Community Healthcare Analytics Solution – Case Study

This document describes a case study to build A Health Analytics solution for Community Health care provider.

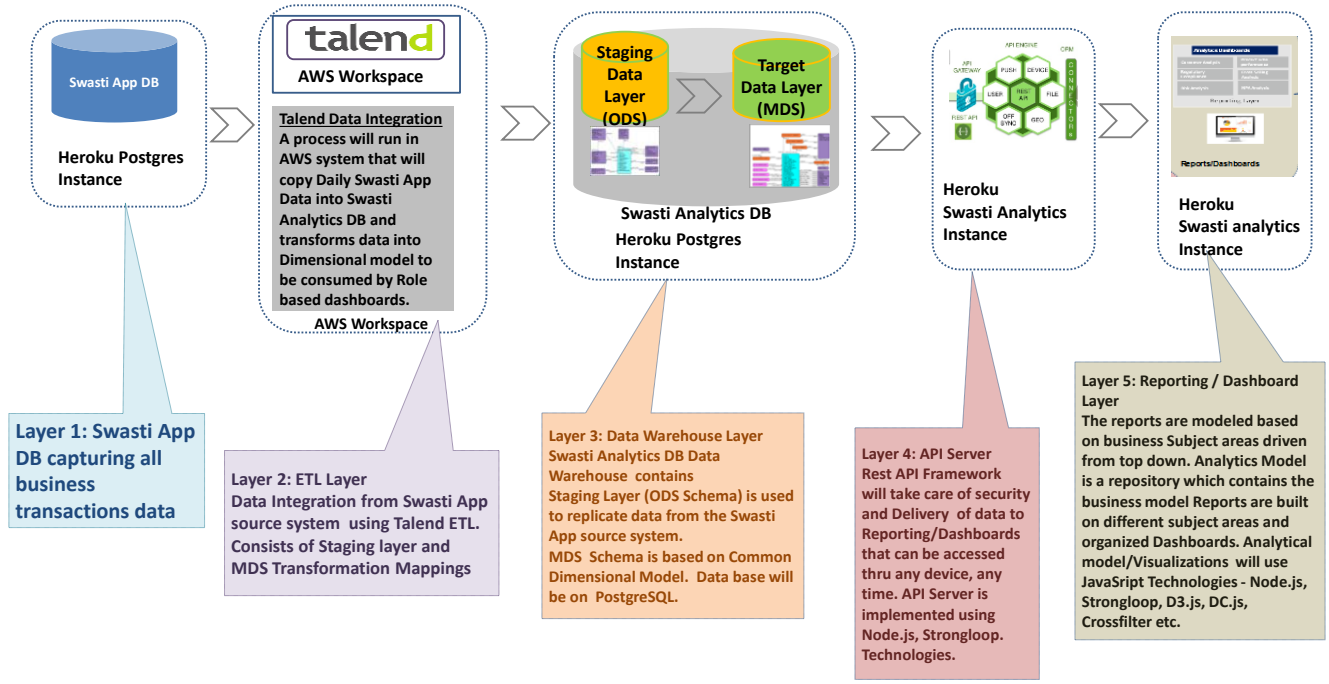
Background : Businesses spend lot of effort in developing and maintaining IT Solutions. As innovations are occurring at rapid pace in Analytics space, it is still big question whether it is actually simplifying running IT solutions for businesses. We all understand how Cloud platform is transforming the way IT Services are being delivered. We are also seeing how Data Science/ Analytics technologies are adopting to Cloud model. Big IT Product companies are transforming the way they deliver their product in Cloud model.

Here are key technical complexities that exist for Companies to deploy new Analytic Solutions.

- Integrating and data extraction with multiple sources in different forms and different geographic locations on cloud platform.
- Building common data model to serve diverse data sources and providing single source of truth and adopting to changing data sources.
- Building Role based Dashboards that will enable business analysis with visualizations (charts and graphs) that will enable slice and dice data top to bottom from large amount of data in real time.
- Adopting to stringent security rules to ensure data is secure and is delivered from a cloud location to business user looking at Dashboards on his mobile device or on desktop.

Here is the simplified representation of typical Analytic Solution hosted on cloud platform.

Swasti Analytics Architecture



API Server plays key role adhering to stringent security rules and ensuring data is safely delivered to dashboard user.

ETL Layer can be implemented using open source ETL tools such as Talend, scripting languages such as Python. 3rd party tools are available as software as service on cloud platform. Eg. xPlenty.

PostgreSQL is widely used as data store in cloud platform.

Analytical Dimensional model is implemented based on crossfilter.js and Dashboard /Visualization is based on charting libraries such as D3.js, Dc.js

Node.js is used to host the dashboard.

All of these technologies are open source technologies available on cloud platform, without compromising scalability, flexibility and security.

Main Objective of simplifying IT for businesses on cloud platform has become realistic. They can focus on their core strength to maximize their business potential.

Reference : My article https://www.linkedin.com/pulse/simplifying-analytic-solution-businesses-cloud-platform-sridhar-pai/