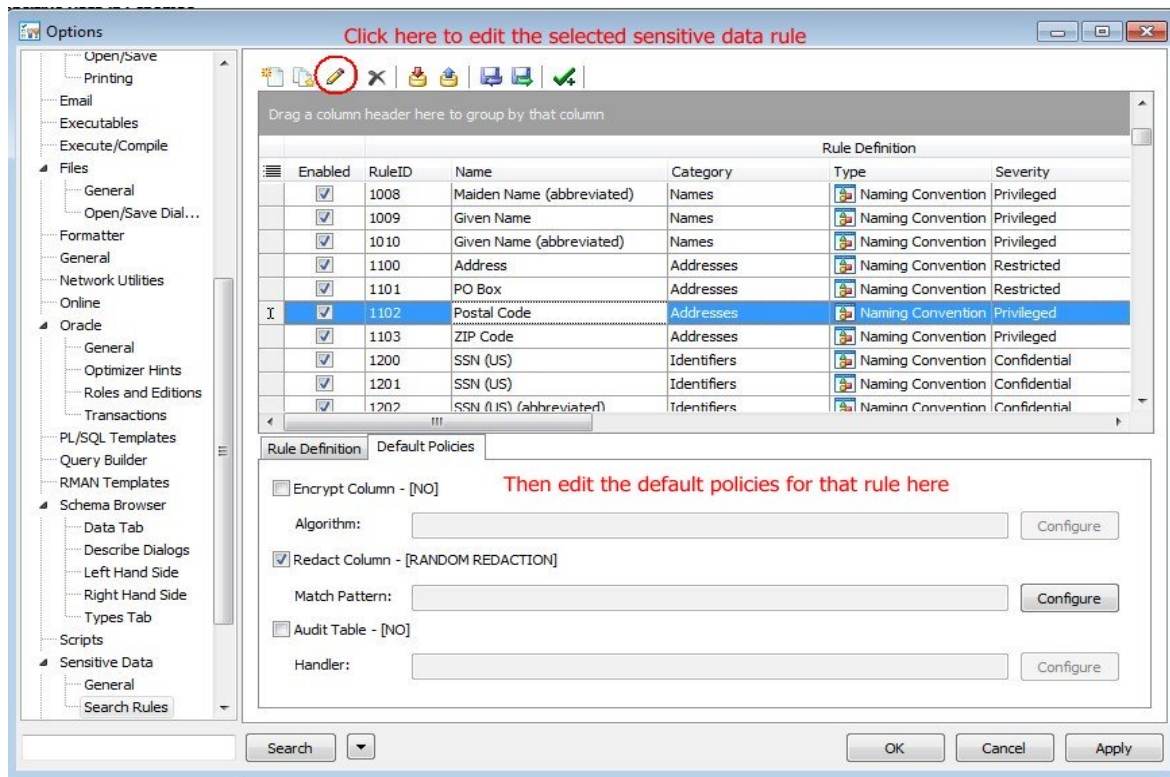
New unit testing built on utPLSQL

- A GUI front-end for the popular open source unit testing suite - utPLSQL.
- Create and run unit tests, and review test results.
- This is included in the **Base Edition**.



Enhancements to Sensitive Data Protection

You can now define default audit, encryption, and redaction policy options, as well as custom user-defined severity categories, to individual sensitive data rules.



Enhancements to Sensitive Data Protection

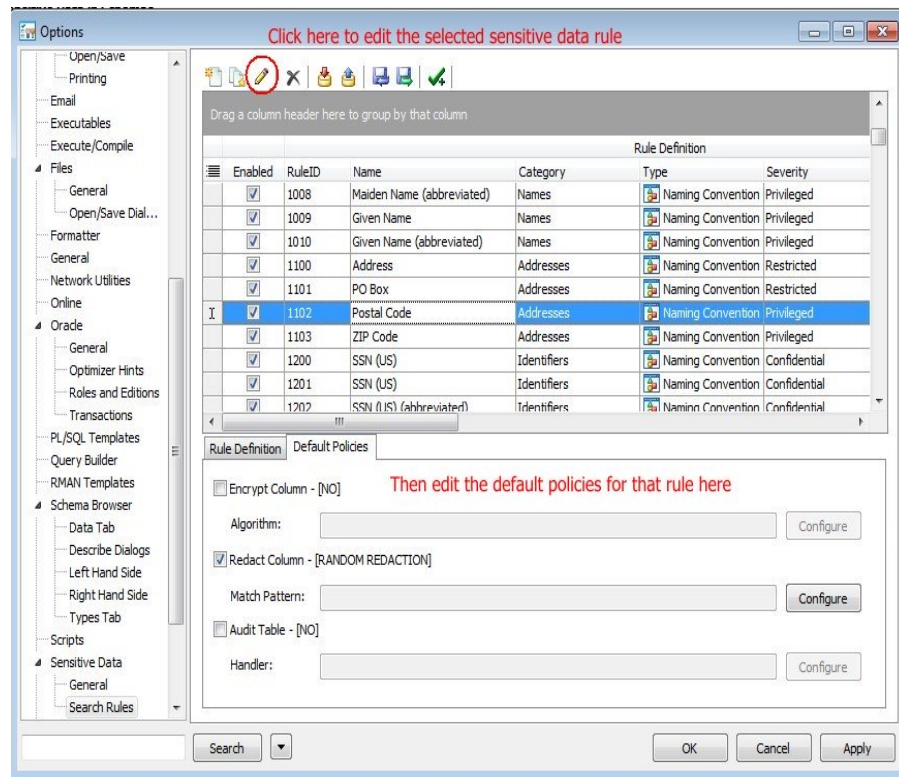
Once defined, those policies can then be applied to a group of columns by selecting the columns in question and selecting “Apply Default Policies”. This allows you to set up policies on multiple columns at once rather than individually.

The screenshot displays the 'Sensitive Data Protection Search' interface. At the top, it says 'Search for Sensitive Data in Schemas' and 'Apply default policies to columns identified by Sensitive Data Protection Search'. Below this is a table with columns for Schema Name, Table Name, Column Name, RuleID, Rule Type, Rule Name, % Matched, Encrypted, and Redacted. The table lists several rows, with the row for 'HR.LOCATIONS.POSTAL_CODE' selected. A context menu is open over this row, with 'Apply Default Policies' highlighted. The menu also includes options like 'Change Policies', 'Print...', 'Export Dataset...', 'Report...', 'Filter Data...', 'Find Data...', 'Record Count...', 'Fix Column', 'Preview Column', 'Sort Columns', 'Appearance', 'Reset Columns', 'Row Select', and 'Size Columns'. Below the table, there is a 'Report Summary' section for the selected row, showing details like Schema Name, Table Name, Column Name, Match Count, Sample Count, and Match Percent.

Schema Name	Table Name	Column Name	RuleID	Rule Type	Rule Name	% Matched	Encrypted	Redacted
HR	EMPLOYEES	FIRST_NAME	1000	Naming Convention	First Name	100.00%	<input type="checkbox"/>	<input type="checkbox"/>
HR	EMPLOYEES	LAST_NAME	1004	Naming Convention	Last Name	100.00%	<input type="checkbox"/>	<input type="checkbox"/>
HR	EMPLOYEES	PHONE_NUMBER	1302	Naming Convention	Telephone Number 3	100.00%	<input type="checkbox"/>	<input type="checkbox"/>
HR	LOCATIONS	POSTAL_CODE	1102	Naming Convention	Postal Code	100.00%	<input type="checkbox"/>	<input type="checkbox"/>
HR	JOBS	MAX_SALARY	2103	Data Contents	ZIP Code (US)		<input type="checkbox"/>	<input type="checkbox"/>
HR	LOCATIONS	STREET_ADDRESS	2100	Data Contents	Address		<input type="checkbox"/>	<input type="checkbox"/>
HR	LOCATIONS	POSTAL_CODE	2103	Data Contents	ZIP Code (US)		<input type="checkbox"/>	<input type="checkbox"/>

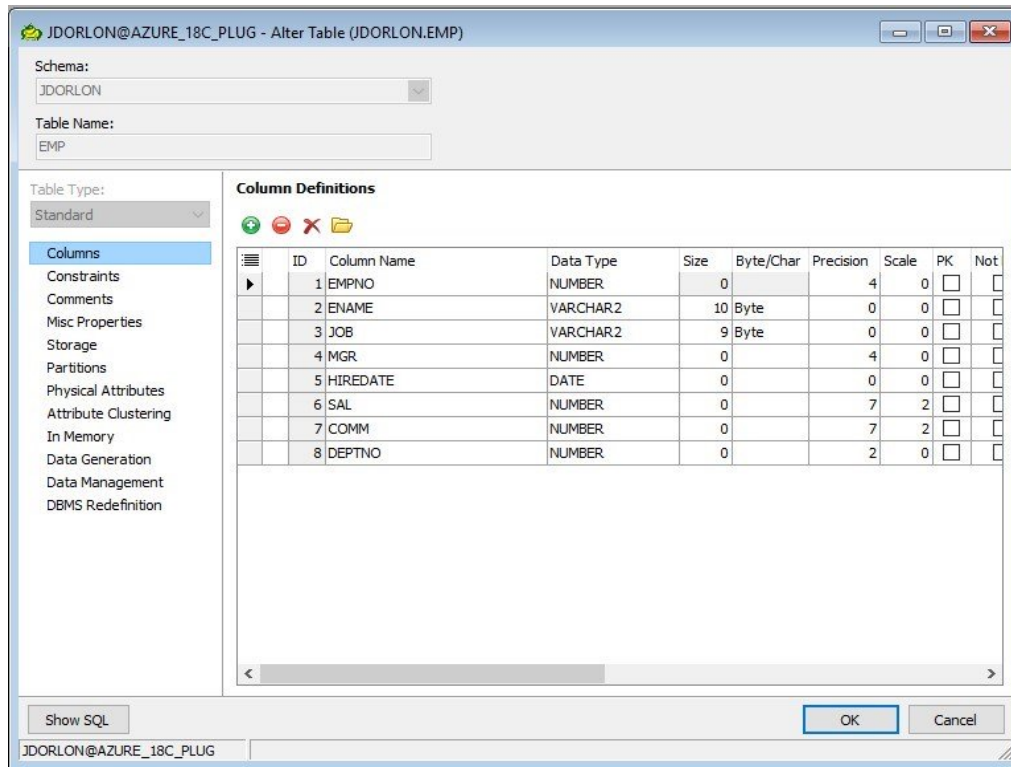
Enhancements to Sensitive Data Protection

- Added regular expression rules for common identification names and formats used throughout the European Union.
- Added an "examples" box and "test" button to the rules window, so you can test rules as you are adding them.
- Added a "severity" field to the rules window to allow for user-defined rule management and organization.



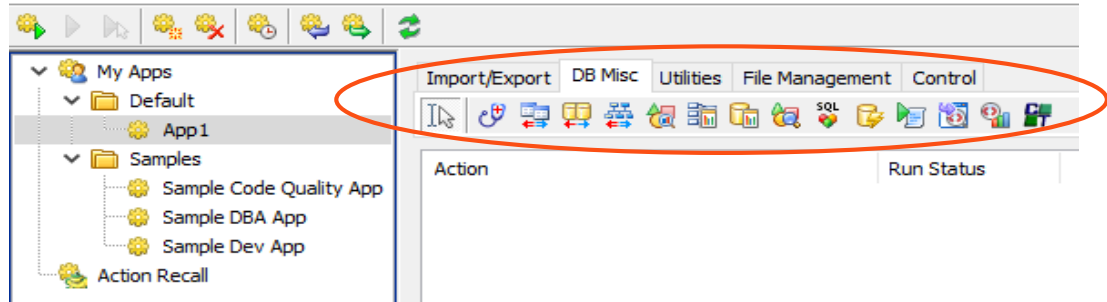
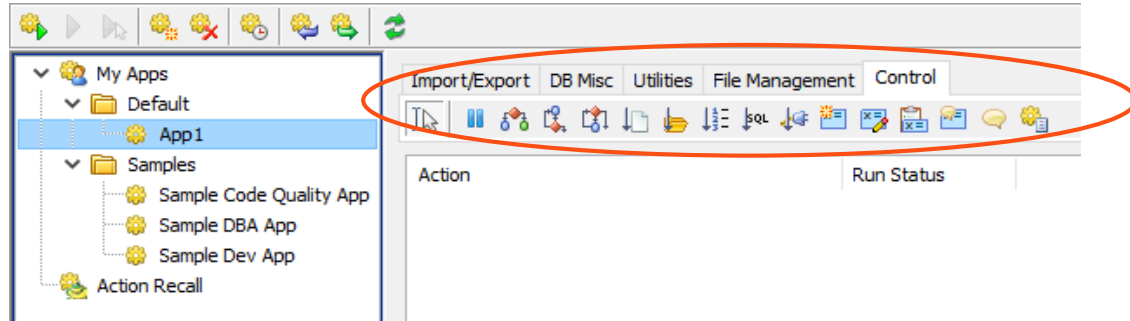
Updated Wizard for Create/Alter Objects

These Wizards have an updated look. Here's a screen shot of the new Alter Table wizard. There are about 40 others!



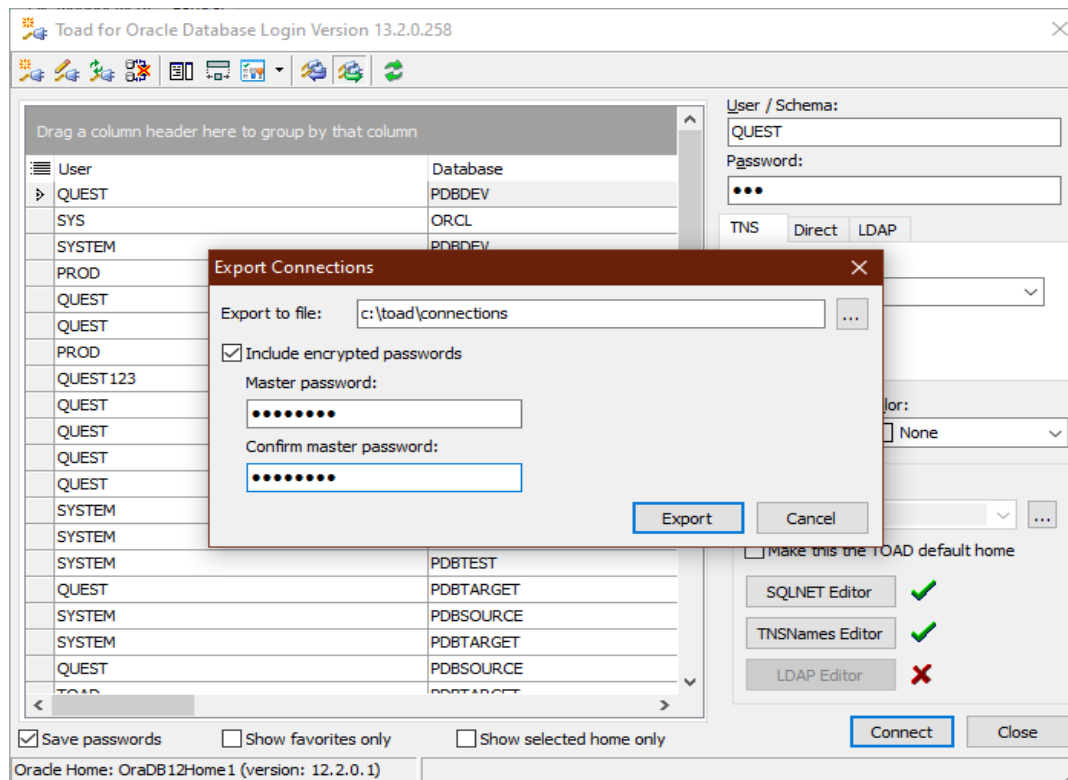
Extra Actions in Automation Designers

- Additional actions have been added to the Automation Designer.
- You can now automate **Analyze Objects** and some additional options when using **Variables**.
- New, easy migration of scheduled Toad actions from prior Toad version to 13.2



Export/Import of Connections

The Export and Import of Connections now includes the option to encrypt the connections file with a master password.



Support/Compliance

Support for the following has been added:

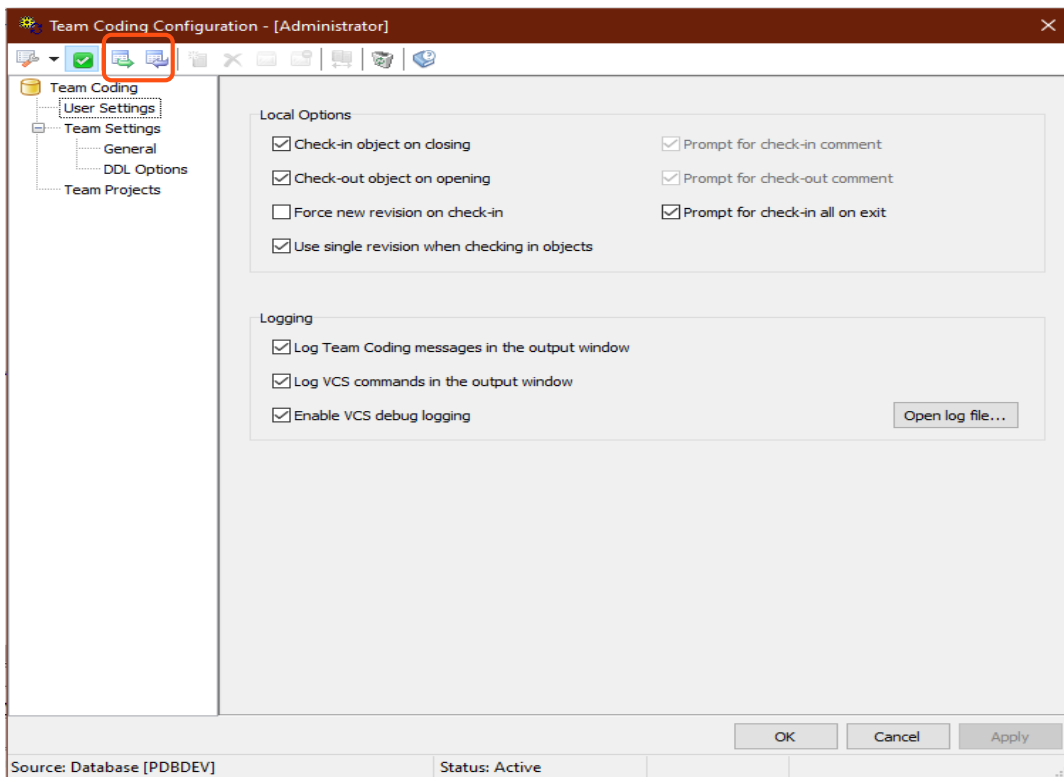
- Oracle 19c
 - FIPS compliance
 - ASM flex disk groups
 - DBMS_AUTO_INDEX
 - Hybrid partitioned tables*
- Support for BLOB, CLOB, NCLOB, XMLTYPE when running Data Compares
 - It is no longer necessary to manually include .GetCLOBVal() in your queries with XMLTYPE. This now happens automatically behind the scenes.
 - XMLTYPE data is now editable in the popup editor (just include ROWID in your query).

Export Dataset enhancements

- Improved performance.
- Enable/disable auto file name (based on table exporting from) by right-click in the “filename” box.
- Can now specify “where” clause for tables being exported.

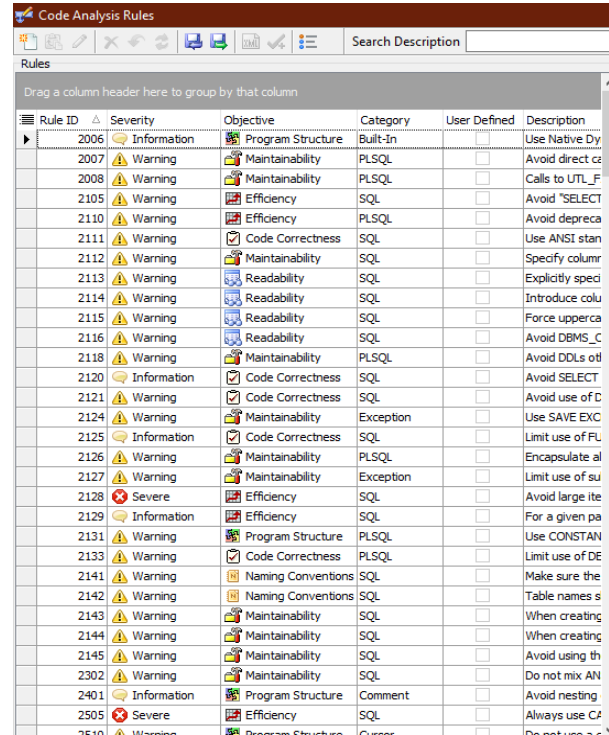
Team Coding

All VCS and Team Coding settings can now be backed up/restored to the server using new toolbar buttons on the Team Coding Configuration window.



Additional rules in Code Analysis

Several new and updated analysis rules.



Rule ID	Severity	Objective	Category	User Defined	Description
2006	Information	Program Structure	Built-In	<input type="checkbox"/>	Use Native Dy
2007	Warning	Maintainability	PLSQL	<input type="checkbox"/>	Avoid direct ce
2008	Warning	Maintainability	PLSQL	<input type="checkbox"/>	Calls to UTL_F
2105	Warning	Efficiency	SQL	<input type="checkbox"/>	Avoid *SELECT
2110	Warning	Efficiency	PLSQL	<input type="checkbox"/>	Avoid depreca
2111	Warning	Code Correctness	SQL	<input type="checkbox"/>	Use ANSI stan
2112	Warning	Maintainability	SQL	<input type="checkbox"/>	Specify colunr
2113	Warning	Readability	SQL	<input type="checkbox"/>	Explicitly speci
2114	Warning	Readability	SQL	<input type="checkbox"/>	Introduce colu
2115	Warning	Readability	SQL	<input type="checkbox"/>	Force upperca
2116	Warning	Readability	SQL	<input type="checkbox"/>	Avoid DBMS_C
2118	Warning	Maintainability	PLSQL	<input type="checkbox"/>	Avoid DDLs of
2120	Information	Code Correctness	SQL	<input type="checkbox"/>	Avoid SELECT
2121	Warning	Code Correctness	SQL	<input type="checkbox"/>	Avoid use of D
2124	Warning	Maintainability	Exception	<input type="checkbox"/>	Use SAVE EXC
2125	Information	Code Correctness	SQL	<input type="checkbox"/>	Limit use of FL
2126	Warning	Maintainability	PLSQL	<input type="checkbox"/>	Encapsulate al
2127	Warning	Maintainability	Exception	<input type="checkbox"/>	Limit use of su
2128	Severe	Efficiency	SQL	<input type="checkbox"/>	Avoid large ite
2129	Information	Efficiency	SQL	<input type="checkbox"/>	For a given pa
2131	Warning	Program Structure	PLSQL	<input type="checkbox"/>	Use CONSTAN
2133	Warning	Code Correctness	PLSQL	<input type="checkbox"/>	Limit use of DE
2141	Warning	Naming Conventions	SQL	<input type="checkbox"/>	Make sure the
2142	Warning	Naming Conventions	SQL	<input type="checkbox"/>	Table names s
2143	Warning	Maintainability	SQL	<input type="checkbox"/>	When creating
2144	Warning	Maintainability	SQL	<input type="checkbox"/>	When creating
2145	Warning	Maintainability	SQL	<input type="checkbox"/>	Avoid using th
2302	Warning	Maintainability	SQL	<input type="checkbox"/>	Do not mix AN
2401	Information	Program Structure	Comment	<input type="checkbox"/>	Avoid nesting
2505	Severe	Efficiency	SQL	<input type="checkbox"/>	Always use C
2510	Warning	Program Structure	Cursor	<input type="checkbox"/>	Do not use a

Thank you

Quest[®]