Oracle Financial Services Liquidity Risk Management running on the Oracle Exadata Database Machine X3-2 calculated contractual liquidity gaps for 2 billion cash flows across 40 million accounts in just 1 hour 46 minutes 33 seconds. Stressed liquidity gaps and LCR was then calculated in a mere 34 minutes 15 seconds.

Compute Liquidity Gaps and LCR in Minutes

Oracle has completed performance testing confirming that financial institutions running Oracle Financial Services Liquidity Risk Management on the Oracle Exadata® Database Machine X3-2 can now compute liquidity gaps under baseline and stressed conditions to devise contingency funding strategies in minutes.

A Tier I institution could easily have upwards of 40 to 50 million accounts around the world; a regional institution would typically have less. This representative volume of accounts can readily have over 2 billion associated cash flows. It has been observed that other systems can require 20 hours or more to similarly calculate contractual and business-as-usual liquidity gaps.

The goal of this testing was to observe the performance achieved when running Oracle Financial Services Liquidity Risk Management on the Oracle Exadata Database Machine and to determine the possibility of calculating liquidity gaps for baseline and stressed conditions on an intra-day basis.


With the ability to execute an individual stress test run in mere minutes, institutions can refine their scenarios to simulate any impact on business-as-usual liquidity gaps and immediately assess the effects of a given counterbalancing strategy. Furthermore, no longer constrained by lengthy run time windows, multiple contingency funding strategies can be iteratively tested to produce the best possible results in a practical timeframe.

Why Oracle Financial Services Analytical Applications on Exadata?

The inclusion of liquidity risk requirements in several recent regulatory mandates, including the Individual Liquidity Adequacy Standards of FSA, the Principles of Sound Liquidity Risk Management and Supervision of BIS and the Basel III guidelines, brings forth the significance of liquidity management in avoiding future economic crises.
Today’s global marketplace changes every minute. Strife in other countries, natural disasters, financial scandals and other regional economic crises can all have a near instantaneous impact on an institution’s liquidity. Now with the ability to calculate liquidity gaps in a fraction of the time previously required, even the largest financial institutions around the globe can apply shocks to their baseline behavior assumptions, calculate stressed case liquidity gaps and develop optimal contingency funding plans within the course of a few hours rather than a few days.

Oracle Financial Services Liquidity Risk Management is part of the Oracle Financial Services Analytical Applications family of Risk, Finance, Compliance and Customer Insight solutions, and currently used by demanding global Tier I institutions around the world.

With the extreme performance of Oracle Financial Services Analytical Applications, running on the Exadata Database Machine, global financial institutions can dramatically reduce the lead times required to perform key analyses like stress testing, liquidity risk management, risk adjusted performance measurement and respond to increasing regulator demands, such as Basel III, quickly and with confidence.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Total</th>
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<tbody>
<tr>
<td>Total Number of Cash Flows</td>
<td>2 Billion</td>
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<tr>
<td>Total Number of Accounts</td>
<td>40 Million</td>
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<table>
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<tr>
<th>Process</th>
<th>Elapsed Time</th>
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<tbody>
<tr>
<td>Contractual Liquidity Run</td>
<td>1:46:33 Hrs</td>
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<tr>
<td>Liquidity Gap &amp; LCR</td>
<td>0:34:15 Hrs</td>
</tr>
<tr>
<td>Total Time Taken</td>
<td>2:20:48 Hrs</td>
</tr>
</tbody>
</table>

**Oracle Exadata X3-2 Machine ½ Rack Configuration**

4 x Database Servers, each with:
- 2 x Eight-Core Intel® Xeon® E5-2690 Processors (2.9 GHz)
- 256 GB Memory
- Disk Controller HBA with 512MB Battery Backed Write Cache
- 4 x 300 GB 10,000 RPM disks
- Dual-Port QDR InfiniBand Host Channel Adapter
- 4x1/10 GB Ethernet Ports
- High performance disk has been used for the exercise

7 storage servers each with 84 CPU cores, 84x600GB 15,000 RPM High Performance Disks. Includes 11.2 TB Exadata Smart Flash Cache

**Software**

Oracle Database 11g Release 2 Enterprise Edition, Oracle Real Application Clusters, and other Oracle Database options. Oracle Linux 5 Update 8, InfiniBand protocol used to communicate between the Exadata Storage Servers and the Oracle Database.
About Oracle Financial Services Enterprise Risk Management

Oracle Financial Services Analytical Applications bring financial institutions best of breed capabilities to proactively manage Risk, Treasury, and Finance. 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.

Oracle Financial Services Enterprise Risk Management spans all areas of risk, including credit, market, operational, liquidity, fixed asset, business, and reputational risk. This solution enables financial institutions to establish a single measure of risk across the organization and obtain a comprehensive and consistent view of risk and performance. Oracle Financial Services Enterprise Risk Management helps manage all risk and provides necessary feeds for compliance-based reporting. The capabilities of Oracle Financial Services Analytical Applications for finance and risk help institutions address compliance issues that demand a close operational synergy between finance and risk functions.

CONTACT US
For more information about Oracle Financial Services Liquidity Risk Management, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

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