

Client Overview:

A global Technology leader, had a revenue reporting system for a segment of customers with huge data volumes. There was a migration process underway to move databases from SQL server on Azure to Synapse Analytics. Legacy system was not scaling and performing for the growing volumes of data resulting in user experience degradation.

Pressure Points

Revenue reporting system for this customer segment suffered performance, scalability and data latency challenges. Legacy system would take more than 99 hours to process the data at times or fail after several hours in the process. Due to high data volumes, some of the operational reports performed poorly. Users grappled with the response times, some reports took 15 mins to refresh or drill down.

Business users and analysts While the first step of migration to Azure data lake as part of Synapse migration was underway, Sonata helped enhance the modernization vision with Microsoft Fabric, then in Public preview. to failures in an enterprise-wide system to centrally report business scorecards and related insights to thousands of stakeholders in the corporate HQ and field. There are hundreds of metrics used across various functions, roles and personas. With the complex data flows, source systems and agile business processes, platform agility and scalability has been an area of ongoing improvement.

Data processing time: 99hours+

Data processing failures and operations overhead

User Experience suffered: report response time:15Mins+, data freshness: over 3 days

Solutions

Sonata helped rationalize the data to build OneLake architecture on Microsoft Fabric, Direct-lake Power BI reporting for improved report performance and data freshness, performed storage and process optimization with partitioning and v-order compressions in Fabric and overall develop a platform that is scalable, highly performant and agile.

Data platform modernization:
OneLake architecture

Power BI Direct-lake

Storage and processing optimizations

Results

By transitioning to lake centric architecture and leverage of Lakehouse and direct-lake Power BI solution, performance and scalability as well as the self service and ad hoc reporting / drill down experience was vastly improved.

Processing hours: reduced from 99hrs + to Average of 3 hours

User experience: report refresh / drill down from over 15 mins to under 10 seconds

Data Freshness improved from 3-4 days to under 6 hours



Sonata has been an integral part of our initial explorations with Microsoft Fabric in private preview, and over the course of the public preview has played a pivotal role in not only working to migrate existing solutions from Synapse Spark & SQL Serverless that imported to Power BI into an E2E Lakehouse solution implemented using Data Engineering to light up our data in One Lake and through Direct Lake in Power BI, but also in building atop this platform new insights for some of the most widely used analytics applications within Microsoft to being best and first on Microsoft Fabric and ready for the era of AI as we cross this threshold into the future.

- RJ Smith, Principal Group Engineering Manager, Microsoft