



# Data Synchronization and System Optimization for LifeSphere Reporting and Analytics

## Client

A global leader in cloud-based life sciences software, focused on regulatory compliance, pharmacovigilance, and clinical data management. The client sought to strengthen data integrity and boost performance across its LifeSphere analytics systems.

## Business Need

The client faced frequent delays and system strain due to inconsistent data synchronization and high memory usage during reporting. This led to reduced reliability, regulatory risk, and slower insights. They needed to:

- Ensure consistent data across LifeSphere environments
- Reduce memory consumption and reporting lag
- Improve data governance and pipeline transparency

## Objectives

- Achieve seamless synchronization of transactional and reporting data
- Move from time-based to change-based data logging
- Enable real-time updates for compliance and decision-making
- Build a scalable analytics foundation



## Solution

Innominds designed a high-performance data synchronization framework featuring modular enhancements across ingestion, transformation, and reporting layers.

### Key Capabilities

- Push-based change logging from source systems
- Delta fetch for optimized data loading
- On-the-fly field-level data calculations
- File-based processing with business rule parsing
- Provisioning layer for SQL-based high-volume reporting
- Validation and exception tracking for governance

## Tools & Technologies

- Oracle 12C
- Talend Enterprise Big Data 5.x
- IBM Cognos Analytics 11.0.6.0
- Java with Play Framework

## Business Impact

- **Accelerated Reporting:** Real-time updates and faster submissions
- **Performance Boost:** Lower memory use and optimized queries
- **Scalable Analytics:** High-volume queries without disruption
- **Trusted Data:** Consistent and auditable reporting pipeline



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