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LEVERAGING SNOWFLAKE STREAMS FOR REAL TIME DATA ARCHITECTURE SOLUTIONS

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ABSTRACT

The exponential growth of data in various industries necessitates the adoption of real-time data architecture solutions to facilitate timely decision-making. Snowflake Streams offers a robust mechanism for capturing changes in data, allowing organizations to build applications that respond to data alterations instantaneously. This paper explores the architecture and functionality of Snowflake Streams, highlighting its integration with Snowflake's cloud data platform. By leveraging Snowflake Streams, businesses can effectively manage and analyze large datasets, ensuring data integrity and availability. The research outlines the operational advantages of utilizing Snowflake Streams, including reduced latency, improved data accuracy, and enhanced analytical capabilities. Moreover, case studies are presented to demonstrate successful implementations of Snowflake Streams across diverse sectors, emphasizing its role in transforming traditional data processing approaches into dynamic, real-time architectures. This study concludes with recommendations for organizations aiming to adopt Snowflake Streams, underscoring its potential to significantly enhance data-driven decision-making processes.

KEYWORDS*: Snowflake Streams, Real-Time Data Architecture, Cloud Data Platform, Data Processing, Data Analytics, Change Data Capture*

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