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TimesTen In-Memory Database What's New in the 18.1.4.1.0 Release?

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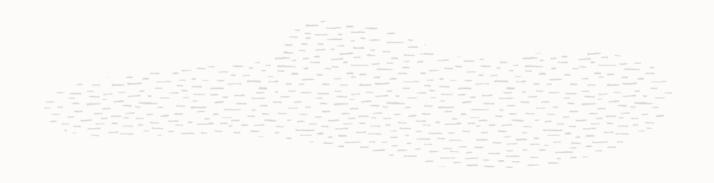
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Agenda

- Platform support update
- 2 New core features
- 3 New Classic features
- 4 New Cache features
- 5 New Scaleout features
- 6 Licensing changes





Platform support update

Server platforms

Oracle Linux 64-bit: 6, 7 and 8.2+

RedHat Enterprise Linux 64-bit: 6, 7 and 8.2+

SUSE Enterprise Server 64-bit: 12 and 15

- Intel ICC 17.0.2.174, GCC 4.4.7
- Oracle JDK or OpenJDK 8, 9, 10, 11, 12, 13 and 14

Solaris Intel and SPARC 64-bit: 11.3 and 11.4

- Oracle Developer Studio 12u3
- Oracle JDK 8, 9, 10 (both) and 11, 13 (SPARC 64 only)

IBM AIX for Power PC 64-bit: 7.1 and 7.2

- IBM xlC 13.1.0 Compiler
- IBM JDK 8

NOTE: TimesTen **Scaleout** is only supported on Linux platforms



Platform support update

Client only platforms

Oracle Linux 32-bit: 6

RedHat Enterprise Linux 32-bit: 6

- Intel ICC 17.0.2.174, GCC 4.4.7
- Oracle JDK or OpenJDK 8 and 9

Microsoft Windows 64-bit: 8.1, 10, Server 2012 R2, Server 2016, Server 2019

- Visual Studio 2012, 2013, 2015, 2017 and 2019
- Oracle JDK 8, 9, 10 and 11

macOS 64-bit: **10.13, 10.14 and 10.15**

- Xcode 5.1.1 and higher
- Oracle JDK 8, 11 and 14



Platform support update

Oracle Database and Clusterware

TimesTen Cache supports Oracle Database 12.1, 12.2, 18c and 19c

TimesTen Replication supports Oracle Clusterware 12.2, 18c and 19c

New core features

For all deployment modes

Support for TLS encryption of client-server traffic*

• Utility provided to create necessary certificates

Allow database user creation and password changes over <u>encrypted</u> client-server connections Transaction timeout

User can set a maximum duration for a transaction beyond which it will be automatically aborted

Added the VSIZE() SQL function

Added the TO_TIMESTAMP() SQL function

Added support for CURRENT_SCHEMA in SYS_CONTEXT

Added support for the ACCESSIBLE BY clause for CREATE PACKAGE, CREATE PROCEDURE and CREATE FUNCTION

Oracle components (libraries, PL/SQL etc.) upgraded to 12.1.0.2



^{*} TLS is not supported by the Linux 32-bit client.

New Classic features

For Classic and Cache deployment modes

TimesTen Kubernetes Operator

- Deploy, monitor and manage TimesTen Classic A/S pairs in Kubernetes containers
- Full automation of all aspects of High Availability

Support for TLS encryption of replication traffic

• Utility provided to create necessary certificates

Generic automatic client failover

Allows failover across a set of databases when A/S pair replication is not being used



New Cache features

For Cache deployment mode

Dynamic Hybrid Cache Group

- A new, additional style of Dynamic Readonly Cache Group
- Allows a PK/FK table hierarchy with a synthetic 'root' table that does not exist in Oracle
- Useful for certain specific use cases see documentation for more details

Automatic PassThrough if a Dynamic Load query would load too many rows

- Based on an optimizer hint TT_DynamicPassthrough(N)
- If query would use Dynamic Load, but would load more than N rows, then dynamic load is <u>not</u> performed and instead the query is passed through to Oracle



New Scaleout features

For Scaleout deployment mode

WAN friendly remote backup support

- New backup type <u>Staged</u> backup
- Significantly faster than normal backups when the target repository is accessed via a high latency, low bandwidth connection, such as a WAN

Performance improvement for dbImport

The dbImport operation can now use multiple threads to increase import performance

Non-blocking epochs

• Reduces overall impact of epoch transactions and improves resilience of the system to transient outages



Licensing Changes

Simpler and more flexible

TimesTen In-Memory Database license

• Now includes all TimesTen functionality (i.e. includes Cache functionality)

TimesTen Application-Tier Database Cache license

- Now includes all TimesTen functionality (i.e. includes Scaleout functionality)
- Explicitly requires that the deployment is a caching use case with Oracle Database



Q & A



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