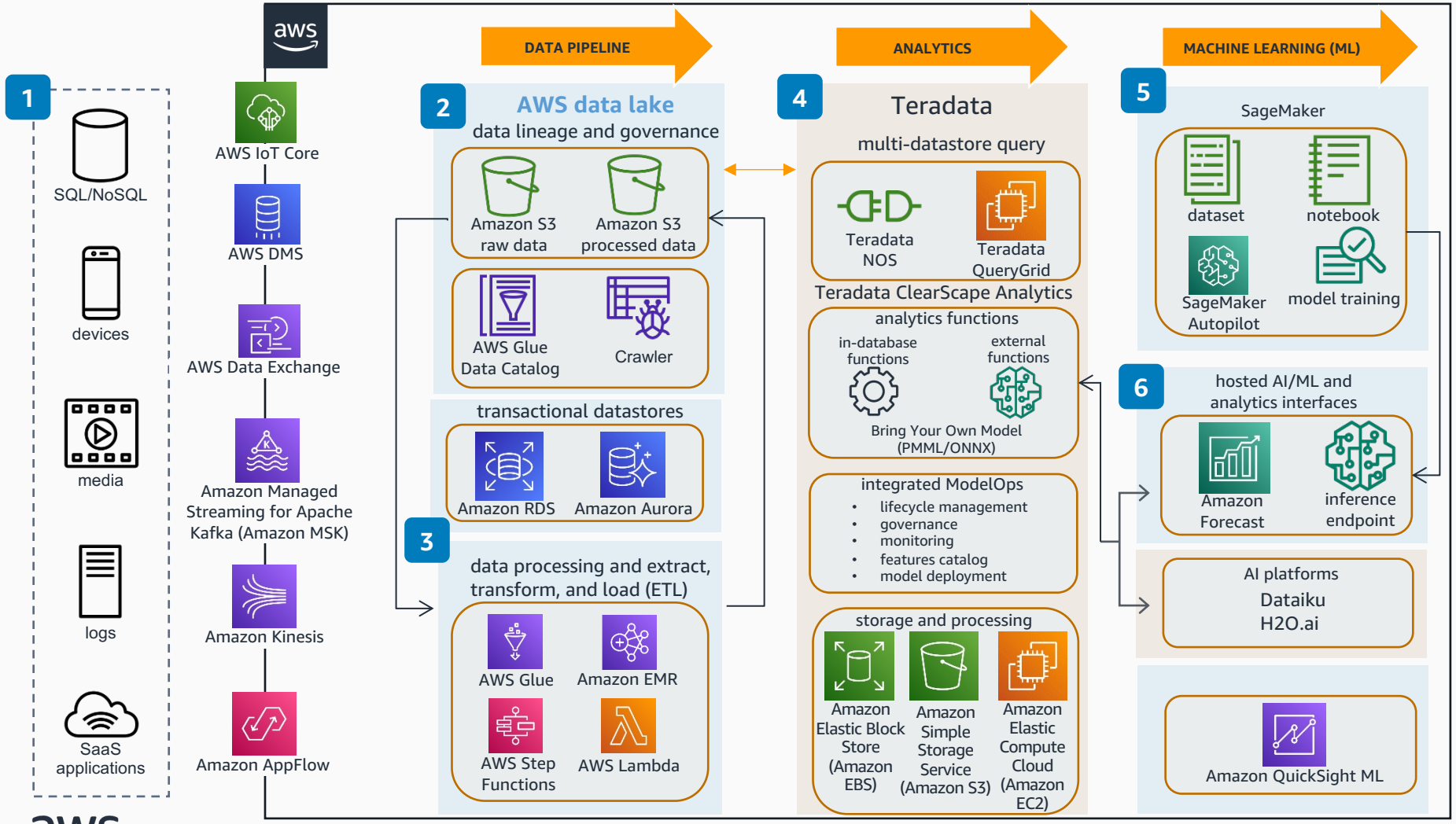
Modern Data Platform using AWS and Teradata

VantageCloud Enterprise is part of the Teradata VantageCloud offering, the complete cloud analytics and data platform that includes Teradata's significantly expanded ClearScape Analytics and integration with Amazon SageMaker.



1 Data is collected from multiple sources across the enterprise and Software as a Service (SaaS) applications, and ingested using AWS services such as **AWS Data Exchange**, **AWS Database Migration Service** (AWS DMS), **AWS IoT Core** and **Amazon Kinesis**. **AWS Data Exchange**, **AWS DMS**, and **Amazon AppFlow** use **Amazon Simple Storage Service** (Amazon S3) as a transitional datastore or a as a permanent datastore accessed through Teradata Native object Store (NOS).

2 The AWS data lake is used to manage data lifecycle and governance. **Amazon S3** is used as a highly-available data store for permanent and transitional storage in the data lake.

3 The data is processed using **AWS Glue** and **Amazon EMR**, and stored either to **Amazon S3** or directly into Teradata using **AWS Glue** streaming.

4 Teradata Vantage on AWS is a highly-scalable data warehouse and analytics platform. With Teradata QueryGrid, the analytics platform can query other datastores such as structured query language (SQL) databases and **Amazon EMR**. Teradata NOS is the native object storage, allowing Teradata Vantage to access and configure data on **Amazon S3** as an external table. **Amazon S3** is also used to store incremental backup.

5 **Amazon SageMaker** retrieves training data from both Teradata and **Amazon S3** using the Teradata SQL kernel or the Teradata python library. Trained models are deployed to an endpoint in **SageMaker** or imported as a bring your own model (BYOM) into Teradata for in-database analytics.

6 External functions within Teradata SQL interface are used to get inference from both Amazon inference endpoints as well as artificial intelligence (AI) platform providers.

Reviewed for technical accuracy November 18, 2022

AWS Reference Architecture