Oracle Financial Services Basel Regulatory Capital completes 65 million regulatory capital calculations in just 1 hours and 29 minutes when running on Oracle Exadata Database Machine.

Oracle has completed benchmark testing confirming that financial institutions running Oracle Financial Services Basel Regulatory Capital on the Exadata® Database Machine can now compute regulatory capital at least three times faster than previously observed.

A Tier I institution could carry upwards of 20 million exposures on its books and needs to calculate risk weighted assets and the corresponding capital requirements for each, on a periodic basis, as defined by regulators in their jurisdiction. Commonly used software and hardware finishes the computational portion of the process in about 8-10 hours as a general case.

The goal of this testing was to use the Exadata Database Machine to complete more than three times the typical observed Tier I volume of calculations in under three hours (approximately one third the normal time required).

Oracle Financial Services Basel Regulatory Capital, running on the Exadata Database Machine and using the Bank for International Settlements’ (BIS) Advanced Internal Ratings-Based Approach (A-IRB) calculated risk-weighted assets and the corresponding capital requirement on 65 million exposures in only 1 hours and 29 minutes – handily exceeding the goals of this test.

65 million exposures represent 32 million retail exposures, 13 million wholesale lending exposures and another 20 million other exposures including equities. This distribution is representative of a Tier I financial institution.

Why Oracle Financial Services Analytical Applications on Exadata?

The regulatory reporting cycle is often a very demanding and time-consuming period for financial institutions. As highlighted in the recent Oracle Industry Survey titled “The European Confidence Report,” current approaches do not allow time for results analysis.

Long lead-times and system-performance bottlenecks leave little room for error. The industry-leading performance of Oracle Financial Services on the Exadata Database Machine can dramatically streamline and speed the capital calculation and reporting process.

The extreme performance also creates new flexibility to help institutions comply with increasingly complex regulatory processes for capital requirements that often require multiple resubmissions with changes to assumptions and calculations. New regulations like Basel III require institutions to perform advanced analytical practices like stress testing and other what-if scenarios to support an institution’s regulatory capital computations, which the Oracle products will support.

Oracle Financial Services Basel Regulatory Capital 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.
RELATED PRODUCTS

**ORACLE FINANCIAL SERVICES ANALYTICAL APPLICATIONS**
- Oracle Financial Services Data Foundation
- Oracle Financial Services Asset Liability 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 Services Liquidity Risk Management
- Oracle Financial Services 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 ENTERPRISE LINUX**

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, profitability and respond to increasing regulator demands, like Basel III, quickly and with confidence.

<table>
<thead>
<tr>
<th>Parameters (Basel Asset Class)</th>
<th>Total</th>
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<tbody>
<tr>
<td>Bank</td>
<td>3,869,665</td>
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<tr>
<td>Cash, Gold and Other Asset Classes</td>
<td>624,139</td>
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<tr>
<td>Corporate Non Small &amp; Medium Enterprise</td>
<td>3,331,318</td>
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<tr>
<td>Corporate Small &amp; Medium Enterprise</td>
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<tr>
<td>Equity Exposures and Venture Capital Investments</td>
<td>19,848,868</td>
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<td>Purchased Receivables</td>
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<td>Retail Exposures</td>
<td>32,871,238</td>
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<td>Sovereign Exposures</td>
<td>1,248,280</td>
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<td><strong>Total Volumes</strong></td>
<td><strong>65,000,000</strong></td>
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<table>
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<tr>
<th>Process</th>
<th>ELAPSED TIME</th>
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<tr>
<td>Data Load from Stage Tables to Basel Processing Tables</td>
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<tr>
<td>Pre-Processing of Data (for RWA Calculations)</td>
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<tr>
<td>Risk Parameter Estimation</td>
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<tr>
<td>Risk Weighted Assets (RWA) Computation</td>
<td>0:51:01</td>
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<tr>
<td><strong>Total Elapsed Time</strong></td>
<td><strong>1:29:21</strong></td>
</tr>
</tbody>
</table>

**Sun Oracle Exadata X2-2 Machine Full Rack Configuration**

8 x Database Servers, each with:
- 2 Six-Core Intel® Xeon® E5670 Processors (2.93 GHz)
- 80 GB memory
- Disk Controller HBA with 512MB Battery Backed Write Cache
- 4 x 300 GB SAS 10,000 RPM disks
- Dual-Port QDR InfiniBand Host Channel Adapter
- 4 Embedded Gigabit Ethernet Ports

3 x 36 port QDR (40 Gb/sec) InfiniBand switches

14 x Sun Oracle Exadata Storage Servers with 12 x 600 GB 15,000 RPM SAS disks or 12 x 2 TB 7,200 RPM SATA disks. Includes 5.3 TB Exadata Smart Flash Cache

**Software**

Oracle Database 11g Release 2 Enterprise Edition, Oracle Real Application Clusters, Oracle Partitioning, and other Oracle Database options. Oracle Linux 5 Update 5. Zero-loss Zero-copy Datagram Protocol (ZDP) InfiniBand protocol used to communicate between the Exadata Storage Servers and the Oracle Database which is based on the Reliable Datagram Sockets (RDS) OpenFabrics Enterprise Distribution (OFED)
About Oracle Financial Services Analytical Applications

Oracle Financial Services Basel Regulatory Capital on Exadata Database Machine is part of the Oracle Financial Services Analytical Applications family of solutions for the global financial services industry.

Oracle Financial Services Analytical Applications are built upon a commonly available analytical infrastructure consisting of a unified financial services data model, analytical computations and the industry-leading Oracle Business Intelligence platform.

Oracle Financial Services Analytical Applications include award-winning solutions for Enterprise Risk Management; Governance, Risk, and Compliance (GRC); Enterprise Performance Management (EPM); and Customer Insight for financial services.

Contact Us

For more information about Oracle Financial Services Analytical Applications and the Exadata Database Machine, visit http://www.oracle.com/us/industries/financial-services or call +1.800.ORACLE1 to speak to an Oracle representative.