Enhancing Sales Performance and Operational Efficiency in a Superstore Using AWS Athena and Quick Sight

A diagram of data analysis

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The Process BreakDown of AWS Architecture:

**IAM User**

An IAM user is initially created with the necessary permissions to access and manage AWS services. This user will have access to upload data to S3, set up AWS Glue, run queries in Athena, and visualize data in Quick Sight.

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**S3 Bucket**

Amazon S3 serves as the storage for the raw data, and hence, the superstore dataset has been uploaded into the bucket. The dataset consists of order details, shipping logistics, customer details, and product specifics.

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**Data Catalog**

The AWS Glue Data Catalog stores the metadata and the dataset's schema. To do this, we will create a data crawler and run it, which then creates a table itself. This helps Athena to understand the data table more clearly and can query it.

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**Athena**

Amazon Athena queries the data stored in S3 and uses metadata from the Glue Catalog to execute SQL queries directly on the data in S3. Various SQL queries are run to analyze different aspects of the data, such as sales performance, shipping efficiency, impact of discounts, profitability, and others.

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**Quick Sight**

The results from the Athena queries are visualized using Quick Sight to create interactive dashboards and reports. These visualizations help derive insights from the data and make data-driven decisions to enhance sales performance and operational efficiencies.

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