Migrating On-Premises Data & Reports to Microsoft Fabric

About Us:

UB Technology Innovations, Inc. (UBTI) is a leading global technology solution provider with more than 3 decades of experience across all industries, specializing in Capital Markets (Asset Management), Logistics and Healthcare. We are the preferred Microsoft Solutions Partner backed by a world-class team of Microsoft Certified experts with rich experience in Azure Cloud Platform, Microsoft Fabric and Data Analytics.

Technology :

Microsoft Fabric

Challenges:

Before adopting Fabric, our client struggled with siloed data across on-premises systems, SSAS Cubes, and spreadsheets. They relied on legacy systems like SSAS and SSRS for reporting, where even simple changes in SSAS were complicated and time-consuming. This fragmented approach limited visibility, slowed reporting, and raised accuracy concerns, hindering data-driven decisions. Additionally, they had concerns about data governance and were unable to do advanced analytics effectively like AI and ML activities.

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Solution

To overcome data silos and fragmented reports, UBTI recommended migrating the current data environment to Microsoft Fabric. The highlights of our implementation are:

• Integration: Seamlessly integrated data from on-premises SQL Server and SQL Server Analysis Services (SSAS) to Fabric Onelake using Dataflow Gen 2, ensuring smooth data flow and consistency.

• Pipeline Development: Designed and implemented a robust data pipeline to facilitate both daily and hourly data loads, optimizing data processing and timeliness.

• Report Migration: Successfully migrated existing Power BI reports to Fabric environment and reengineered the SQL Server Reporting Services (SSRS) reports to Power BI in Microsoft Fabric using Direct Lake mode.

• Subscription Implementation: Established and configured daily email subscriptions for Power BI reports to automate the delivery process, ensuring stakeholders receive timely updates and insights.

• Governance Framework: Implemented a comprehensive data governance framework to manage like Data Lineage Data Quality, Data Catalog, Data Health, Alerts based on Data Health using Microsoft Purview.

• Access Controls: Configured user-specific access controls and permissions for both data and reports, enhancing data security and compliance with organizational policies and regulations.

• Data Science Implementation: With the help of Microsoft Fabric Notebooks trained the following ML Models:

- Sales Forecasting: Developed and deployed machine learning models to predict future sales trends, enabling data-driven decision-making and strategic planning.
- Sentiment Analysis: Implemented sentiment analysis tools to gauge customer opinions and emotions, providing actionable insights into customer feedback and behaviour.
- Customer Churn Reporting: Created predictive models to identify patterns and factors contributing to customer churn, improving retention strategies and reducing customer attrition.

• Data Quality Rules: Established and enforced data quality rules using Data Activator, ensuring that data adheres to defined quality standards.

• Integrity and Reliability: Continuously monitored and maintained data integrity and reliability across all systems, addressing any issues promptly to ensure high-quality data.

Benefits:

1. Eliminates Data Silos: Consolidates information from various sources into a single, secure repository for a comprehensive view of organizational performance.

2. Streamlined Reporting Enhancement: The migration of existing Power BI reports and the reengineering of SSRS reports to Fabric Power BI were accomplished efficiently. This smooth transition significantly enhanced reporting capabilities, leveraging advanced analytics and visualization features for more insightful and interactive reporting.

3. Dynamic Reporting: Facilitates the creation of easily refreshed reports accessible to authorized users, eliminating the need for manual Excel report generation from SSAS cubes.

4. Built-in Security: Ensures data accuracy and consistency with built-in security features.

5. Enhanced Governance: Provides access controls and data lineage for a clear audit trail, improving data governance.

6. Scalable Architecture: This architecture accommodates future data growth through elastic compute and storage resources and enables seamless scaling of workloads based on changing business demands.

7. Advanced Data Science: Delivers advanced analytics solutions for sales forecasting, sentiment analysis, and customer churn prediction, empowering data-driven decision-making.

Conclusion

By leveraging Microsoft Fabric, we transformed our client's data landscape from siloed, inefficient systems to a centralized, data-driven platform.

We addressed critical challenges including data accessibility, reporting inefficiencies, and the absence of advanced analytics capabilities. Through seamless data integration, robust data pipelines, and the migration of reporting tools to Power BI, we enhanced data accessibility and reporting efficiency.

Furthermore, by implementing a comprehensive data governance framework, including user-level permissions and data quality checks, we ensured data integrity and security.

The integration of AI and ML models, such as sales forecasting, sentiment analysis, and customer churn prediction, has empowered our clients to make data-driven decisions, optimize operations, and gain a competitive edge.

This successful implementation demonstrates Microsoft Fabric's power in driving business transformation and underscores UBTI's expertise in delivering exceptional data solutions.

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