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

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Agenda

- 1 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 xIC 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 encrypted 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 not 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 – Staged 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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