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LEVERAGING AZURE DATA FACTORY PIPELINES FOR EFFICIENT DATA REFRESHES IN BI APPLICATIONS

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ABSTRACT

In the era of data-driven decision-making, Business Intelligence (BI) applications require timely and accurate data to deliver meaningful insights. Azure Data Factory (ADF) provides a robust framework for orchestrating and automating data workflows, making it an ideal solution for managing data refreshes in BI environments. This paper explores the effective utilization of Azure Data Factory pipelines to enhance the efficiency of data refresh processes in BI applications. By leveraging ADF's capabilities, organizations can automate data ingestion, transformation, and loading, significantly reducing the time and effort required for data updates.

The study outlines best practices for designing ADF pipelines tailored for BI needs, emphasizing the importance of integrating various data sources, scheduling refresh intervals, and monitoring performance. Furthermore, it discusses the scalability of Azure Data Factory, enabling organizations to handle increasing data volumes without compromising performance. Key features such as data flow transformations, error handling, and logging mechanisms are examined to illustrate how they contribute to a more resilient data refresh strategy.

Ultimately, this research highlights the critical role of Azure Data Factory in facilitating efficient data refreshes, which in turn empowers BI applications to deliver timely insights and support informed decision-making. By adopting ADF pipelines, organizations can achieve greater agility and responsiveness in their BI initiatives, ultimately driving improved business outcomes.

KEYWORDS: *Azure Data Factory, Data Refresh, Business Intelligence, BI applications, Data Orchestration, Automation, Data Integration, Performance Monitoring, Scalable Data Workflows, Data Transformation*

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