Data Warehouse Migration and Multi-tenancy for Large IDN



Client Requirement

Client is a private not-for-profit healthcare system in the US. It includes 8 hospitals, 1,000+ licensed beds, 100+ patient care sites, 800+ affiliated providers and 10,000+ employees.

The client needed to migrate clinical, claims, pharmacy and survey data from its legacy data warehouse to an enterprise data warehouse, based on IBM UDMH. It also wanted to enable multi-tenancy with secure data access, integrate data from new relational as well as flat files-based source systems and upgrade the existing data model to UDMH 9.3 version.

CitiusTech Solution

Requirement Analysis

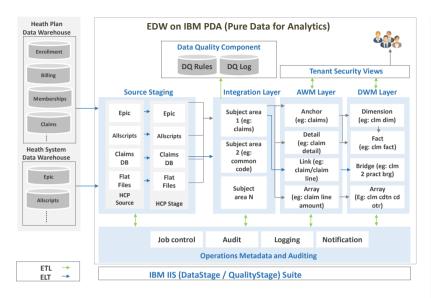
The client faced significant challenges around data profiling and mapping due to lack of expertise around source systems. It also faced several data quality issues due to insufficient quality checks during data ingestion from multiple, disparate source systems.

Solution Design

CitiusTech's solution had the following features:

- Integration of clinical, claims, pharmacy, laboratory, prior-authorization, drug formulary and survey data into IBM UDMH in IBM PDA (Netezza) environment
- Development of a HIPAA compliant multi-tenancy architecture which included identification of user groups on the basis of their data access needs
- Use of CitiusTech's accelerators such as File Reader and Data Quality Framework (built using IBM DataStage technology) to extract, transform and load data to IBM UDMH Atomic Warehouse Model (AWM) and Dimensional Warehouse Model (DWM)
- IBM tools like IIS and Aginity to develop ELT jobs,
 FastTrack for maintaining mappings and IDA for data model updates
- Robust access control that leverages the multitenancy features of IBM UDMH 9.3 model to securely store data from separate business entities





Solution Schematic

Value Delivered

By partnering with CitiusTech, the client was able to:

- Reduce development time by 15% by leveraging CitiusTech accelerator frameworks
- Shorten QA timelines by 2 months using an automated regression testing framework
- Improve efficiency of daily ETL execution process by 75%
- Make functional data enrichments as per business needs, within budget

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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