ORACLE®   ✕ TANGOSOL™

**Oracle and Tangosol
Acquisition Announcement**

March 23, 2007

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract.   It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

What We Are Announcing

- **Oracle has Agreed to Acquire Tangosol**
  - Transaction expected to close in April 2007

- **About Tangosol**
  - Leading provider of reliable in-memory data grid technology
  - Headquarters in Somerville, MA
  - 100+ customers globally over 1,500 deployments

- **Accelerates Oracle's Product Strategy**
  - Foundation technology for next generation middleware
    - Reliable in-memory data grid
    - Extreme transaction processing enabler
  - Tangosol is a leading provider of reliable in-memory data grid infrastructure
  - Complements Oracle's middleware, database and applications

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Why Tangosol?

- **Leading Best-of-Breed In-Memory Grid Vendor**
  - Technology highly differentiated with over 5 years of R&D
  - Real time analysis & extreme transaction processing capabilities
  - Brings Java & J2EE to new class of mission-critical applications
  - Further differentiates Oracle's Grid Computing value proposition
  - Successfully deployed at over 1,500 implementations
- **Proven Technology**
  - Adopted widely in tier 1, Global 1000 customer base
  - Mission critical references in financial services, travel, retail insurance, online gaming, government
  - Integrated with Oracle, BEA, IBM, JBoss, open source and .NET
- **Experienced World Class Organization**
  - Highly skilled & experienced product development team
  - Deep domain knowledge in key high end industry verticals
  - Excellent support & adoption by global system integrators

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Strategic Importance to Oracle

- **Extreme Transactions Market Segment Rapidly Emerging**
  - SOA, Web 2.0 and EDA pushing infrastructures to growth limits
  - Traditional approaches unable to cope with processing growth
  - Highly costly for traditional architectures to scale to demands

- **Complements Oracle's Existing Strengths**
  - Oracle already leader in middleware grid technology
  - Extends Oracle Fusion Middleware for reliable in-memory data grid
  - Already integrated with Oracle Application Server and complements key Oracle product lines – SOA, EDA, Web Center, TimesTen

- **Why Now?**
  - Organizations reaching limits of growth with current approaches
  - Customers re-thinking architecture in light of SOA, Web 2.0, EDA
  - Differentiates Oracle Application Server vs. competitors

Expected Customer & Partner Benefits

- **Tangosol Customers**
  - Increased R&D investment in Tangosol products
  - Better integration with Oracle technology & applications
  - Access to Oracle's global sales, support, services organizations

- **Oracle Customers**
  - Best-of-breed in-memory data grid suite
  - Complements Oracle's middleware, applications and database
  - Access to Tangosol domain expertise

- **Oracle & Tangosol Partners**
  - ISVs: Broader opportunities to embed technology
  - SIs: Strategically partner for next generation middleware
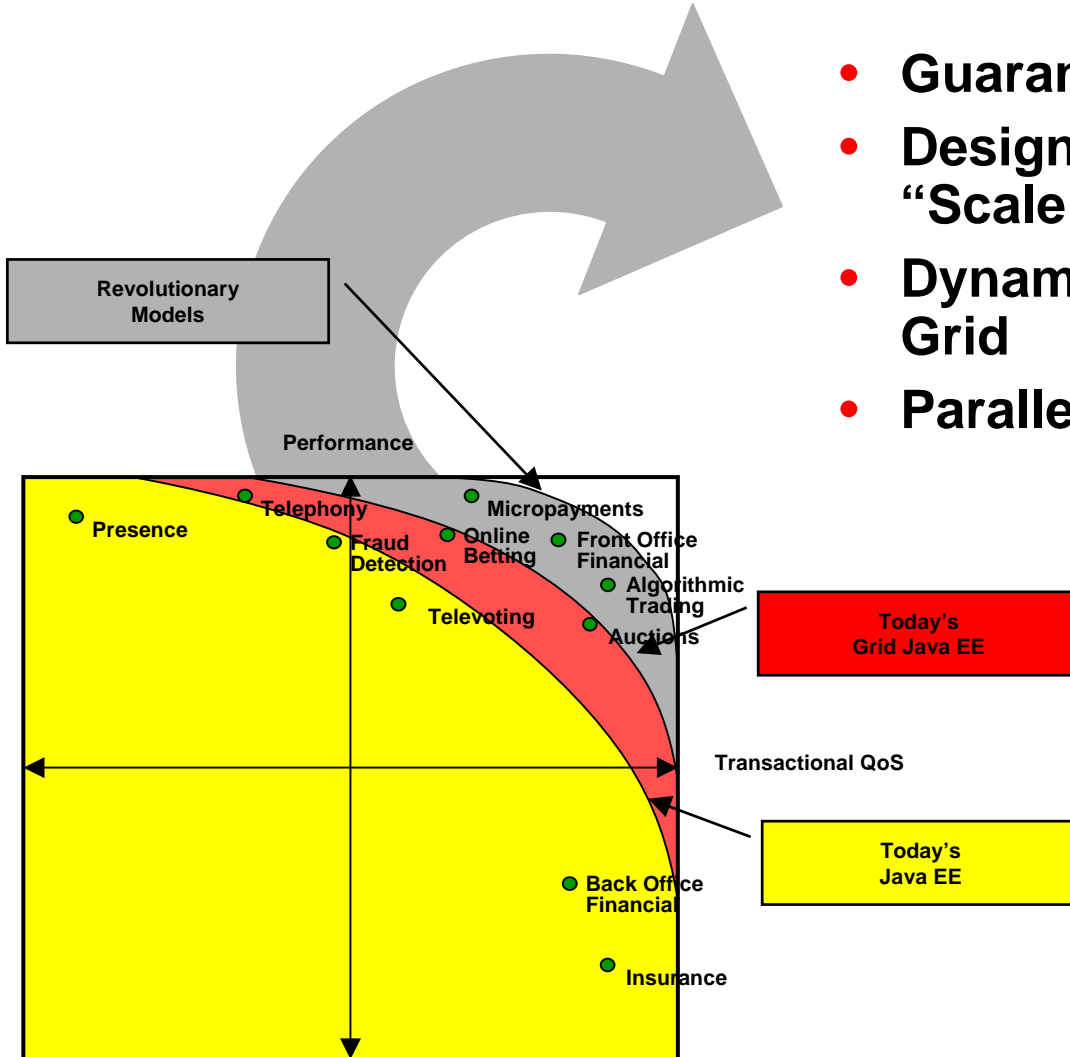 - VARs: Expanded opportunities for value-added solutions

Reliable In Memory Data Grid

Customer Challenge

- **Current Infrastructures Unable to Scale to New Demands**
  - Exploding transaction volumes (capital markets, trading, online …)
  - Business requirements for real time information (Web 2.0)
  - SOA and EDA putting huge demand on backend processing

- **New Architectures Required**
  - Caching data to accelerate applications
  - Transactional system of record offloading backend processing
  - Real time data analysis done across massive data grids
  - Event processing with in-memory matching across clusters

- **While Integrating with Existing Middleware and Databases**
  - Need to plug into and leverage existing middleware
  - Application servers, integration servers, messaging systems
  - Real time/in-memory databases, embeddable systems

Tangosol Coherence for Extreme Transaction Processing

- **Guaranteed Data Reliability**
- **Designed for Massive Application "Scale Out"**
- **Dynamic, Distributed In Memory Data Grid**
- **Parallelized Transaction Processing**

Revolutionary Models

Performance

Telephony

Presence

Micropayments

Fraud Detection

Online Betting

Front Office Financial

Algorithmic Trading

Televoting

Auctions

Today's Grid Java EE

Transactional QoS

Today's Java EE

Back Office Financial

Insurance

Tangosol Coherence Industry Coverage

Coherence … ensures data is "closer" to the applications issuing transactions against one or more databases/data stores … The result is almost linear scalability from 2 million to more than 60 million "aggregations" per second, according to a joint investment-bank benchmark

February 2007
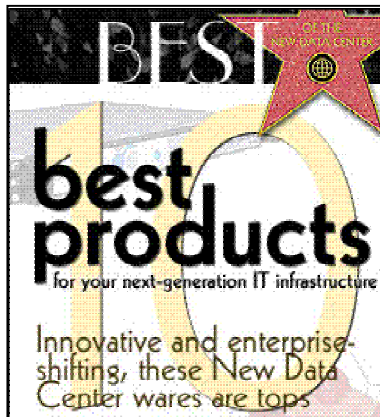
Top 10 Product in Network World Next Generation Data Center Product Review

'*With Coherence, performance has improved by as much as 100 times …*'

Network World, March 2007

Tangosol Product Line

Coherence™
Caching
Edition

Coherence™
Application
Edition

Data
Client

RealTime
Client

Compute
Client

Coherence™
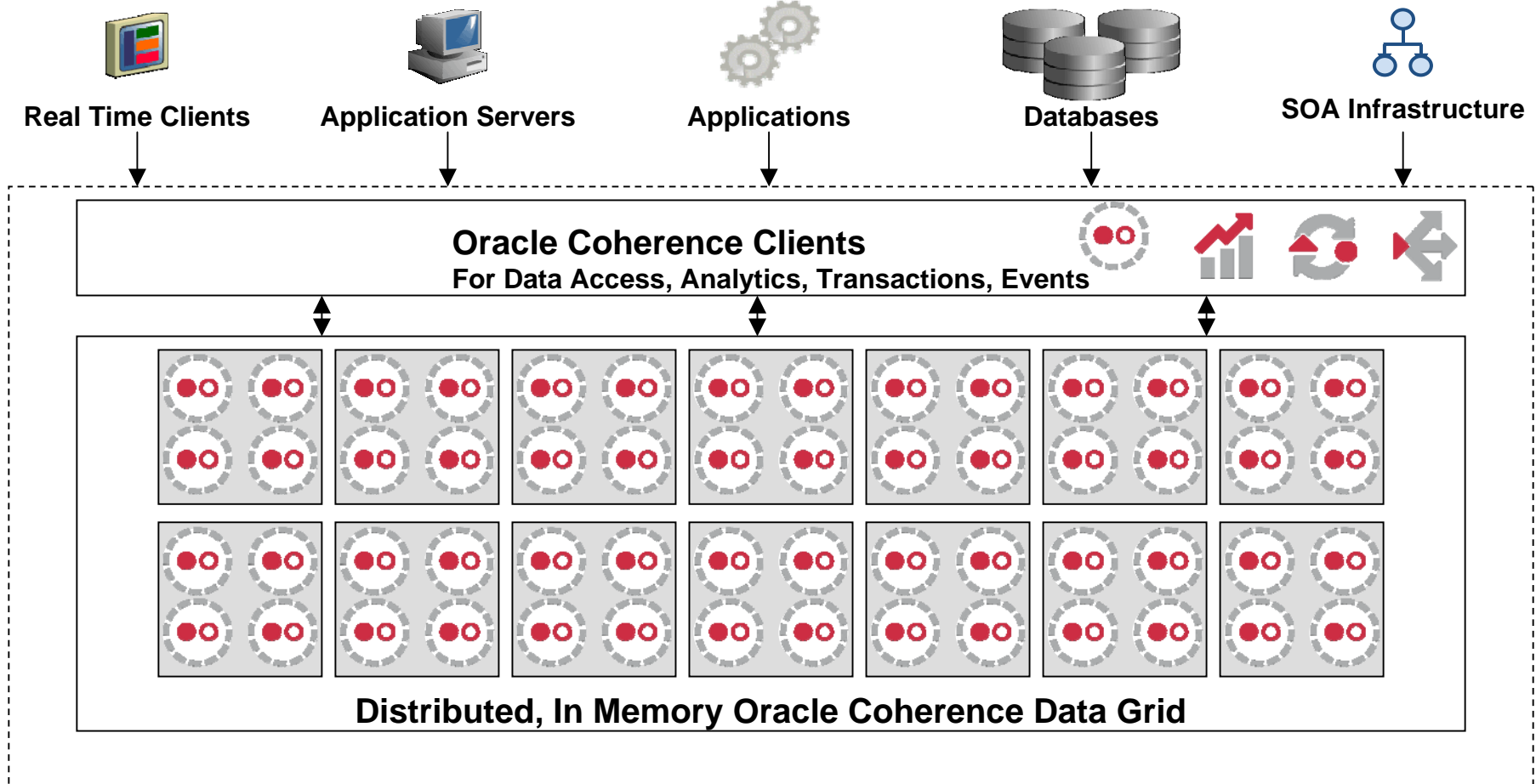Data Grid
Edition

SOA   EDA

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Reliable In-Memory Data Grid Service

Real Time Clients   Application Servers   Applications   Databases   SOA Infrastructure

Oracle Coherence Clients
For Data Access, Analytics, Transactions, Events

Distributed, In Memory Oracle Coherence Data Grid

Coherence Caching Edition

- **Customer Value Proposition**
  - Enable faster access to frequently accessed data
  - Reduce load on shared data sources
  - Provides Data Grid Edition Clients – Java, .NET

- **Sample Applications**
  - Offloading reference data from backend to memory, reducing backend load
  - Accelerating business logic with frequently used data in memory

- **Customer Benefits**
  - Manageable and scalable host for the cache
  - Guarantees consistent data and data integrity
  - Broad industry support as a plug-in cache

Coherence Caching Edition
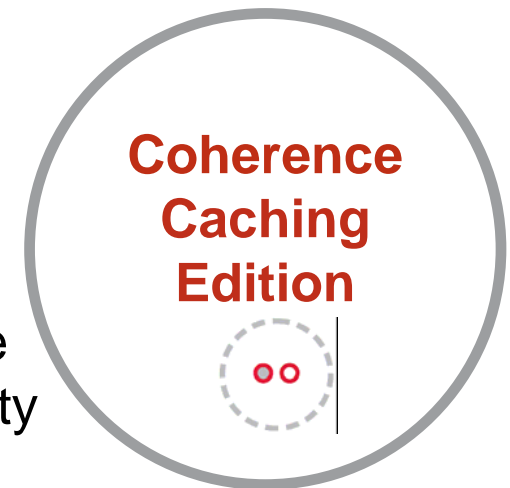
Coherence Application Edition

- **Customer Value Proposition**
  - Offload and accelerate application servers
  - Enables massive scaling of stateful Web applications
  - Co-locate business logic and data for efficiency
  - Transactional data processed in real time

- **Sample Applications**
  - Online travel booking – session state in-memory data grid
  - Online insurance broker – in-memory transactional system of record

- **Customer Benefits**
  - Reduce Web tier costs
  - Accelerate application business logic
  - Offload backend transaction processing

Coherence Application Edition

Coherence Data Grid Edition

- **Customer Value Proposition**
  - Enables transactional in-memory system of record
  - Enable complex analytics through massive parallel processing across the grid
  - Enable query rates beyond what a database can handle

- **Sample Applications**
  - Financial Services: Real time risk management
  - Online Gaming: Real time event matching

- **Customer Benefits**
  - Multi-site data grid infrastructure
  - Cross-platform real time client support
  - Queries, transactions, write-behind caching, compute grid features
  - Once-and-only-once processing for external events
  - Real-time handling for data-driven events

Coherence Data Grid Edition

SOA   EDA
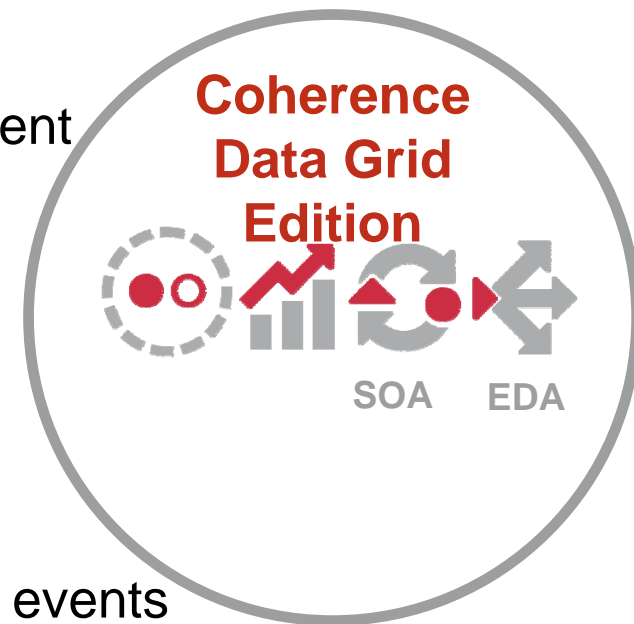
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Oracle Fusion Middleware
Natural Integration Points

Session Sharing and Data Caching

Clustered BAM Infrastructure

User Interaction
Portals, Content, Search, Desktop, Mobile, VoIP

Business Intelligence
ETL, Q&A, OLAP, Reports, Alerts, Real Time

Integration & Process Management
Messaging, ESB, BPM, B2B, BAM, MDM

Application Server
J2EE, WS-*, Events, Rules

Grid Infrastructure
Coherence Grid and Clusters

Development Tools
SOA Tools & Framework

Systems Management
System Application Services

Identity Management
Directory Provisioning, Single Sign-On, Identity Administration

Data Caching, Extended State Replication, Shared In-Memory Infrastructure

Accelerated Stateful Business Processes

Shared Service for Java, .NET, PHP, Ruby …

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Oracle DBMS, TimesTen, Berkeley DB
Natural Integration Points

Oracle Berkeley DB
(Java Edition)

**Cache Overflow Integration
with Coherence**

Coherence

**Berkeley DB
Cache Overflow**

Middleware Infrastructure
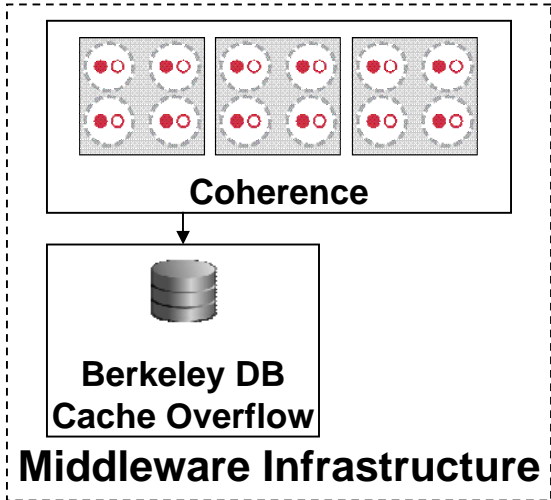
Oracle TimesTen

**Clustered Caching
with Coherence**

Coherence

Coherence

**Times
Ten**

**Times
Ten**

Middleware Infrastructure
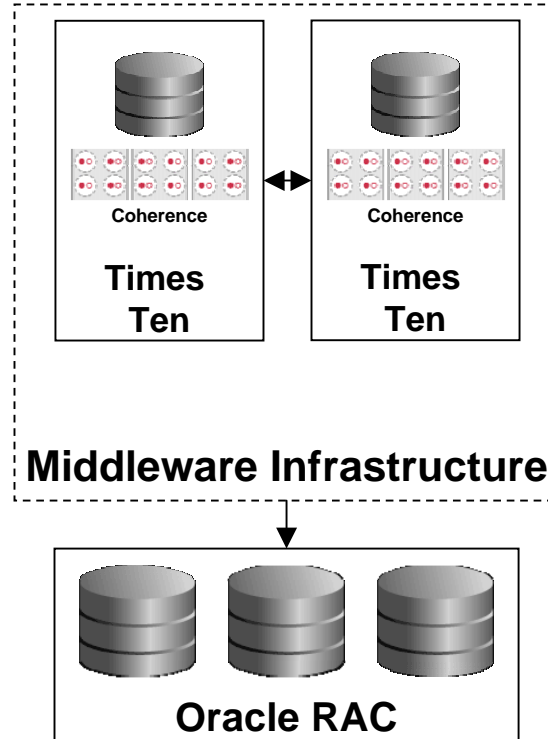
Oracle RAC

Oracle RAC

**Persistence QoS
with Coherence**

**Application
Servers**

**Application
Servers**

Coherence

Middleware Infrastructure

Oracle RAC
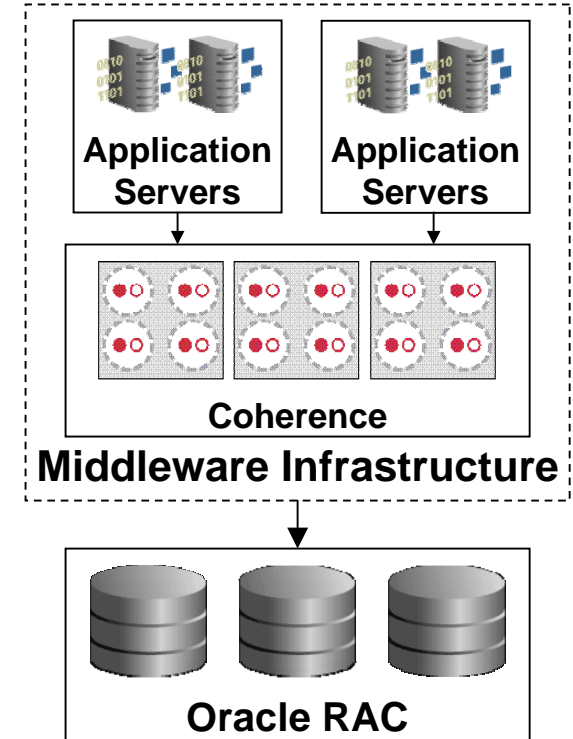
Shared Infrastructure Service for Oracle Fusion Middleware

External Users

Internal Users

Internet

Router

Internal Users

Internal Users

Firewall

Firewall

Firewall

Web Tier

WebCenter

Java EE

SOA

IDM

Coherence Data Grid Services

RAC
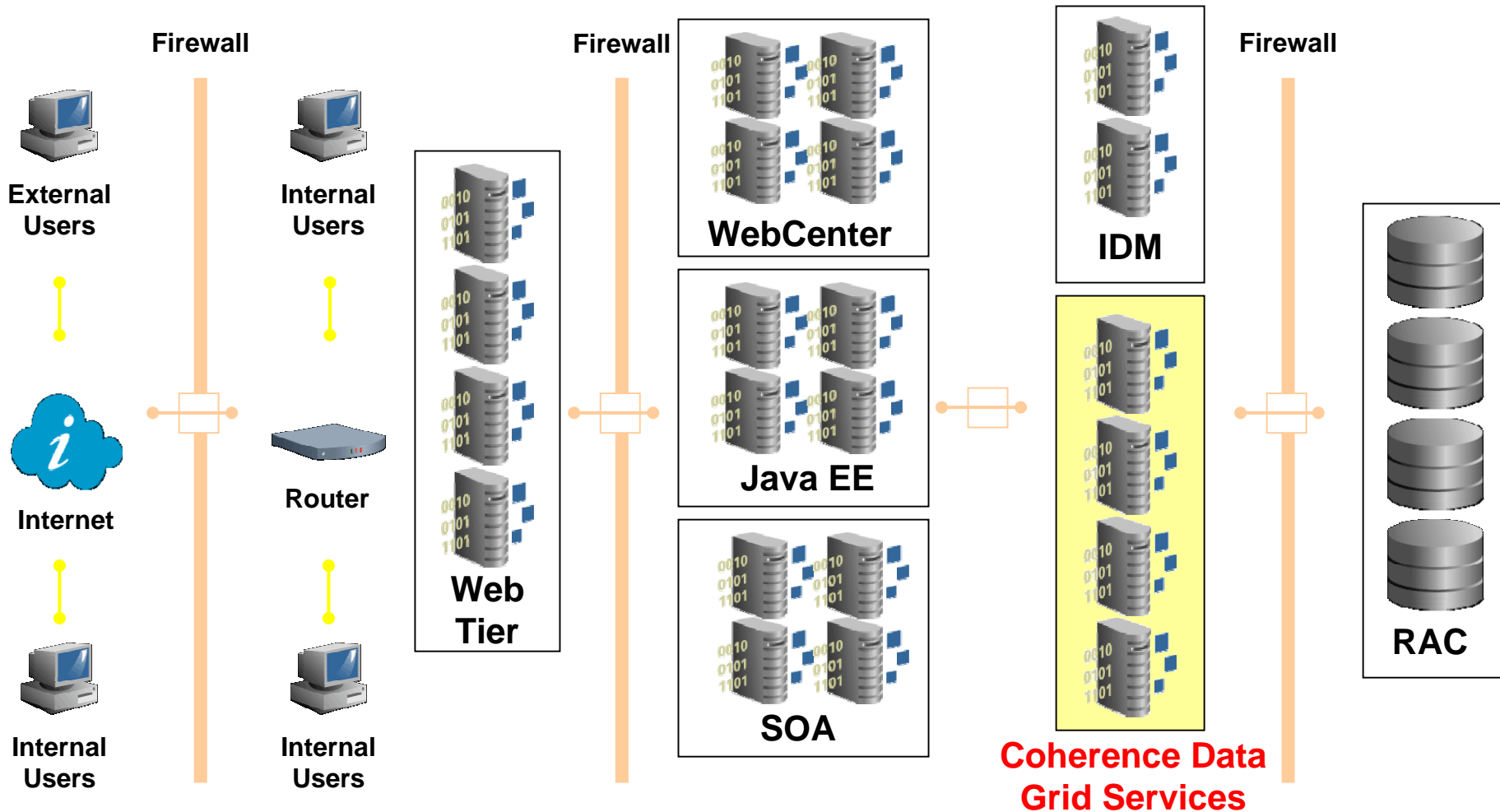
Oracle Coherence in Maximum Availability Architecture

Data Center 1

Data Center 2

Global Router

Firewall

Firewall

Web Tier

Web Tier

Firewall

Firewall

WebCenter

SOA

J2EE

WebCenter

SOA

J2EE

Low Latency High Bandwidth WAN

Coherence Data Grid Service

IDM

IDM

Firewall

Firewall

RAC

OracleAS Guard

RAC
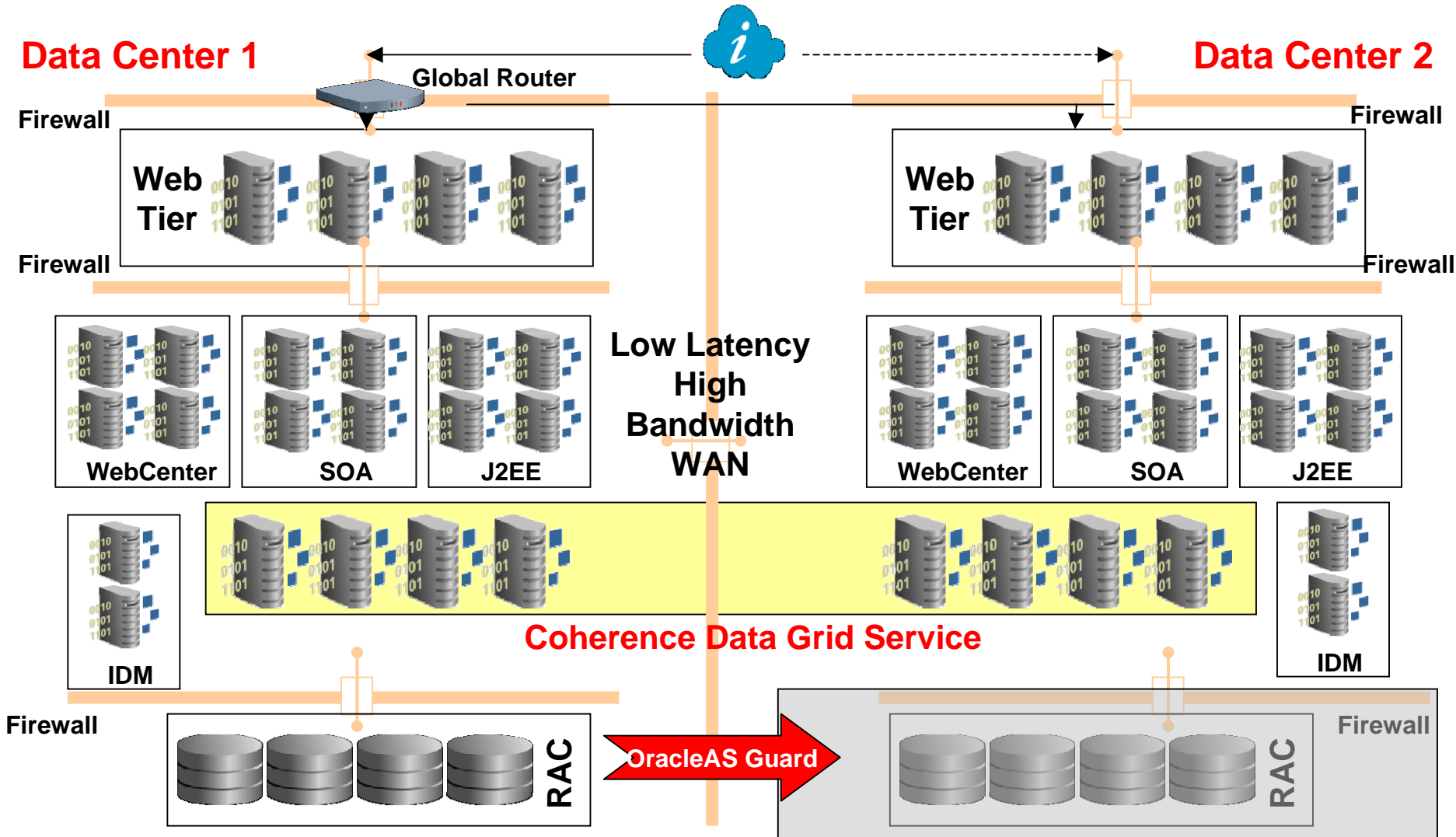
Customer Success

Customers

100 Direct Customers and 1,500+ production installations

Online Insurance Company - Caching

- **Problem**
  - Managing user-entered policy information on public web site.
  - Persisting profiles to backend required upwards of one second – multiplied by thousands of concurrent users
- **Challenge**
  - Needed to offload rapidly expanding middleware processing from core backend database processing
- **Solution**
  - Applications request data from the In-Memory Data Grid rather than backend data sources
- **Benefits**
  - 90% reduction of backend load = increase in capacity for new operations
  - Application survived an extended backend outage with no impact
- **Tangosol Coherence Feature Fit**
  - Manageable and scalable host for the cache
  - Guarantees consistent data and data integrity
  - Broad industry support as a plug-in cache

Large Financial Institution - Analytics

- **Problem**
  - Query-intensive Portfolio Management application required 30+ seconds to generate pages via database queries
- **Challenge**
  - Portfolio managers require rapid access to accurate information
- **Solution**
  - Applications execute all queries against the In-Memory Data Grid - from simple queries to advanced scenario modeling
- **Benefits**
  - No changes to database schema: operational cost savings
  - All access to database during off-peak hours: lowered operational impact
- **Tangosol Coherence Feature Fit**
  - Built-in query support
  - User-defined parallel calculations
  - Stable results even with server failure

Global Hospitality Chain - Transactions

- **Problem**
  - Throughput challenges for rule-based price-optimizing reservation engine due to volume of transactions exceeding backend processing capacity
- **Challenge**
  - Enable thousands of customer service representatives to maximize per-stay hotel revenue
- **Solution**
  - Use in-memory data grid for system of record for all transactions
- **Benefits**
  - Moving event processing into application tier increased capacity to handle peak loads
  - Enabled application developers to modify logic without impacting the database; operational cost savings & increased flexibility
- **Tangosol Coherence Feature Fit**
  - Continuous availability capabilities of in-memory data grid fundamental to transactional integrity

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Organizational Alignment

- **Tangosol Development Team**
  - Will Becomes part of Oracle Fusion Middleware Development
  - All development staff expected to join Oracle Development

- **Tangosol Sales**
  - Becomes part of Oracle Fusion Middleware Sales
  - Specialists retained to sell value proposition to Global 1000

- **Tangosol Support**
  - Operations will be integrated with Oracle's Global Support
  - Supplemented by Oracle Worldwide Support

- **Tangosol Marketing**
  - Supplemented by Oracle Global Marketing & Developer Programs

Next Steps

- **Public Announcement**
  - March 23, 2007

- **Communicate with all Stakeholders**
  - Oracle keynote at TSSJS on March 23, 2007
  - Press & analyst briefings: Week of March 26, 2007
  - Customer briefings: Week of March 26, 2007

- **Complete Transaction**
  - Expect to close in April 2007

- **More information can be found at:**
  - www.oracle.com/tangosol

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ORACLE IS THE INFORMATION COMPANY