



Reporting and Analytics Case Study: **InterSystems Data Platform for Financial Services in a Fortune 100 Investment Bank**

Customer Challenge

The development manager at a large investment bank (\$39.2 BN revenues) needed to find a solution to meet the following demands of his organization's business:

- The customer management application must support the ability to answer ad-hoc queries about an end customer's assets
- The same system must support the ability to report traceability to show that trades were in compliance
- The customer management application must scale dynamically and respond to queries in milliseconds, not seconds
- The underlying database must be able to handle big data volumes (TBs) of trade data from across the firm
- The underlying system must scale with increasing demands of velocity, variety, and volume of data
- The system must reduce infrastructure costs

Technical Challenge

The firm's data was archived into a Hadoop data lake. The architecture had the following limitations:

- The data lake was good for basic historical analysis but could not support real-time, current data streams
- Performance was barely acceptable and had limitations on scaling out
- The application could not provide data drill down for analysis/reporting (Hive only supported simple SQL queries, no joins)
- The application could not support more advanced, analytical needs

Solution:

InterSystems Data Platform for Financial Services

The client deployed InterSystems Data Platform for Financial Services to address both the business and technical challenges.

- HDFS was integrated with the Data Platform to combine terabytes of historical data with current transactions
- The Data Platform's persistent store and cached data layer was architected to support the needs of different lines of business. A single deployed reference architecture supported ad-hoc user-defined queries with high performance
- InterSystems Data Platform supports complex SQL queries across all applications while meeting SLAs
- InterSystems Data Platform for Financial Services uniquely combines shared-nothing and shared-everything architectures. It proved to be the only option in the market that could provide the required performance at scale
- The reduced costs requirement was met because InterSystems Data Platform's 'cloud-friendly architecture' does not require specialized hardware. The application could be configured to run (and scale) on commodity hardware

InterSystems Data Platform for Financial Services

Capabilities and Benefits

Capability	Benefit
Multi-model support.	Supports all data types in a single data platform. Provides low cost of ownership by eliminating the need for point solutions to support multiple data models.
Full ANSI SQL support.	No need to rewrite queries when porting from legacy applications.
Only technology to address inner, outer, cross joins across all data types with shared everything.	Supports both simple and complex analytics using standard SQL.
Data is always up to date and accurate without the need to duplicate or broadcast data.	Saves on server memory and storage footprint while minimizing network traffic.
Consistent performance.	Performance is consistently maintained regardless of what data is queried or what data is already cached in memory.
Multi-workload.	Future-proofs investments. The data platform can support future business requirements.
Dynamically scales both vertically and horizontally.	Eliminates the need for expensive hardware investments when required to scale vertically and/or horizontally.
Government grade security, Common Criteria 3 certified.	Low risk. Secure operations.
Simple to install and support.	Fast implementation means quick time-to-market.

Contact us to learn more about InterSystems Data Platform for Financial Services or to schedule a demonstration.

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