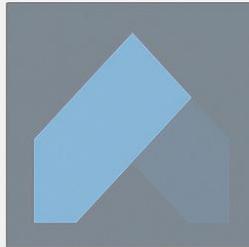


# **Modernizing Our Fraud Detection & AML Capabilities**

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**OUR  
BANK**

# Real-Time Fraud Detection & AML Compliance in Global Banking



Rising volumes and complexity of fraud: card abuse, identity theft, money laundering



Manual reviews and batch-only systems are no longer fast or scalable enough



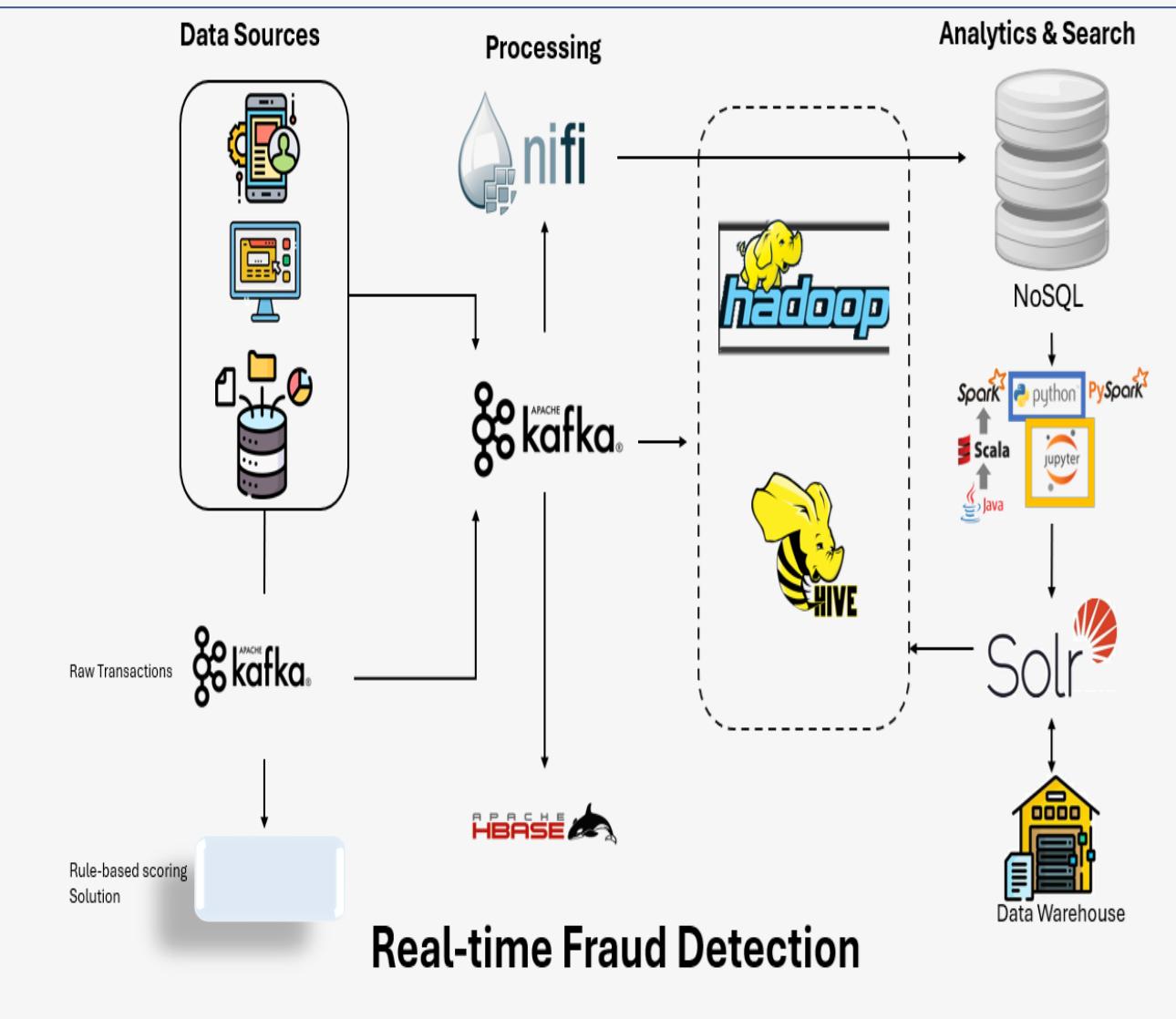
Delayed response undermines security, compliance, and customer trust



To stay ahead, we must build a system that:

- Identifies fraudulent activity in real time
- Analyzes transaction and behavioral data for anomalies
- Fast alerts and automated responses
- Transparent, auditable, and compliant systems

# Proposed Architecture (High-Level)



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**NiFi** ingests data from digital apps, ATMs, systems.

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**Kafka** distributes streams to consumers: Actimize, Spark, storage.

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**Spark + Hive** analyze historical data and patterns at scale.

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**HBase** maintains user behavior profiles.

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**NoSQL DB** stores scoring metadata for APIs and dashboards.

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**Solr** enables fast search for flagged transactions and audit trails.

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**Jupyter + Spark** empower analysts with interactive data science.

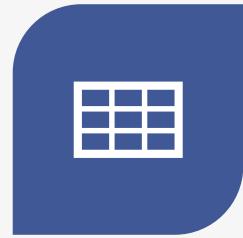
# Delivering Trust, Protection, and Compliance at Scale



REAL-TIME FRAUD  
DETECTION & SCORING  
WITH KAFKA + ACTIMIZE



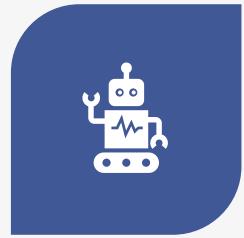
BEHAVIOR-BASED  
ANALYSIS USING HBASE +  
SPARK



COMPLIANCE & AUDITS  
POWERED BY HIVE + SOLR



TRANSPARENT ALERT  
SYSTEM WITH NOSQL +  
DASHBOARDS



SCALABLE, MODULAR  
ARCHITECTURE READY TO  
EVOLVE WITH OUR DATA