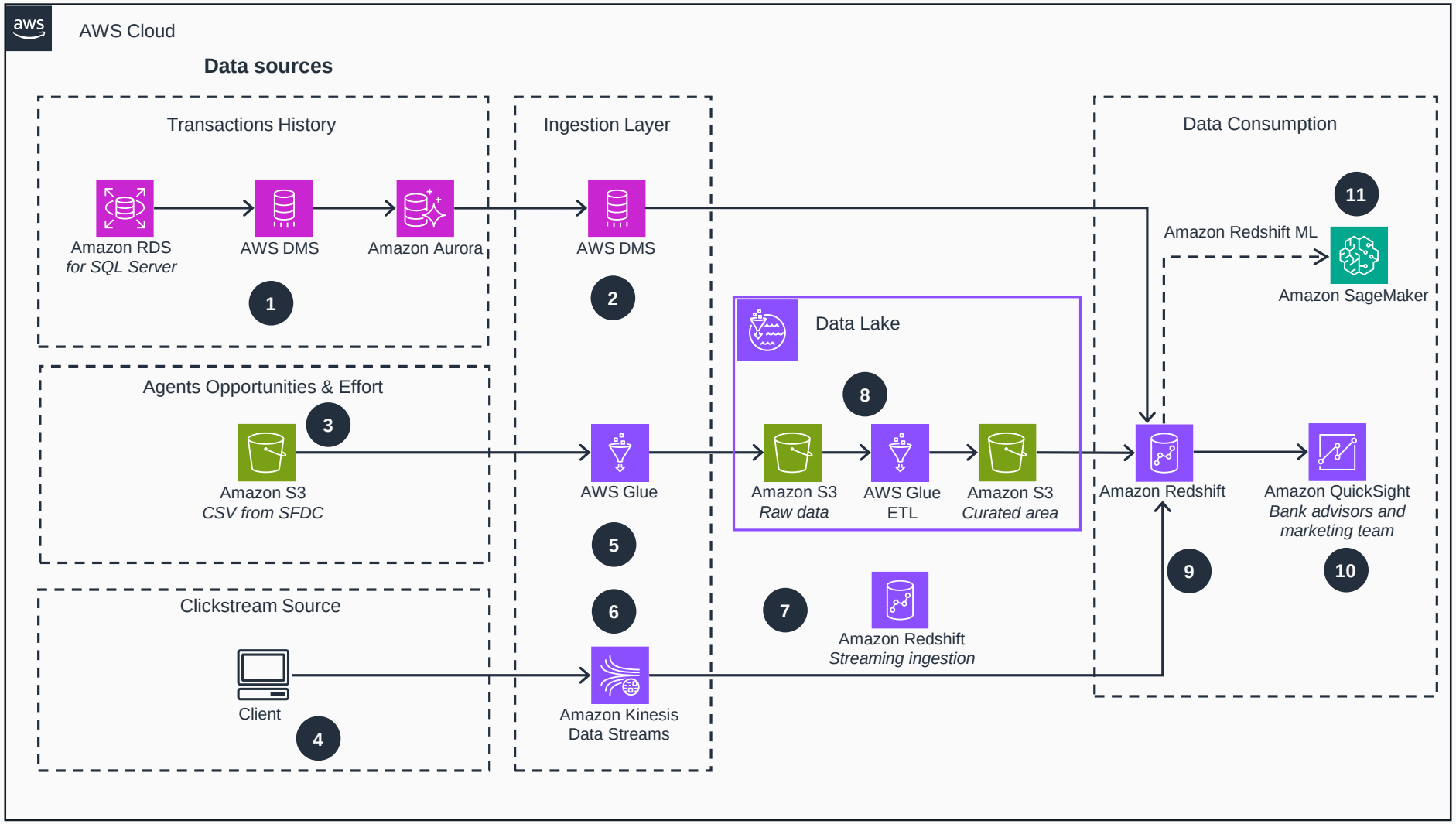
Guidance for Customer Lifetime Value Analytics on AWS

This architecture diagram shows how financial institutions can implement and leverage Customer Lifetime Value (CLV) using AWS services.



1. Transactional data workload is modernized by moving from commercial database engines to (open source) **Amazon Aurora**, using **AWS Database Migration Service** (AWS DMS).
2. **AWS DMS** replicates data from **Amazon Relational Database Service** (Amazon RDS) to the data warehouse with **Amazon Redshift**.
3. Sales data is made available in an **Amazon Simple Storage Service** (Amazon S3) bucket (such as a CSV file) directly from the data source, which in this case is Salesforce.com (SFDC).
4. You can generate clickstream data while using the application.
5. An **AWS Glue** job copies data from the source **Amazon S3 b**ucket (CSV from SFDC) towards the “Raw Data” **Amazon S3 b**ucket.
6. **Amazon Kinesis Data Streams** uses clickstream data through a data stream.
7. **Amazon Redshift** can directly use streaming data from **Kinesis Data Streams**.
8. An **AWS Glue** extract, transform, and load (ETL) job cleanses raw data and writes it into the “curated area” of the **Amazon S3** bucket.
9. **Amazon Redshift** centralizes historical revenues, customer profiles, and clickstream data to allow advanced customer spend and revenue analytics.
10. **Amazon QuickSight** is used by the bank advisors and the marketing teams to visualize customer profiles, revenues, lifetime value, and make decisions.
11. **Amazon Redshift** uses **Amazon SageMaker** to train a machine learning (ML) model and predict the Customer Lifetime Value (CLV) using historical data.

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AWS Reference Architecture