

# ORACLE COHERENCE FOR MAINFRAME OFFLOADING

## KEY FEATURES AND BENEFITS

ORACLE COHERENCE IS THE #1 IN-MEMORY DATA GRID.

### FEATURES

- Elastic Data
- Capacity on demand
- True linear scalability
- Distributed caching
- Single system image
- Dynamic High Availability (HA) partitioning
- Automatic load balancing
- Transactional consistency
- Grid-wide lock manager
- Database read-through, write-through, and asynchronous write-behind
- Parallel query and cache indexing
- Real-time continuous query
- Parallel grid-wide agents
- Parallel grid-wide data aggregation
- Real-time desktop functionality
- Grid-wide Java Management Extensions (JMX) for management and monitoring
- Oracle TopLink, Hibernate, and Java Persistence API (JPA) support
- Native Java, C++, and .NET support
- Dynamic load balancing of Coherence\*Extend clients
- Coherence\*Web - J2EE session management provider
- Coherence\*Web SPI for WebLogic Server
- Coherence\*Web SPI for Glassfish
- Session Provider for the Microsoft .NET Framework
- Configurable off-heap Storage
- The Coherence Guardian
- Coherence Query Language (CohQL)
- Transaction Framework API

*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 data sources.*

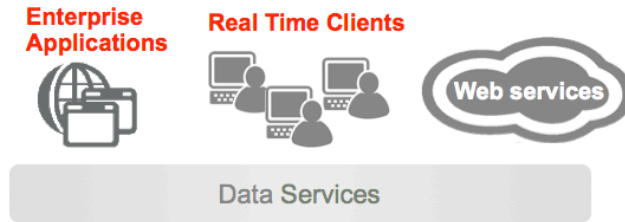
### The Oracle Coherence Advantage

**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.

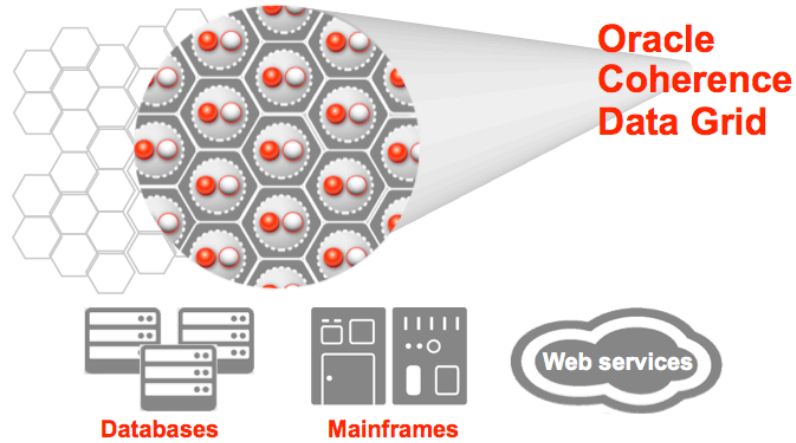
**Scalability** – Oracle Coherence enables applications to scale linearly and dynamically for predictable cost and improved resource utilization. For many applications, it offers a straightforward approach to increasing the effective capacity of shared data sources. Oracle Coherence handles continually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

- XA Compliant Resource Adaptor
- ACID transaction Guarantees
- Multi-version Concurrency Control (MVCC)
- Native SSL Support



**BENEFITS**

- Fast reliable access to application data
- Near memory speed access to data, regardless of storage medium
- Enables in-memory data analytics and event processing
- Reduces load on shared data sources
- Optimized for scaling-out on commodity hardware
- Tera-scale support for in-memory data grids
- Native integration for Oracle's WebLogic Server and WebLogic Portal
- Native Integration for Glassfish Server
- Automatically detects and corrects service disruptions
- Integration with Transactional Applications
- Tighter integration with WebLogic (XA Support)
- Improved Operational Control
- Improve Application Responsiveness
- Server Consolidation
- Pluggable Authentication Framework
- Integration with F5's BIG-IP® Local Traffic Manager™
- Integration with F5's BIG-IP SSL Acceleration™
- Seamlessly manage data across memory and disk-based devices
- Intelligently distribute and manage client connections
- Simplify the configuration of large-scale environments



**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 data sources 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 data source 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.

## RELATED PRODUCTS

Oracle Coherence enables in-memory data management for clustered applications and application servers. Coherence makes sharing and managing data in a cluster as simple as on a single server.

## RELATED PRODUCTS

To make application grid computing possible, Oracle brings together key industry-leading technologies:

- Oracle Coherence
- Oracle WebLogic Suite
- Oracle WebLogic Server
- Oracle Application Grid
- Oracle JRockit
- Oracle Enterprise Manager
- Oracle WebLogic Operations Control
- Oracle Tuxedo
- Java Technology

## Coherence for Mainframe Offloading

As companies face increasing pressure to reduce the cost of IT operations and deliver higher business value, reducing cost of Mainframe has become top priority for CFOs and CIOs. Oracle Coherence provides a solid platform to offload the mainframe data into the data-grid for fast, reliable performance and at the same time significantly reducing the Mainframe MIPS cost.

Companies with significant portfolio of Mainframe applications have many challenges such as finding skilled labor for the legacy code, adapting to ever changing business requirements and providing web access to these applications. Many times there is overload on the Mainframe due to simple read-only reporting of the data. These requirements can significantly increase the MIPS costs.

## Customer Example

A global car rental company was experiencing phenomenal customer and partner growth from many different channels. These web based applications required significant read access to the Mainframe data, spiking the growth in MIPS usage causing higher cost of operations. Oracle Coherence based solution lowered the MIPS usage by caching many of the read-only data such as pricing by location, car IDs, inventory etc. Car rental company can also run the reports against this cached data to get real-time view of the business and how these channels are performing. Car rental company reduced the cost of MIPS by 32% with 98%+ hit ratio on the cached data.

“Our investment in Oracle WebLogic Suite has helped us improve customer satisfaction and reduce transaction processing costs significantly. What really distinguishes Oracle WebLogic Suite - Oracle WebLogic Server and Oracle Coherence - is its superior performance and ability to cost-effectively scale on demand. We are committed to WebLogic Suite and see no reason to change our strategy. Every bit of service, convenience, and trust has a significant impact on customer loyalty in this business, and the WebLogic solution has strengthened our competitiveness.”

- A Principal Architect

## Contact Us

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



Oracle is committed to developing practices and products that help protect the environment

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