



Cloud-Based Enterprise Data Warehouse Using Hadoop and H-Scale

Success Story

A leading not-for-profit health system partnered with CitiusTech to create a single source of truth with the data aggregated from multiple source systems and leverage it for advanced analytics.

Business Impact

A leading not-for-profit health system implemented CitiusTech's H-Scale to create a comprehensive healthcare Big Data management platform, achieve a 360-degree view of patients and support advanced analytics.

450,000

patient / member
health records ingested

400+

database tables
/ entities ingested

500+

data quality / data
standardization rules processed

Client Requirement

Client is a leading not-for-profit health system in the U.S. serving over 2 million patients annually across 300 sites of care. It operates 10 acute care hospitals with 2,800+ beds, 4 medical groups, and 1,000+ physicians.

To improve care outcomes, the client needed a 360-degree view of patients and support advanced analytics. It used CitiusTech's H-Scale data management platform to develop a comprehensive enterprise data platform that could also handle its Big Data integration, privacy, analytics and Data Science needs.

The CitiusTech Advantage

Using H-Scale, CitiusTech built a flexible and robust healthcare data model that simplified the ingestion, reconciliation and processing of Big Data.

CitiusTech's interoperability, Big Data and clinical informatics experts collaborated with clinical and operational teams to address key challenges around rapid analytics, data security and accessibility.

CitiusTech also provided an industry-standard data model for advanced analytics and reporting, to support focused use cases such as sepsis and venous thromboembolism (VTE).

Technology Overview

The CitiusTech team conducted a detailed assessment of the client's existing data environment. It designed and developed a cloud (Microsoft Azure) based enterprise data warehouse solution on a Cloudera Hadoop distribution, and used H-Scale for data transformation. Solution highlights include:

Simplifying Aggregation & Reconciliation

- Ingestion of raw data from various systems
- Storage in Azure Data Lake Store

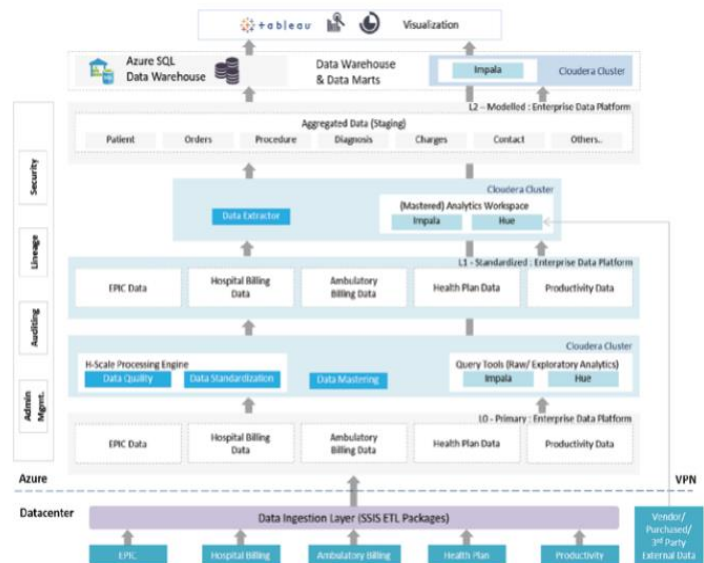
Processing & Standardizing Big Data

- Processing, enhancing data quality and data standardization using H-Scale, to create a consistent data layer
- Alignment to a standard data model
- Comprehensive and faster insights across multiple use cases

Improving Data Security & Access

- Robust data security protocols at domain, organization, provider and facility level
- Adherence to HIPAA compliance standards

“With CitiusTech’s solution, we have significantly reduced the time taken to translate data into insights.”



Solution Schematic

About CitiusTech

CitiusTech is a specialist provider of healthcare technology services and solutions to healthcare technology companies, providers, payers and life sciences organizations. With over 4,000 professionals worldwide, CitiusTech enables healthcare organizations to drive clinical value chain excellence - across integration & interoperability, data management (EDW, Big Data), performance management (BI / analytics), predictive analytics & data science and digital engagement (mobile, IoT). CitiusTech helps customers accelerate innovation in healthcare through specialized solutions, platforms, proficiencies and accelerators. With cutting-edge technology, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare organizations worldwide.

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