GE Solved 100+ Use Cases and Reduced Auditing Costs by 40X with Self-Serve, Real-time Data from SingleStore

100+

Use cases solved with a single platform

40X

Reduction in the number of auditors (5) that can now do what it used to take 200 auditors to do

> "Our people… would previously get inconsistent answers from the system because of latency. Today they get consistent answers, and they're getting it through a system that's better, easier to maintain, and at a far better cost point."

For more than 125 years, General Electric (GE) has invented the future of industry. GE has pioneered technologies that have spurred world-transforming changes and improved the lives of billions. GE brings to market innovative solutions that deliver essential infrastructure and solutions — across additives, aviation, capital, digital technologies, healthcare, power, renewable energy, and research — in a culture of compliance and respect for human rights, while reducing the impact of technology on its environmental footprint.

Challenges/Goals

GE has a vision for the future of business and technology but had a data infrastructure that was holding it back. GE's existing data ecosystem was based on Hadoop and Apache Spark that was complex and made it impossible to support every team's specific use cases.

Payment reconciliation can be time-consuming and resource-intensive for any enterprise, and nowhere more so than at GE. As an industrial conglomerate dealing with multiple banks across 180 countries, GE needed an army of people behind the scenes to double-check every step of the process, with 200 auditors traveling to more than 150 countries to access the necessary data sets.

"With a large and complex organization such as General Electric, which spans verticals such as aviation, healthcare, manufacturing, and energy & utilities including clean energy, and has operations in 180 countries, the only way you can manage it is by effectively leveraging technology to provide each team with the data and insights it needs," said Diwakar Goel, Chief Data Officer, GE.* "Real-time analytics has moved from being a 'nice to have' to a 'must have' in order to remain competitive in global markets."

Goel and the team knew GE needed to:

- Bring all the data together from all disparate systems
- Support citizen development and self-service to empower business users to obtain their own answers and resolve their own issues without having to create a bottleneck by bringing every request to IT and data management teams
- Drive large-scale transformation programs in pursuit of multi-million-dollar benefits

SingleStore

GE Aviation is a world-leading provider of aircraft engines, systems, and avionics

"**Real-time analytics has moved from being a 'nice to have' to a 'must have' in order to remain competitive in global markets.**" — *Diwakar Goel, Chief Data Officer, GE*

Technology Requirements

GE needed to simplify its sprawling data ecosystem while enabling the ability to handle the self-service capabilities that business users required. The technology it would select needed to help business users ask and work on the right questions, then speed up the process of getting answers to those questions.

The data comes from many systems and in many formats, so low-latency ingestion was needed to move information into the analytic tools in real time. With more than four million transactions per minute and 40,000+ users, the right technology also needed to meet the scale and concurrency requirements at a reasonable cost.

GE Healthcare builds intelligent devices, data analytics, applications, and services to help healthcare practitioners deliver more efficient care and better outcomes
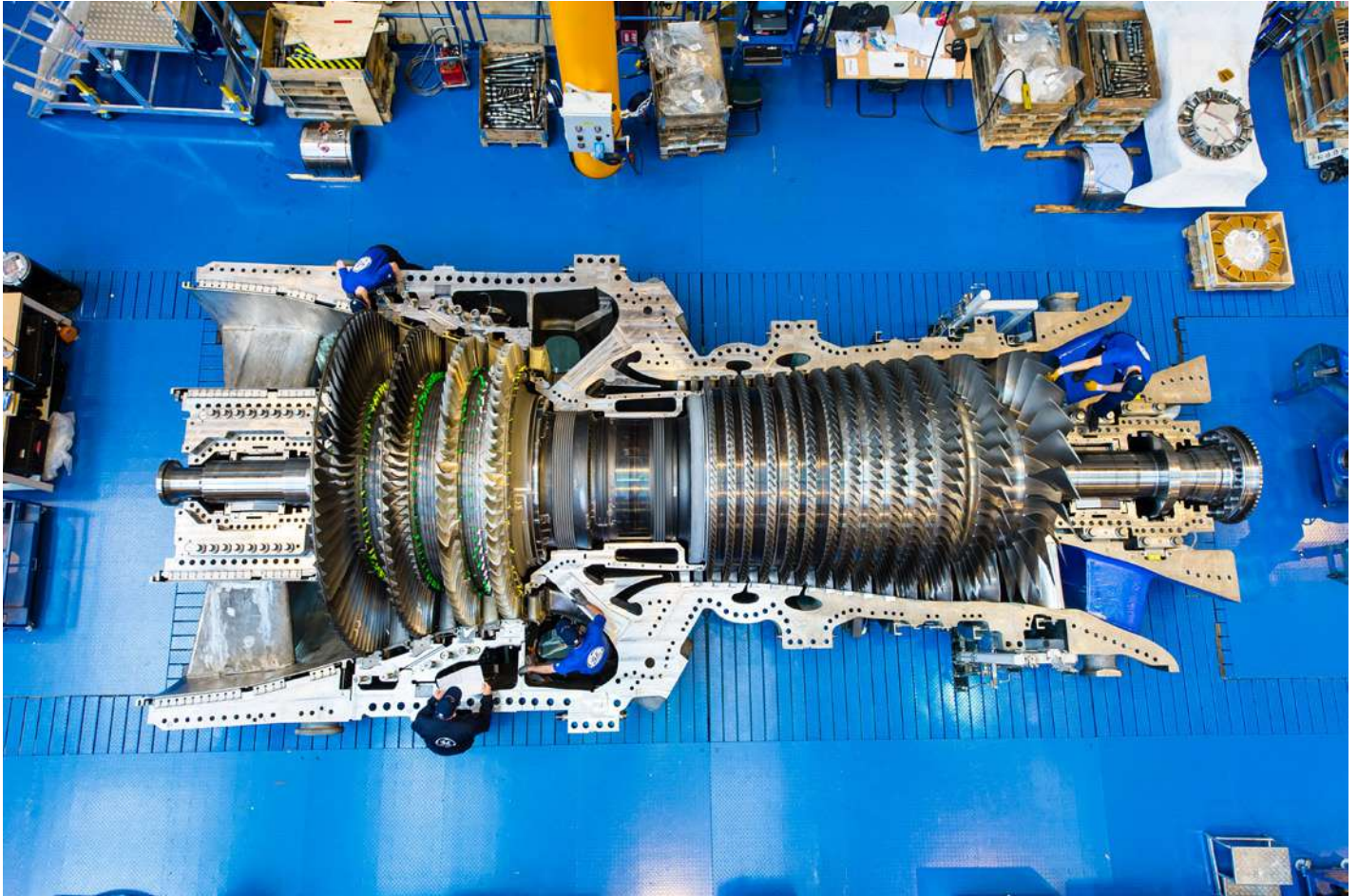
Why SingleStore

One reason GE chose SingleStore was the ability to unify transactions and analytics together in a single data platform that can ingest millions of events per second with ACID transaction guarantees while simultaneously analyzing billions of rows of data.

"With SingleStore, we can build AI and machine learning-powered self-service apps that deliver super-low-latency queries, ultra-fast ingestion, and high concurrency. We are processing millions of real-time queries supporting tens of thousands of concurrent users," said Goel.

Solution

SingleStore is working with streaming, real-time, and historical data from across the organization to surface the insights that matter most to teams. It also readily integrates with many BI tools and built-in data pipelines. This is making it easy for GE to implement ad hoc analysis in response to evolving business and marketing conditions.

SingleStore

GE Power is improving today's power networks and building the energy technologies of the future

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Outcomes

By implementing its vision with SingleStore, GE reduced the complexity of its data fabric, gave business users the self-serve, real-time data they craved, and reaped massive cost-savings.

Simplified its Data Ecosystem

GE used SingleStore to solve 80% of its data platform challenges and complexity out of the box, and the company is closing in on resolving the remaining 20%. Using an ultra-fast solution that brings transactional and analytical workloads together helped GE reduce latency significantly. GE can also now accelerate financial reporting and decision making from quarterly to real time.

Empowering Business Users with Self-Service Capabilities

"Developers working on analytic tools may not know exactly what data business users need for financial operations; conversely, business users may not understand the true capabilities of a robust data platform," explained Goel. SingleStore's AI/ML capabilities are making it simple for IT and data teams to deliver the correct data on a self-service basis to business users. Business users are gaining access to the information and insights they need to make better decisions and identify factors they can control to improve outcomes.

Eliminated Time-Consuming Manual Tasks and is Reaping 40X Savings

GE uses SingleStore and designed AI processes around it to do transactional reconciliation across its ecosystem. Significant portions of the process are automated, freeing up business users for other vital duties. Real-time data access across the global organization improved productivity and decreased costs. Instead of 200 auditors spanning the globe, five auditors can now do the work in a single location.

GE Research is where scientific research meets reality to propel GE and the world forward

To hear GE discuss its innovative implementation of SingleStore, watch this GE Town Hall on demand webinar:
The New Data Challenges of Remote Work

▶ Watch this video interview with GE by Technology Correspondent Lisa Martin, Host of The Know Show, theCUBE, and SilconANGLE
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