

Oracle Financial Services Asset Liability Management on Oracle Exalogic



Oracle Financial Services Asset Liability Management running on the Oracle Exalogic processed 2 billion cashflows across 40 million records in just 49 minutes.

KEY FEATURES

- Exalogic is an open system, assembled by Oracle from its portfolio of standards-based, best-of breed component products and technologies.
- The Exalogic system reflects best-practices acquired and refined from thousands of customer deployments and extensive R&D effort.
- Exalogic is designed to meet the highest standards of reliability, availability, scalability and performance for a wide variety of time sensitive, mission-critical workloads
- OFSAA applications, including Oracle Financial Services Asset Liability Management, Profitability Management and Funds Transfer Pricing, all benefit from this architecture

Gain Visibility with Highly Accurate Modeling Results in Minutes

Oracle has completed performance testing confirming that financial institutions running Oracle Financial Services Asset Liability Management on Oracle Exalogic® can now model every instrument on and off the balance sheet down to the account level of detail in under an hour, giving financial institutions the ability to complete this exercise intraday.

A Tier I institution could easily have upwards of 40 to 50 million instrument records, or more. This representative volume of accounts can readily have over 2 billion associated cash flows. It has been observed that other systems can process this in an overnight batch to similarly compute aggregated cashflow results and detailed cashflows for different instruments under realistic workloads.

The goal of this testing was to observe the performance achieved when running Oracle Financial Services Asset Liability Management on the Oracle Exalogic and to determine the possibility of calculating detailed cashflows on an intra-day basis. Oracle Financial Services Asset Liability Management running on Oracle Exalogic calculated 2 billion cashflows across 40 million records in just 49 minutes.

Why Oracle Financial Services Analytical Applications on Exadata?

Oracle Financial Services Asset Liability Management allows financial institutions to gain an accurate view into their profitability, earnings stability, and overall risk exposure of the balance sheet. By modeling every instrument on and off the balance sheet, and adding to or replacing current position runoff with new business, users get an accurate forecast of a balanced balance sheet into their forecast horizon.

Today's financial services industry changes on a daily basis; from managing risk and profitability, to keeping up with regulatory changes and customer demands, it's challenging for banks to stay on top of it all. In the midst of everything else, an important task is balance sheet projections and at time these projections can extend out over a lengthy time horizon. Now with the ability to forecast the balance sheet in a

RELATED PRODUCTS**Oracle Financial Services Analytical Applications:**

- Oracle Financial Services Data Foundation
- Oracle Financial Services Liquidity Risk Management
- Oracle Financial Services Profitability Management
- Oracle Financial Services Balance Sheet Planning
- Oracle Financial Services Funds Transfer Pricing
- Oracle Financial Services Pricing Management, Transfer Pricing Component
- Oracle Financial Services Pricing Management, Capital Charge Component
- Oracle Financial Services Basel Regulatory Capital
- Oracle Financial Services Retail Credit Risk
- Oracle Financial Services Corporate Credit Risk
- Oracle Financial Services Economic Capital Advanced
- Oracle Financial Service Market Risk
- Oracle Financial Services Retail Portfolio Risk Models and Pooling

Oracle Applications:

- Master Data Management
- Application Integration Architecture

Oracle Fusion Middleware:

- Application Server
- Business Process Management
- Enterprise Manager

Oracle Database

- Oracle Database 11g
- Real Application Clusters
- Partitioning
- Advanced Compression
- Advanced Security
- Active Data Guard

Oracle Servers and Storage

- Systems
- Sun Servers
- Sun Storage and Tape

fraction of the time previously required, even the largest financial institutions around the globe can process this either as Static Deterministic or Dynamic Deterministic and give management the required information the same day.

Oracle Financial Services Asset Liability Management on Oracle Exalogic

Parameters	Total
Total Number of Cash Flows	2 Billion
Total Number of Instruments	40 Million

Static Deterministic (Balance Sheet Runoff – LRM Use Case: outputting instrument level cashflows)

Process Time –	Number of Cashflows	Elapsed Time
40MM	2 billion	49 minutes

Dynamic Deterministic¹ (ALM Use Case: Forecasted flat balance new business originations target Growth 0%)

# of Scenarios	Elapsed Time
1	27 minutes
3	35 minutes
5	43 minutes

Oracle Exadata X5-2 ½ Rack Configuration

4 x Database Servers, each with:

- 2 x Eighteen-Core Xeon® E5-2699 v3 Processors (2.3 GHz)
- 256GB Memory (expandable to 768GB)
- Disk Controller HBA with 1 GB Supercap-backed Write Cache
- 4 x 600 GB 10,000 RPM Disks
- 2 x QDR (40Gb/s) InfiniBand ports
- 4 x 1/10 Gb Ethernet Ports (copper)
- 2 x 10 Gb Ethernet Ports (optical)
- 1 x ILOM Ethernet Port
- 2 x Redundant Hot-Swappable Power Supplies

7 x Exadata Storage Servers X5-2, each with:

- 2 x Eight-core processor for SQL processing and
- 4 PCI Flash cards each with 1.6 TB (raw) Exadata Smart Flash Cache and 12x 4 TB 7,200 RPM High Capacity disks

Software

Oracle Database 12c Release 1 Enterprise Edition, Oracle Real Application Clusters, and other Oracle Database options. Oracle Linux 6 Update 4, InfiniBand protocol used to communicate between the Exadata Storage Servers and the Oracle Database.

Oracle Exalogic Elastic Cloud X5-2 ½ Rack Configuration

16 x Oracle Sun X5-2 Servers, each with:

- 2 x Eighteen-Core Xeon® E5-2699 v3 Processors (2.3 GHz)
- 256GB Memory (expandable to 768GB)
- 2 x 400 GB SSDs (RAID1)
- 1 x Dual port QDR (40Gb/s) InfiniBand HCA
- 1 x 10 Gb Ethernet Management Port
- 2 x Redundant Hot-Swappable Power Supplies

Storage Subsystem:

- (4) QDR InfiniBand ports (one active and one passive per storage head)
- 6.4 TB solid state disk read cache
- 800 GB solid state disk write cache
- 80 TB Serial Attached SCSI (SAS) disks
- (2) 10GbE remote replication ports (BASE-T)
- (1) GbE management port (BASE-T)

Software

Oracle Exalogic includes extensions to Oracle Linux for enhanced application performance and manageability while maintaining compatibility with existing applications. All software certified for the appropriate Linux or Solaris versions is fully supported for Exalogic.

¹ when MV calculation is included in process, it merely takes ~5% longer, but utilized all memory

About Oracle Financial Services Enterprise Performance Management

Oracle Financial Services Analytical Applications bring financial institutions best of breed capabilities to proactively manage Financial Risk, Treasury, Finance and the Front Office. The applications are built upon a commonly available analytical infrastructure consisting of a unified financial services data model, analytical computations, a Metadata driven “R” modeling platform, and the industry-leading Oracle Business Intelligence platform. This provides one version of the analytical “truth” throughout the enterprise.

Financial institutions, regulators, and shareholders who are focused on the need to measure and meet risk-adjusted performance objectives can turn to Oracle Financial Services Enterprise Performance Management. This solution allows institutions to price products appropriately to reflect their true risk, track profitability trends and cost structures, and better understand how their institution is impacted by threats to liquidity, capital adequacy, and exposure to market rate volatility.



CONTACT US

For more information about Oracle Financial Services Asset Liability Management, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

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