

# ORACLE COHERENCE: DATA GRID SOLUTION

## KEY FEATURES

### THE ORACLE COHERENCE DATA GRID SOLUTION INCLUDES

- Capacity on demand
- True linear scalability
- Distributed caching
- Single system image
- Dynamic High Availability (HA) partitioning
- Automatic load balancing
- Transactional consistency
- Gridwide lock manager
- Database read-through, write-through, and asynchronous write-behind
- Parallel query and cache indexing
- Real-time continuous query
- Parallel gridwide agents
- Parallel gridwide data aggregation
- Real-time desktop functionality
- Gridwide Java Management Extensions (JMX) for management and monitoring
- Oracle TopLink, Hibernate, and Java Persistence API (JPA) support
- Native Java and .NET support
- J2EE and ASP.NET HTTP session management providers

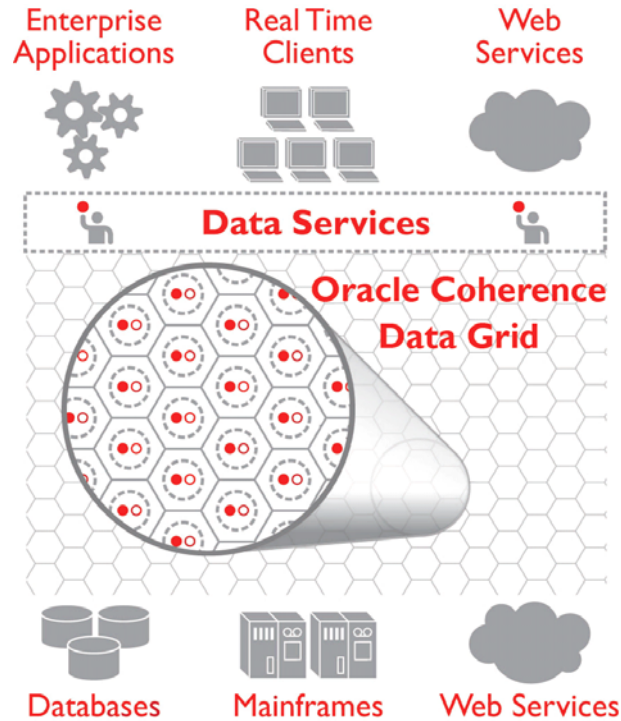
*Oracle Coherence is an in-memory data grid solution that enables organizations to predictably scale mission-critical applications by providing fast access to frequently used data. Data grid software is middleware that reliably manages data objects in memory across many servers. By automatically and dynamically partitioning data, Oracle Coherence ensures continuous data availability and transactional integrity, even in the event of a server failure. It provides organizations with a robust scale-out data abstraction layer that brokers the supply and demand of data between applications and datasources.*

### The Oracle Coherence Advantage

**Performance** – Oracle Coherence solves latency problems and drives dramatic increases in performance by moving data closer to applications for efficient access. In-memory performance alleviates bottlenecks and reduces data contention, improving application responsiveness.

**Reliability** – Oracle Coherence is built on a fault-tolerant mesh that provides data reliability and accuracy. Organizations can meet data availability demands in mission-critical environments with Oracle Coherence support for data tolerance and continuous operation. The reliability of the data grid minimizes the need for applications to compensate for server and network failures, streamlining the development and deployment process.

**Scalability** – Oracle Coherence enables applications to scale linearly and dynamically for predictable cost and improved resource utilization. For many applications, it offers a straightforward approach to increasing the effective capacity of shared datasources. Oracle Coherence handles continually growing application loads without risking data loss or interruption of service.



Oracle Coherence data grid

### Oracle Coherence at Work

**Caching** – Applications cache data in the data grid, avoiding expensive requests to back-end datasources. The shared data cache provides a single, consistent view of cached data. Reading from the cache is faster than querying back-end datasources and scales naturally with the application tier.

**Analytics** – Applications query and analyze data in memory, leveraging the massive parallel capabilities of the data grid. Oracle Coherence provides out-of-the-box support for searching, aggregating, and sorting data, with support for custom analytical functions. It parallelizes operations across the entire data grid, ensuring that server failures or slowdowns do not affect calculation results.

**Transactions** – Applications manage transactional data in memory inside the data grid. A combination of unparalleled scalability and performance makes Oracle Coherence optimal for extreme transaction processing workloads. Its best-of-breed in-memory replication and guaranteed data consistency mean that it is suitable for managing transactions in memory until they are persisted to an external datasource for archiving and reporting.

**Events** – Applications respond in real time to data changes throughout the data grid. Every transaction can potentially trigger many events, each of which may need to be processed in a matter of milliseconds. Oracle Coherence provides event-handling technologies capable of handling intense event rates, including server-side stream processing and interactive technologies such as “continuous query” for real-time desktop applications.

### Contact Us

For more information on Oracle Coherence, call +1.800.ORACLE1 to speak to an Oracle representative, or visit [oracle.com/products/middleware/coherence](http://oracle.com/products/middleware/coherence).

Copyright 2007, Oracle. All Rights Reserved.

This document is provided for information purposes only, and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor is it subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document, and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.