Oracle® SQL Developer

Oracle TimesTen In-Memory Database Support Release Notes

Release 20.2

F33023-01

July 2020

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
- Known problems and limitations
- Documentation Accessibility

1 Changes in this release

This section lists changes between releases:

- Changes for Release 20.2 from Release 19.2
- Changes for Release 19.2 from Release 19.1
- Changes for Release 19.1 from Release 18.2
- Changes for Release 18.2 from Release 4.1
- Changes for Release 4.1 from Release 4.0
- Changes for Release 4.0 from Release 3.1

1.1 Changes for Release 20.2 from Release 19.2

- This release replaces all text instances of **TimesTen Grid** with **TimesTen Scaleout** in the user interface. (The documentation will be updated at a later date.)

1.2 Changes for Release 19.2 from Release 19.1

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

1.3 Changes for Release 19.1 from Release 18.2

- There are new features. See New features in release 19.1.

1.3.1 New features in release 19.1

Features supported in TimesTen Scaleout Release 18.1.2.1 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 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.

1.4 Changes for Release 18.2 from Release 4.1

- There are new features. See New features in release 18.2.

1.4.1 New features in release 18.2

Features supported in TimesTen In-Memory Database 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 SQL Developer Oracle TimesTen In-Memory Database Support User's Guide*.

1.5 Changes for Release 4.1 from Release 4.0

- There are new features. See New features in release 4.1.

1.5.1 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 `ttIsql` attribute, see "ttIsql" in the *Oracle TimesTen In-Memory Database Reference*.

1.6 Changes for Release 4.0 from Release 3.1

- 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.

1.6.1 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.

2 Supported TimesTen releases and platforms

SQL Developer 19.2 is available on 64-bit Microsoft Windows, Linux systems, and macOS. SQL Developer 19.2 supports Oracle TimesTen In-Memory Database 11.2.2.8.0 and later, TimesTen Application-Tier Database Cache 11.2.2.8.0 and later, and TimesTen In-Memory Database 18.1, 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.

SQL Developer 19.2 requires Oracle Java Development Kit (JDK) 8 or 11, with a minimum version of 1.8 update 121.

3 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 19.2 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.

4 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.

Oracle SQL Developer Oracle TimesTen In-Memory Database Support Release Notes, Release 20.2
F33023-01

Copyright © 2008, 2020, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software" or "commercial computer software documentation" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.