

Complex Queries, Growing Data, and the Financial Services Regulatory Reporting Challenge

Regulatory reporting requirements have become an integral part of financial services since the 2008 financial crisis. Banks and other financial institutions must file hundreds of regulatory reports, stress test their capital reserves, constantly monitor their risk position and more. Reporting requirements increase rapidly in number and complexity for banks operating regionally or globally, where they are required to file in multiple jurisdictions.

To address these challenges, banks have implemented complicated reporting tools based on information that resides in the bank's data repositories. Such tools automate end-to-end processes - from data capture through submission. Among these tools is the Oracle Financial Services Regulatory Reporting solution (OFSAA), which enables banks and other financial services to manage and execute regulatory reporting in a single, integrated environment.

OFSAA processing can take hours. With such lengthy processing, you cannot afford many dry runs, and every error gets you closer to being late on reporting. Regulatory reporting requires complex and lengthy data preparation that require a great deal of CPU and memory resources. As data grows each year, a CPU-bound massive parallel data preparation process now struggles to handle the sheer scale of the complexity and data.

SQream for FSAA Reporting

SQream accelerates your OFSAA reporting, allowing you to shorten processing times by up to 50% and have your reports ready on time, stress-free. SQream's OFSAA acceleration solution is built on SQream DB, a GPU-accelerated analytics database that has the power to handle massive data stores with trillions of rows and hundreds of terabytes in a fraction of the time and cost.

GPUs are multi-core accelerator cards originally designed for graphics processing. Their power comes not only from their large number of computing cores, but also from incredible memory bandwidth, along with the software development tactics used to develop them. GPUs allow software developers to parallelize complex tasks with performance that's difficult to achieve on classic CPU-bound implementations. For example, compression, encryption, and sorting algorithms benefit from the GPU's high core count and memory bandwidth.

SQream's end-to-end solution runs alongside OFSAA, accelerating the data staging and preparation processes, ingesting the results directly into the OFSAA result tables in a fraction of the time.

Accelerated Reporting Over Growing Data

Out-of-the-box OFSAA acceleration platform.

Average 50% reduction of processing time.

Robust platform that harvests thousands of GPU cores to split complex data preparation queries.

Customizable high-performance Data Loader connector to extract data from staging tables.

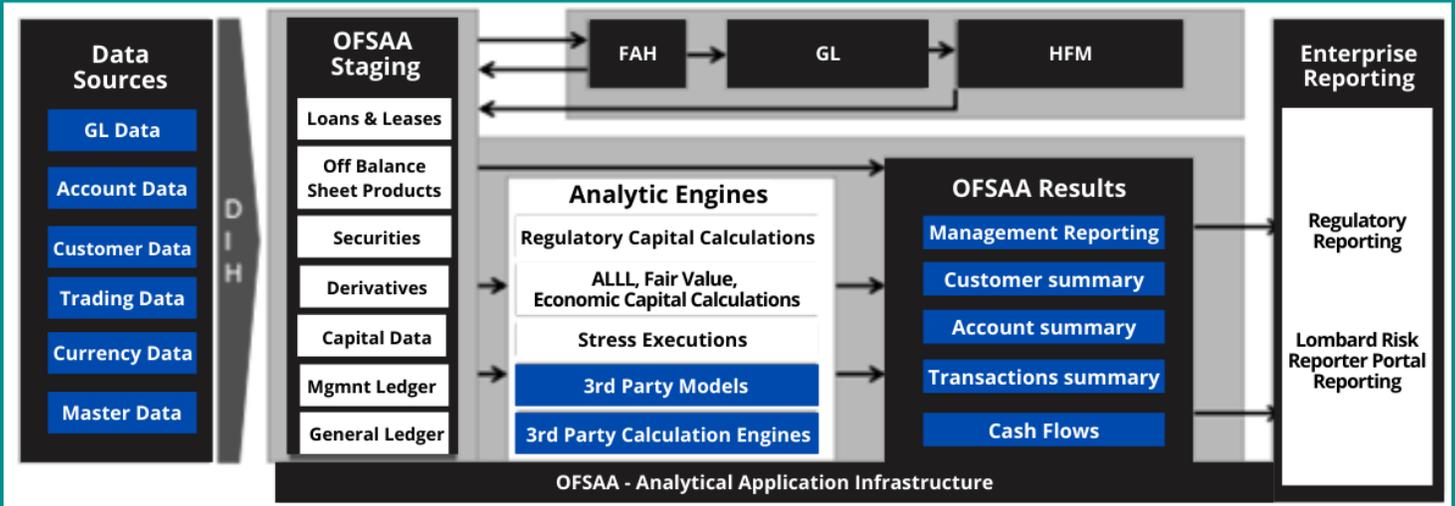
Appliance or cloud deployment.

Simple and cost-effective scaling out.

Can be leveraged for other financial reporting needs, from terabytes to hundreds of petabyte datasets, unmatched in speed or cost.

How SQream Works with OFSAA

The OFSAA analytical application infrastructure captures data sources into a staging area, where the analytical engines run complex data preparation queries. They then output the queries into OFSAA results tables, from which the reporting tool reads the data, as depicted in figure 1.



The SQream data analytics acceleration platform is an end-to-end-solution that replaces the analytical engines and uses GPU architecture to parallelize the data preparation queries.

It comes with an OFSAA customized data loader engine, that also uses multiple GPU cores to extract the data from all of OFSAA's data staging tables into its operational datastore. There, it performs all the analytical queries over thousands of GPU cores and injects the data back into the FSAA result tables, as depicted in figure 2.

The SQream platform decouples compute from storage, and it is easy to scale out by adding additional GPU cards.

