INDUSTRY IMPACT STORY

Enabling Fast Analytics for the C-Suite

12+

Integrate data across 12+ applications, including finance, support, sales, and marketing, ERP to deliver key performance indicators (KPIs) that are made directly accessible to the C-suite

"...analytics and AI can potentially unlock $1 trillion of incremental value for banks, annually"

- McKinsey, 2020

Artificial intelligence and analytics could deliver up to $1 trillion of additional annual value for global banking, according to McKinsey. AI and machine learning also can help firms drive operational improvement to support growth. But, as one Fortune 50 company discovered, it's a challenge to provide the C-suite with instant visibility into business performance via executive dashboards when you have underlying architectures that make it inherently complex, and lack speed, and reliability. So, the company searched for a platform that would simplify its data infrastructure; enable fast and reliable data ingestion and deliver sub-second query performance to power its executive dashboards. The organization found the ideal, all-in-one database in SingleStore, which delivers elastic scaling; fast data ingest; familiar relational SQL; high-performance queries; and the ability to plug in directly to popular enterprise tools including Kafka, MicroStrategy, Tableau and Spark.

Business Goals

A Fortune 50 company was struggling to deliver instant visibility into business performance and enterprise operations to the C-suite through executive dashboards. It needed to provide comprehensive visibility into KPIs across data aggregated from dozens of enterprise resource planning (ERP) applications, including finance, support, sales, and marketing. But, the data infrastructure the company used to deliver the dashboards was failing.

For one, it took too much time—hours or days—to refresh the executive dashboards, which were fed by a combination of Apache Hadoop, data warehouses, and specialized NoSQL caching solutions. Secondly, the data feeds refreshed the dashboards at irregular times, which wasn't fast or reliable.

Additionally, it was very hard to tune query performance due to the complexity of Hadoop, which resulted in extracts being used that created silos of Excel spreadsheets accessed by dozens of data analysts. The use of a growing set of non-relational systems quickly became an interoperability challenge limiting data analyst queries and a pervasive use of Tableau. Given these challenges, the company decided to look for a new underlying database solution that would accomplish these goals:

- Simplify the data infrastructure to drive **continuous ingest** from existing data sources
- **Fast query performance** to deliver interactive insights in real-time for the C-suite
- **Eliminate data silos** powering various dashboards
- Deliver a comprehensive view for data analysts and executives
- Leverage its existing Hadoop infrastructure for more exploratory data science initiatives

SingleStore

INDUSTRY IMPACT STORY

Fortune 50 Leader Uses SingleStore to Power Executive Dashboards for Better, Faster Business Decisions

Technology Requirements

For its tier one ERP applications, the company needed a unified database with the ability to deliver **fast ingest, low latency, and high concurrency** to power internal facing applications and dashboards to drive all of its "can't wait" analytics needs.

The broad set of prerequisites for a new database system started with the requirement of relational SQL. The database had to work with existing business intelligence (BI) tools (including Tableau and Microstrategy) while allowing data analysts to run ad hoc queries with standard SQL.

The second requirement was support for a reliably fast ingestion architecture with Apache Kafka to accommodate disparate sources loading data continuously throughout the day at variable increments.

The final requirement included the ability to support highly responsive queries for both aggregate and ad hoc analysis with a high number of active users. The solution this institution selected was SingleStore.

See Figure A for the "before" architecture.

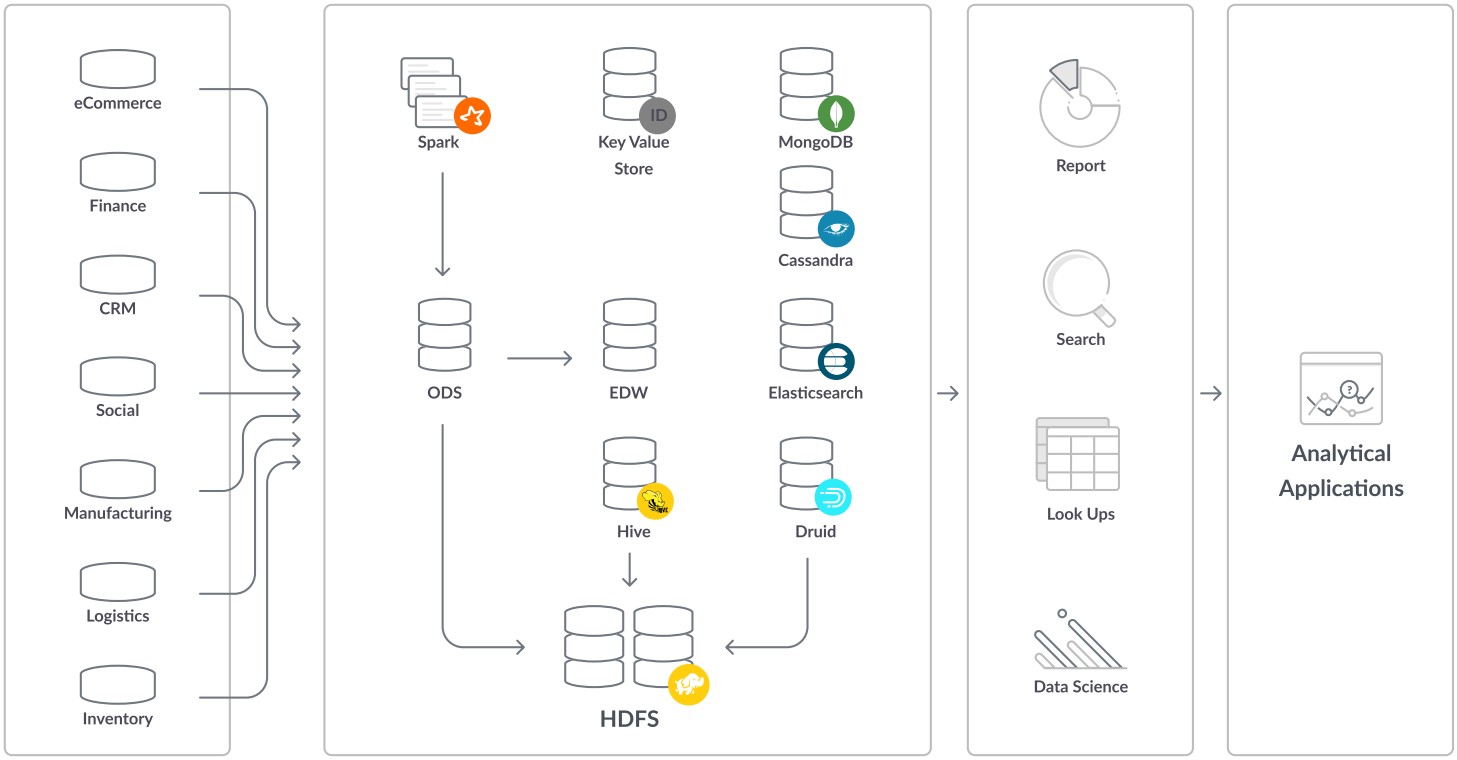

Fig A - "Before" architecture: Data architecture complexity for operational dashboards

SingleStore

Why SingleStore? The Unified Database for Fast Analytics

SingleStore delivers the fastest and most scalable reporting and analytics across all of an organization's operational data; including streaming, real-time, and historical. It plugs in directly with the company's existing technologies, including BI tools Tableau, and Microstrategy, in addition to modern data tools like Kafka and Spark.

The customer chose a real-time ingestion architecture with Apache Kafka feeding directly into SingleStore. Data is also batched to Hadoop for more exploratory data science initiatives. With SingleStore, the customer has direct access to data for faster analytics performance along with all the benefits of a traditional data warehouse, including aggregation of data, support for detailed ad hoc queries, and interoperability with Tableau and data science workbench tools. In fact, query performance was dramatically faster across a variety of conditions including high concurrency and peak ingest volumes.

For the Fortune 50 business, SingleStore was the ideal all-in-one database for operational analytics that require fast data ingest, high performance queries and elastic scaling with familiar relational SQL.

See Figure B for the "after" architecture.

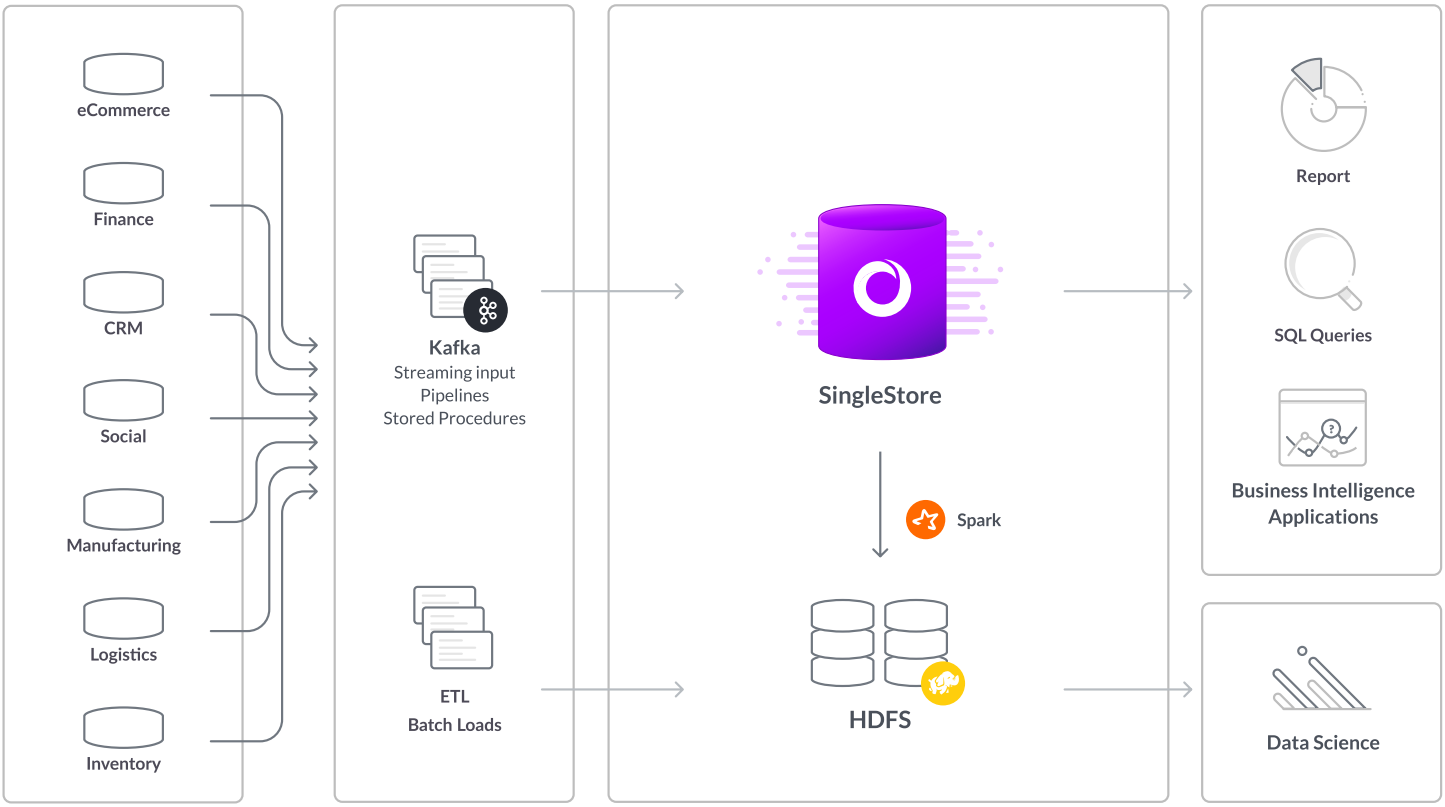

Fig B - Architecture with SingleStore: Modernized operational dashboards architecture

SingleStore

Business Outcomes

Executive visibility

With SingleStore, the access to **real-time data** gave the C-Suite, asset managers, analysts and advisers a leg up. The company now has a single source of truth for investor and quarter-end reporting.

The CEO and senior executives have direct access into operations and KPIs aggregated across more than a dozen ERP applications. SingleStore is built for the enterprise, so this Fortune 50 company now has fault tolerant, secure, and enterprise-grade platform to support its mission-critical applications and sensitive data environments.

From spreadsheets to business intelligence

This Fortune 50 company (like many) was doing much of its core analytics work by exporting data from Hadoop into Excel spreadsheets. With SingleStore, the full range of BI tools is now available as needed, which has helped the company eliminate the data silos it once had. Additionally, by leveraging the SingleStore BI connectors, the company can perform ad hoc analyses with its existing BI tools, Tableau and Microstrategy.

From batch mode to near real-time

SingleStore enables parallel, high-scale streaming data ingest, meaning **billions** of events per second can be ingested for immediate availability. For the Fortune 50 company, analytics now run against near real-time data and information that used to take days to arrive now takes just minutes. SingleStore customers can achieve ultra fast query responses across both live and historical data using familiar ANSI SQL.

Exploratory data science enables data analysts

SingleStore delivers self-service analytics on financial data enabling analysts to find actionable insight. It also enables instant data access for live queries. Using SQL, any analyst can make any query, anytime, and get results quickly. In combination with BI tools, this supports the kind of interactive probing that leads to real, timely, actionable insights.

SingleStore helps half of the top 10 financial service institutions in North America and a number of fast-growing FinTechs around the globe accelerate the performance of their data infrastructure to enable support real-time decision making and deliver exceptional customer experiences.

With a cloud-native, distributed data architecture, SingleStore offers a unified database for fast analytics powering applications that require fast data ingest, high performance queries, and elastic scaling. Its familiar relational SQL interface also enables quick adoption by all teams across the entire enterprise.

With **SingleStore Managed Service**, the fully-managed, on-demand cloud database service you can get started in just a few clicks—on any cloud of your choice. **Test drive now.**

Check out **singlestore.com** for more details

SingleStore