



Real-Time Fraud Analytics Hadoop Application



Partner Brief



“Effective fraud detection needs access to the most recent data as well as full historical context. This requires real-time petabyte-scale dataset queries to reconstruct a sequence of events, potentially spanning months or years that a machine-learning model can automatically flag as fraud. Hortonworks support of Accumulo is critical to making this happen for large enterprise and carrier rollouts.”

Arshak Navruzyan
Vice President, Products
Argyle Data

Fraud has moved from a back office subject to front-page news. Because the rewards are so large criminals and terrorists are out innovating enterprises across all industries. Typical organizations lose 5% of revenue to fraud (Association of Certified Fraud Examiners) and in the communications industry mobile and fixed line carriers lose of \$46 billion per year to fraud.

2014 will be remembered as the year that the fraud and security cyber-dam broke. Existing systems that predated the era Hadoop and Machine Learning are no longer effective against modern criminals. They either (a) Don't discover fraud (b) Overwhelm the user with false positives (c) Operate in batch mode discovering fraud after the criminal has long gone or (d) Use dated rules that discover last years fraud not today's.

Argyle Data is a real-time fraud analytics application built from the ground up on Hadoop using the latest big data, machine learning and anomaly detection technology proven at Facebook and Google. Argyle Data is based on open-source frameworks including the Hortonworks Data Platform (HDP), Accumulo (based on Google's BigTable) and Presto (distributed SQL engine developed by Facebook).

The HDP is a core component of the Argyle Data solution since it enables Argyle Data to detect fraud on full data sets of both operational and business data, at petabyte scale, in real-time on low cost commodity hardware.

What Business Challenges are Solved?

Fraud Detection

Argyle Data detects fraud not detected by pre-Hadoop fraud management systems and reduces the time for detection from days to seconds

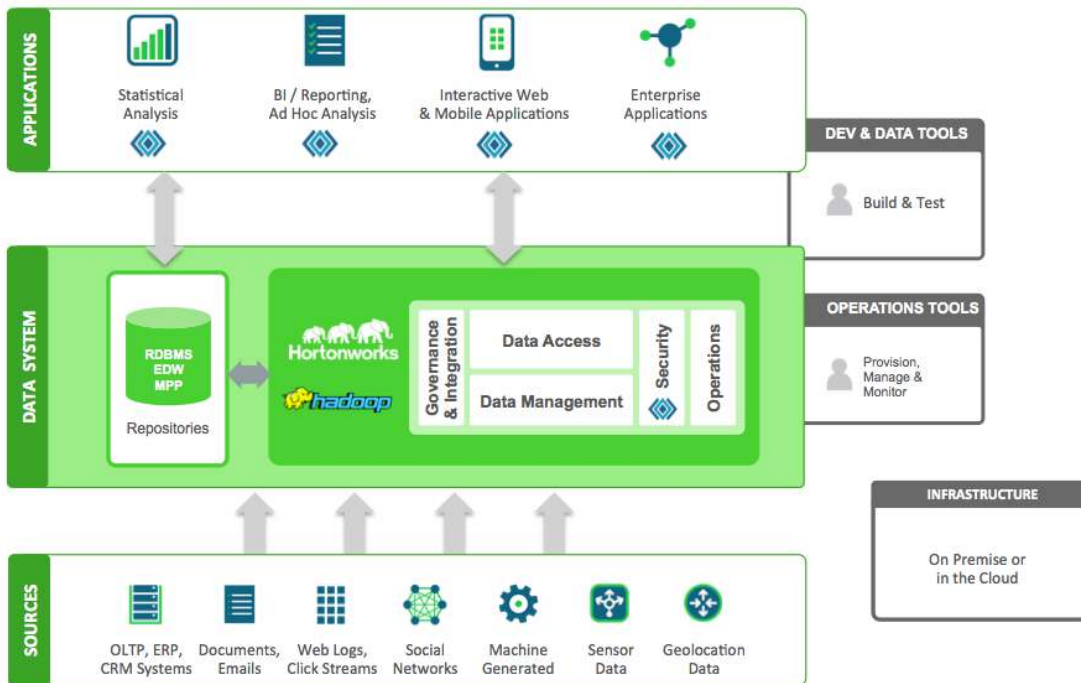
Large-Scale Data Processing

The integration with HDP enables Argyle Data to analyze petabytes of data with interactive performance for fraud analysts

Cost savings Through Open-Source Framework

The Argyle Data solution runs as a native Hortonworks Data Platform application integrated to Ambari, with support for Yarn, enabling cost-effective deployment at scale

Argyle Data in the Modern Data Architecture



Features and Benefits of the Combined Solution

- Argyle Data is a *native* Hadoop application – *No Hadoop cluster no application*
- Argyle Data fully supports Ambari and is Operations Ready Certified
- Argyle Data combines a fire-hose of packet data with business data to perform real-time fraud detection at petabyte scale allowing it to
- Detect fraud not detected by the pre-Hadoop fraud systems
- Detect fraud in minutes vs. days
- Discover both new and old fraud attack techniques
- Dramatically reduce false positives

Argyle Data is a *native* Hadoop application that requires the HDP to do real-time fraud detection at petabyte scale

Argyle Data is a Certified Technology Partner

The Hortonworks Certified Technology Program reviews and certifies technologies for architectural best practices, validated against a comprehensive suite of integration test cases, benchmarked for scale under varied workloads and comprehensively documented.



Hortonworks. We do Hadoop.

Hortonworks is a leading commercial vendor of Apache Hadoop, the open source platform for storing, managing and analyzing Big Data. Hortonworks Data Platform, our distribution of Apache Hadoop, provides an open and stable foundation for enterprises and a growing ecosystem to build and deploy Big Data solutions.

Hortonworks is the trusted source for information on Hadoop, and together with the Apache community, Hortonworks is making Hadoop an enterprise data platform. Hortonworks provides unmatched technical support, training and certification programs for enterprises, systems integrators and technology vendors.

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