

# Oracle® TimesTen In-Memory Database

## SQL Developer Support Release Notes

Release 21.2

F38408-01

July 2021

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## Overview

This document provides late-breaking information (as well as information that is not yet part of the formal documentation) on Oracle SQL Developer regarding the management and use of Oracle TimesTen In-Memory Database.

## This Release

This is release 21.2 of SQL Developer. For the release notes of SQL Developer 21.2, see [Oracle SQL Developer 21.2 Release Notes](#).

This is release 18.1 of TimesTen. For the release notes of TimesTen 18.1, see [Oracle TimesTen In-Memory Database Release Notes](#).

We strongly recommend that users of earlier versions upgrade to these releases.

## Supported Platforms and TimesTen Releases

SQL Developer 21.2 is available on:

- Linux
- macOS (64-bit)
- Microsoft Windows (64-bit)

SQL Developer 21.2 supports:

- TimesTen Classic Release 11.2.2.8.0 or later
- TimesTen Cache Release 11.2.2.8.0 or later
- TimesTen Scaleout Release 18.1.1.1.0 or later

SQL Developer 21.2 can be used to connect to a TimesTen database that resides on any platform that is supported by TimesTen. If you connect to a TimesTen Server of an older release than the TimesTen Client used for the connection, any new features added to TimesTen since the release of the TimesTen Server are not supported.

## Required Java Versions

SQL Developer 21.2 requires Oracle Java Development Kit (JDK) 8 or 11, with a minimum version of 1.8 update 121.

## Changes in the Release

This section describes new features, enhancements, and other changes to SQL Developer to support TimesTen in this and previous releases.

### Changes in Release 21.2

- A problem is fixed where the **SQL** tab in the table view failed to show the `CREATE TABLE` statement for the table if the connection type was client/server.

### Changes in Release 20.4

- There are new features. See [New Features in Release 20.4](#).

### New Features in Release 20.4

Features supported in TimesTen Release 18.1.4.1.0 or later:

- You can create, edit, or drop password management profiles for database users in TimesTen databases. See *Working with profiles* in the *Oracle TimesTen In-Memory Database SQL Developer User's Guide*.
- The **Create User** and **Edit User** dialogs are enabled to:
  - Assign an existing profile to the user.
  - Lock the user account.
  - Expire the password.
- You can reset the password of the database user used for the TimesTen connection. See *Reset password of connected user* in the *Oracle TimesTen In-Memory Database SQL Developer User's Guide*.

### Changes in Release 20.2

- This release replaces all text instances of **TimesTen Grid** with **TimesTen Scaleout** in the user interface.

### Changes in Release 19.2

- This release now supports Oracle Java Development Kit (JDK) 11.

### Changes in Release 19.1

- There are new features. See [New Features in Release 19.1](#).

## New Features in Release 19.1

Features supported in TimesTen Scaleout Release 18.1.2.1.0 or later:

- For stop or unload database operations, you can opt to force all user connections to disconnect if the initial attempt to terminate such connections fails.

Features supported in TimesTen Scaleout Release 18.1.1.3.0 or later:

- The **Connection Details** dialog now displays information on the element, host, instance, connection name, process ID, and type of connection for the selected connection. It also displays additional information on client/server or proxy connections.

## Changes in Release 18.2

- There are new features. See [New Features in Release 18.2](#).

## New Features in Release 18.2

Features supported in TimesTen Release 18.1 or later:

- You can use SQL Developer to work with TimesTen Scaleout databases. For more information, see "Working with TimesTen Scaleout" in the *Oracle TimesTen In-Memory Database SQL Developer User's Guide*.

## Changes in Release 4.1

- There are new features. See [New Features in Release 4.1](#).

## New Features in Release 4.1

Features supported in TimesTen Release 11.2.1.0 or later:

- You can set a custom substitution character that TimesTen uses for variable substitution. By default, the `set define` attribute is set to `off` and uses the substitution character of `&`. For more information on the `set define` attribute, see "ttlsq!" in the *Oracle TimesTen In-Memory Database Reference*.

## Changes in Release 4.0

- When you create a named connection to connect to a TimesTen database, the **User specified** connection type is now called **Advanced**.
- You can set the **Autocommit** option directly from the **New/Select Database Connection** dialog. This new autocommit option is set at the connection level. In previous releases the autocommit option is set at the running instance level.
- There are new features. See [New Features in Release 4.0](#).

## New Features in Release 4.0

Features supported in TimesTen Release 11.2.2.5 or later:

- You can capture `ttStats` snapshots and generate `ttStats` reports that compare two snapshots. A `ttStats` snapshot is a collection of performance metrics. TimesTen collects performance metrics from TimesTen system tables, system views, and built-in procedures.
- There are new pre-defined Performance reports. Performance reports show statistics information and statistics snapshots for the TimesTen database. These reports are available in the **Performance** category of the **TimesTen Reports**.

Features supported in TimesTen Release 11.2.2.4 or later:

- SQL Developer supports the TimesTen Index Advisor which can evaluate a SQL workload and recommend indexes. The indexes that the TimesTen Index Advisor recommends can improve the performance for joins, single table scans, and `ORDER BY` or `GROUP BY` operations.
- You can load data using parallel threads from an Oracle database into a TimesTen database without creating a cache grid, cache group, or cache table.

## Known Problems and Limitations

- When you use some Java 8 versions on Linux, the pie chart in the table distribution tab cannot be seen. The drop-down list for the pie chart and the bar chart may look distorted. As a workaround, select the bar chart to visualize the data.
- To use SQL Developer 21.2 on Windows to manage a grid or database from TimesTen Scaleout, install a TimesTen Client (version 11.2.2.8.0 or higher) and set your environment variables with the `ttenv` script. By default, the `ttenv` script sets the `CLASSPATH` environment variable to:

```
installation_dir\lib\ttjdbc5.jar;
```

However, using `ttjdbc5.jar` with Oracle Java Development Kit (JDK) 8 causes the Java Virtual Machine to crash. Depending on the available `.jar` file, set your `CLASSPATH` environment variable to use either

```
installation_dir\lib\ttjdbc7.jar; or installation_dir\lib\ttjdbc8.jar;
```

- 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**, then select **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 to 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**, then select **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.

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

## 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 that have purchased support 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.

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