

Oracle Coherence in Sisal's Architectures

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ORACLE OPEN WORLD



September 16–19, 2019 SAN FRANCISCO

About Sisal SpA: Gaming and Payment Services

Sisal today is a major Italian group operating in the Gaming and Payment Services sector

Turnover of about **18 Billion Euros** Over **1,800 employees** More than **48,000 points of sale**

Sisal manages a broad offering of on- and offline games: **lotteries**, **betting**, **casino** games and **gaming machines**

Offers the public in excess of **500 payment services**, through its network of retailers and over 80 partners





14 Million Customers in Italy

14 MIn Active Customers*

SisalPaySoperEnalottoSisal.it12 Mln5 Mln> 240Kusers ofplayersactivepayonlineservicesplayers



Sports Betting

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Online Betting: Pre-Match and Live (During Events) Wager can be placed on-line or at a point-of-sale kiosk Quotes vary continuously as the Event progresses





Extreme Elasticity

- Several thousands of logins per minute
- Peaks to several hundreds of interactions per minute during Events





In-Memory DataGrid with Oracle Coherence - OnPrem



Crucial Coherence Features Used

- Listener Interfaces for Cache Events
- Coherence provides cache events using the JavaBean Event model. It is extremely simple to receive the events that you need, where you need them, regardless of where the changes are actually occurring in the cluster.

- Continuous Queries

- Coherence provides a feature that combines a query result with a continuous stream of related events to maintain an up-to-date query result in a real-time fashion. This capability is called *Continuous Query*, because it has the same effect as if the desired query had zero latency *and* the query were being executed several times every millisecond!

- Targeted Agent Execution

- Coherence provides for the ability to execute an agent against an entry in any map of data managed by the Data Grid. In the case of partitioned data, the agent executes on the grid node that owns the data to execute against. For many processing purposes, it is much more efficient to move the serialized form of the agent



Benefits gained

- Near-Realtime event push
- x1,000 Performance Gain for queries without Disk Access
- Leverage both Near-Cache and Partitioned Cache Models
- New Reactive Architectural Paradigm
- Architectural «In-Memory DataLake» promotes convergence across different output channels/clients via Interface Adapters
- Foundation for elastic scaling for Cloud-based architectures



Future Work - Soaring to The Cloud

- OCI Oracle Cloud Infrastructure
- OKE Managed Kubernetes on OCI
- Coherence Operator for Kubernetes
- WebLogic Operator for Kubernetes
- Helidon Microservices

