Oracle® SQL Developer

Oracle TimesTen In-Memory Database Support Release Notes

Release 3.1

E25285-03

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This document provides late-breaking information as well as information that is not yet part of the formal documentation.

This document contains the following sections:

- Changes in this release

- Supported TimesTen releases and platforms

- Prerequisites

- Known problems and limitations

- Documentation Accessibility

1 Changes in this release

This section lists changes between releases:

- Changes for Release 3.1 from Release 3.0

- Changes for Release 3.0 from Release 2.1.1

1.1 Changes for Release 3.1 from Release 3.0

- To start SQL Developer on a Mac OS X system, go to the sqldeveloper directory under the `<sqldeveloper_install>` directory, and run `sh sqldeveloper.sh -J-d32`. The option `-J-d32` is required.

- If you duplicate rows and the data type for the column(s) is `BLOB` (for TimesTen Release 11.2.2 or later), `ROWID`, or `BINARY/VARBINARY`, the column(s) are populated with null values.

- There are new features. See New features in release 3.1.

1.1.1 New features in release 3.1

Features supported in TimesTen Release 11.2.2 or later:

- You can define and use LOB data types. This includes defining columns with LOB data types, adding columns with LOB data types, displaying LOB data types, and defining LOB data types in `IN`, `OUT`, and `IN OUT` parameters in PL/SQL editors.

- You can compute table size information. After computing table size information for one or more tables, you can view values for `INLINE BYTES`, `OUT OF LINE BYTES`, and `METADATA BYTES`.

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- There is a new **Table** report called **Table Sizes.** This report displays table size information for tables on which you have computed table sizes.

- The **Columns** reports has been enhanced to display LOB data types.

Features supported in TimesTen Release 11.2.1.4.0 or later:

- You can specify `INLINE` for data types `VARCHAR2`, `NVARCHAR2`, and `VARBINARY` when defining columns in the **Create Cache Group** dialog, **Create Table** dialog, and **Add Column** dialog.

- You can test your PL/SQL function, procedure, or package using a `REF CURSOR` as an `OUT` parameter.

- You can load data into tables using **Import Data**.

- There are two new cache group reports. One report provides a summary of the type and count of cache groups. The second report lists attributes of the read-only, asynchronous writethrough, synchronous writethrough and user managed cache groups.

1.2 Changes for Release 3.0 from Release 2.1.1

- When you use a named connection to connect to a TimesTen database, you no longer have to select the **Save Password** check box in the connection's **New/Select Database Connection** dialog box to view the DDL statement for any database element such as a table or view in the element's **SQL** tab.

- You no longer have to select the **Save Password** check box in a named connection's **New/Select Database Connection** dialog box to perform any cache group operations such as creating or loading a cache group.

1.2.1 New features in release 3.0

- You can use the Schema Browser for filtering and narrowing the list of objects displayed.

- You can create and drop internal and external TimesTen database users. You can grant system privileges to a new user that you are creating. You can grant system privileges to or revoke system privileges from an existing user. You can change the password of an existing internal user.

- You can generate the following TimesTen reports:

  - Data source attribute settings and database version

  - Names of all database objects accessible to the user connected to the TimesTen database

  - Count of all database objects by owner and type accessible to the user connected to the TimesTen database

  - Names of all public and private synonyms

  - Program unit arguments, source code search and source code line counts for PL/SQL packages, procedures and functions

  - System and object privileges granted to the user connected to the TimesTen database

  - Privileges granted to the `PUBLIC` role

- Names of all tables and columns accessible to the user connected to the TimesTen database

- Names of all tables owned by the user connected to the TimesTen database

- Listing of all internal and external database users

- Names of all indexes owned by the user connected to the TimesTen database

- Names of all indexes accessible to the user connected to the TimesTen database

- You can create and drop private synonyms. You can export the definition of a private synonym to a file or to SQL Worksheet. You can display the details of a private synonym.

- You can create and drop public synonyms. You can display the details of a public synonym.

- You can create and drop materialized view logs. You can display the details of a materialized view log.

- You can create a hash index when:

  - Adding a primary key to a table

  - Changing the type of index on the columns of a table's existing primary key

- You can cache an Oracle table that has a unique index but no primary key defined on it.

- You can cache an Oracle private synonym.

- You can update table and column statistics used by the query optimizer for all tables owned by the user connected to the TimesTen database.

- You can compile invalid or all PL/SQL packages, procedures and functions.

- You can specify cascade delete when adding a foreign key to a table.

- You can view and update the data in a table's column using display editors. You can use text editor, binary editor, or Date and Timestamp editor to update data in the data grid.

2 Supported TimesTen releases and platforms

SQL Developer 3.1 is available on 32-bit and 64-bit Microsoft Windows and Linux systems. SQL Developer 3.1 supports Oracle TimesTen In-Memory Database and Oracle In-Memory Database Cache Releases 11.2.1.4.0 and later, and can be used to connect to a TimesTen database that resides on any platform that is supported by the TimesTen software.

In a client/server environment, if you connect to the TimesTen server with an older release of the TimesTen client, then new features added to the newer release of the server are not supported.

3 Prerequisites

Before you can use SQL Developer to connect to a TimesTen database:

1. Install 11.2.1.4.0 or later release of the TimesTen Data Manager or TimesTen Client on the same system as SQL Developer. If you use SQL Developer to connect to a local database, at minimum install the TimesTen Data Manager on the same

system as SQL Developer. If you use SQL Developer to connect to a remote database, at minimum install the TimesTen Client on the same system as SQL Developer.

2. Execute the *TimesTen_install_dir*/bin/ttenv.sh or *TimesTen_install_dir*/bin/ttenv.csh shell script on Linux systems, or the *TimesTen_install_dir*\bin\ttenv.bat batch file on Microsoft Windows systems to set the TimesTen environment variables before starting SQL Developer.

3. Make sure the CLASSPATH environment variable includes the proper TimesTen JDBC driver file (*TimesTen_install_dir*/lib/ttjdbc6.jar on Linux systems or *TimesTen_install_dir*\lib\ttjdbc6.jar on Microsoft Windows systems). SQL Developer 3.1 requires Java Development Kit (JDK) 6 be installed.

4 Known problems and limitations

- If you do not select "**Autocommit**," then TimesTen SQL operations within the **Connections** navigator are not always automatically committed. You must issue an explicit commit by either selecting **Commit** or by issuing the commit command in SQL Worksheet. If TimesTen encounters errors in your transaction, you must explicitly roll back the transaction by either selecting **Rollback** or by issuing the rollback command in SQL Worksheet.

  If "**Autocommit**" is selected, then TimesTen SQL operations within the **Connections** navigator are automatically committed. A transaction in the SQL Worksheet is also automatically committed if there are no open tables in the transaction. If there are open tables, then the transaction in the worksheet is not automatically committed and you must issue an explicit commit by either selecting **Commit** or by issuing the commit command in SQL Worksheet.

  To enable "**Autocommit**," select **Tools** > **Preferences**. In the **Preferences** dialog box, click the + to the left of the **Database** node to expand the node and select **Advanced**.

- Setting the passthrough level to a value other than 0 can affect the SQL operations in the **Connections** navigator. Make sure this setting is reset to 0 when switching from issuing passthrough operations in SQL Worksheet back to the **Connections** navigator.

  You can also create an unshared worksheet which uses a separate database connection from the **Connections** navigator so that a particular passthrough level setting applies only to that worksheet. From a shared worksheet, click the **Unshared SQL Worksheet** icon or press **Ctrl+Shift+N** to create an unshared worksheet.

- If you click the + to the left of the **Indexes** node to view the list of indexes and then click the name of the index with the characteristics you want to view, you cannot view the index's DDL statement, because the **SQL** tab is missing. To view the CREATE INDEX statement, from the index's underlying table or materialized view, click the **SQL** tab.

- TimesTen error 2963 (Inconsistent datatypes: (NUMBER,CHAR) are not compatible in expression) is returned when you attempt specify a numeric value filter on a numeric column. To specify a filter value for a numeric column, click the + to the left of the **Tables** node to view the list of tables, and then click the name of a table that contains a numeric column. In the **Data** tab of the table, click

the name of a numeric column. In the **Filter** field, enter a numeric value and press the **Enter** key.

- Before you export data from a table in a format that is compatible with the TimesTen `ttBulkCp` utility, set the format for `DATE` and `TIMESTAMP` data using the following instructions:

    1. Select **Tools** > **Preferences**.

    2. In the **Preferences** dialog box click the **+** to the left of the **Database** node to expand the node.

    3. Select **NLS**.

    4. In the **Date Format** field, specify `RRRR-MM-DD`

    5. In the **Timestamp Format** field, specify `DD-MON-RRRR HH24:MI:SSXFF`

    To export data from a table in a format that the `ttBulkCp` utility recognizes, right-click the name of the table and select **Unload**. After you select **Unload**, step 1 (**Source/Destination**) of the **Unload Wizard** appears. In the **Format** drop-down menu, select **ttbulkcp**. After you complete step 1, click the **Next** button to advance to step 2 (**Specify Data**) of the **Unload Wizard**. After you complete step 2, click the **Next** button to advance to step 3 (**Unload Summary**). Click the **Finish** button to complete the data export operation.

    You can change the `DATE` and `TIMESTAMP` data format back to their original settings after the data has been exported.

- In TimesTen 11*g* releases up to and including 11.2.1.5, a user that has not been granted the `ADMIN` privilege cannot create PL/SQL objects such as procedures, functions and packages even if the user has been granted the `CREATE PROCEDURE` or `CREATE ANY PROCEDURE` privilege. The workaround is to grant the `SELECT` privilege on the `SYS.SYSTEM_PRIVILEGE_MAP` system table to the `PUBLIC` role.

- In TimesTen 11*g* releases up to and including 11.2.1.4, an "`agent status cannot be determined`" error is returned when you attempt to start the cache agent or the replication agent as a user that has not been granted the `ADMIN` privilege. The same error is returned when you attempt to perform an operation that is to be processed by the cache agent such as loading or refreshing a cache group.

    In TimesTen Releases 11.2.1.5.0 and later, granting the `CACHE_MANAGER` privilege to the user is sufficient to perform these operations.

- The hierarchical profile and debugging of PL/SQL procedures and functions in a TimesTen database are not supported.

5 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit

http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.