Global Healthcare Leader Delivers Better Care, Lowers TCO, and Enables $10B ARR Growth with SingleStore

14X

Identifying health gaps & opportunities 14 times faster

-DB Sprawl

Replaced SQL Server and replacing PostgreSQL

90TB

of data to be managed in SingleStore

+$10B

ARR growth

A global health services company that is one of the world's largest enterprises is gaining real-time data insights for mission-critical patient- and health provider-facing applications with SingleStore, while reducing TCO and enabling $5 million in revenue growth in the first year alone. By choosing SingleStore, this global healthcare leader is also positioning itself to successfully onboard multiple large new customers, which it could not effectively achieve with its existing data infrastructure.

Challenges/Goals

This company saw substantial revenue opportunities in front of it but was unable to capitalize on them due to the limitations of its existing single-node database with its symmetric multiprocessing (SMP) and rowstore-only implementation. The company was limited to scheduled reports, and had to rely on pre-aggregation of data to try to optimize query performance. It could not support high availability or high concurrency, was already struggling to meet existing data volumes, and could not meet the exponential data growth it knew was coming as its business grows, including new capabilities to be driven by machine learning.

In addition to lost revenue opportunities, these issues put existing revenue and business relationships at risk because they rendered the enterprise unable to provide pharmacists with accurate and timely analysis of compound drug prescription costs, cost drivers, and quality.

This all placed the enterprise at risk of missing targeted annual revenue increases

Technology Requirements

This healthcare leader's technology requirements in a new database included the ability to integrate data from multiple sources to ensure the most accurate results; architectural simplification and reduced complexity by reducing database sprawl; and low latency and sub-second performance to enhance the user experience.

◯ SingleStore

Pipelines
Ultra-fast ingestion with non-blocking low-latency analytics on data as it lands

Workspaces
Real-time database that supports separation of compute from compute

SingleStoreDB
Distributed

Massively Parallel

Universal Storage
The only database with a Single, unified table type for both fast transactions & analytics

Unlimited Storage
Object storage provides near-real time access to unlimited DB capacity in least expensive storage available

World's only database that delivers best-in-class performance on TPC-C, TPC-H, and TPC-DS

IMAGE | Some of the many SingleStoreDB features that led to its selection by this customer

Why SingleStore

This healthcare enterprise chose SingleStoreDB to gain a number of advantages, including:

● Unifying transactions and analytics in a single database with no data movement
● Distributed SQL and a scaleout architecture built for the cloud, but with the flexibility to also deploy on-prem, or in a hybrid environment utilizing both
● Ability to evolve away from single-node architecture and scale horizontally, quickly doubling its data cluster
● Fresh data at scale to bring analytics to applications in real time
● SingleStoreDB's three-tier architecture encompassing In-Memory or "hot" data, "warm" data on disk (SSD/NVMe), and bottomless storage of "cool" data through SingleStoreDB's Unlimited Storage, which offers near-real time access to unlimited database capacity via the least expensive storage available

Isolated Workloads on Shared Data

Compute operates on shared data without one workload affecting the performance of others
● Allow granular scalability and isolation of compute resources
● Eliminate the cost of moving and maintaining data between multiple workloads
● Scale ingest and compute workloads independently
● Isolate internal and customer facing real-time applications simultaneously on shared data

Separation of Compute & Compute

Separate write transactions from read-only workloads (analytics) each with it's own dedicated compute resources without data duplication
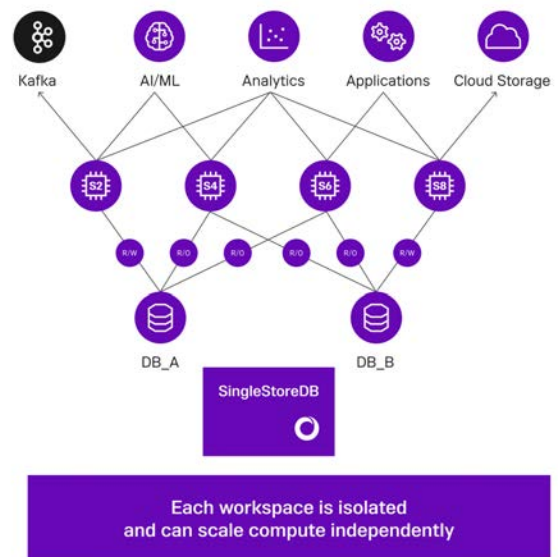

IMAGE | SingleStoreDB Workspaces isolates workloads on shared data

O SingleStore

In addition to Unlimited Storage, it also sought other SingleStoreDB features such as:

- **Pipelines**, which offer ultra-fast ingestion with non-blocking, low-latency analytics on data as it lands
- **Workspaces**, offering a real-time database that supports partitioned separation of compute from compute
- **Universal Storage:** SingleStore is the only database with a single, unified rowstore-columnstore table type for both fast transactions and analytics

Solution

This global healthcare giant has customers, often large health networks, with an array of data and application needs. It initially chose SingleStoreDB as the data foundation for one mission-critical use case, and due to the success it has achieved there, is now migrating another use case to SingleStoreDB:

A Patient Portal

This is where the customer initially deployed SingleStoreDB, replacing SQL Server. It is a user-facing application for patients that analyzes their health needs to recommend optimal alternatives, including helping them find generic drugs to save them money on their healthcare costs. It currently manages 65-70 terabytes of data (uncompressed) in SingleStoreDB.

A Portal for Both Providers and Patients

This customer is currently migrating another use case, in this instance from PostgreSQL to SingleStoreDB: a web portal for both healthcare providers and patients that uses medical data to identify health improvement opportunities and gaps in care 14 times faster than before. The portal helps providers identify patients most in need of outreach, helps clinicians customize treatment plans, and lets members access information around testing, medication safety, preventative care, and any gaps in their current coverage. Providers can create dynamic queries with insights around multiple data points including medications, labs, medical conditions, and patient information. With SingleStoreDB the customer gains the ability to let users add multiple conditions and segmentation options.

This move was an essential part of the customer's business expansion as it prepared to onboard two large new health network customers. In PostgreSQL it has only been able to store 18 months' worth of data; with SingleStore, it anticipates it will be able to manage five years' worth, at a total data size of up to 20 terabytes of uncompressed data.

As mentioned, one reason this healthcare giant chose SingleStore is that SingleStoreDB meets organizations wherever they are in their cloud journeys, offering flexibility to deploy self-managed on-premises, as a fully managed cloud service, or both in a hybrid environment. The customer has initially deployed SingleStoreDB Self-Managed and is evaluating migrating to SingleStoreDB Cloud over the next 12-15 months. Given HIPAA and other privacy requirements that impact how companies manage patient health and other information, if this customer makes the move to the cloud, it will be leveraging SingleStoreDB's ability to allow the data plane to reside on-prem with the customer while the control plane operates on SingleStoreDB in the cloud. This enables customers to obtain all the cost and flexibility benefits of the cloud while also meeting their specialized privacy requirements. SingleStoreDB's massively parallel processing (MPP) scaling with shared-nothing architecture supports high performance and high availability.

○ SingleStore

Benefits this customer is already realizing with SingleStoreDB include interactive, on demand reporting instead of the old scheduled reporting constraints; and, similarly, real-time aggregations instead of having to pre-aggregate data to try to obtain timely analytic insights, as it did before. SingleStore's support for all data sources and speeds is also crucial as SingleStoreDB is ingesting streaming data from Kafka and batch data from Hadoop.

Also simplifying and accelerating its real-time data strategy: with SingleStore the customer is able to leverage its current SQL data assets and to preserve access to the internally-developed business intelligence tool its teams are accustomed to using.

Before SingleStore	with SingleStore
SMP (symmetric multiprocessing)	MPP (massively parallel processing)
Limited to scheduled batch reporting	Interactive, on demand reporting
Pre-aggregation to try to speed results	Real-time aggregations
Database sprawl and unnecessary data movement	Database reduction and data consolidation
Revenue at risk	+$10B ARR enablement on one large customer alone
Customer relationships at risk	Successfully onboarding large new customers
Data infrastructure that couldn't keep up with existing business needs or growth	Real-time data foundation supporting current needs and future growth

Outcomes

This global enterprise in the healthcare and pharma space is reaping positive technical and business outcomes with SingleStore:

A Prescription for Better Experiences and Care

By helping identify health gaps and opportunities 14 times faster than before, users can find the answers they need quickly and patients get better care.

The Freshest, Most Accurate Data Served Up Sub-Second

With SingleStore it is reducing the complexity of gathering the data and is now able to consolidate data to yield a single version of truth. This provides accurate, consistent, and reliable data and the speed of SingleStore delivers sub-second query results on its customer-facing dashboards.

Substantial Cost-Savings and Positive Revenue Results

With SingleStore it is reducing TCO through more cost-effective SingleStore licensing and eliminating the cost and overhead associated with multiple existing databases. This customer is also on track to achieve its targeted annual revenue growth of $5 million over the first year alone with SingleStore.

Foundation for Continued Healthy Growth

The power to equip pharmacists with the analytic insights they need in real time positions this global enterprise to penetrate the pharmacy space further, faster, helping it expand its presence and increase market share.

◯ SingleStore is helping companies compete and win across many verticals. **Learn More >**

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