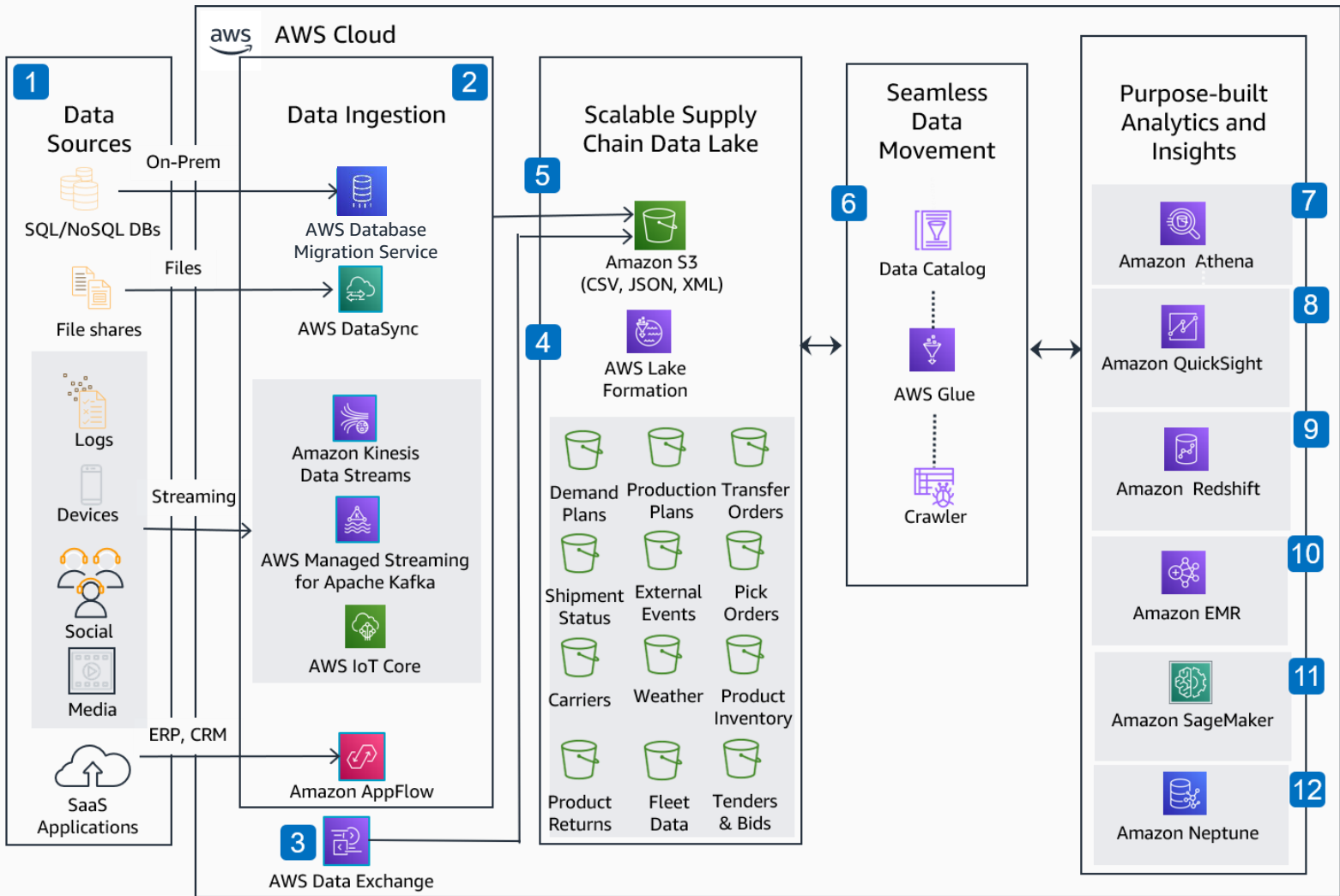


Guidance for Deploying a Supply Chain Data Hub on AWS

This architecture shows options for ingesting data from supply chain planning, execution, and real-time shipment status providers as well as building cross-category scorecards using AWS services to create a supply chain data lake for analysts and planners.



- 1** Supply chain data is collected from multiple data sources across the enterprise, including enterprise resource planning (ERP) and customer relationship management (CRM) software-as-a service (SaaS) applications, manufacturing shop-floor edge devices, logs, streaming media, and social media.
- 2** Based on the type of data source, **AWS Database Migration Service (AWS DMS)**, **AWS DataSync**, **Amazon Kinesis**, **Amazon Managed Streaming for Apache Kafka (Amazon MSK)**, **AWS IoT Core**, and **Amazon AppFlow** ingest data into the supply chain data lake hosted on AWS.
- 3** **AWS Data Exchange** integrates third-party data that may be useful in predicting shipment estimated time of arrival (such as weather data) into the supply chain data lake.
- 4** **AWS Lake Formation** helps with building the scalable supply chain data lake.
- 5** **Amazon Simple Storage Service (Amazon S3)** is the foundation for supply chain data lake storage.
- 6** **AWS Glue** extracts, transforms, catalogs, and ingests data across multiple data stores like ERP, planning, and shipment visibility systems.
- 7** **Amazon Athena** is a serverless interactive query service that analyzes data in **Amazon S3** using standard SQL.
- 8** **Amazon QuickSight** provides dashboards that help planners analyze data about supply chain planning, execution, and real-time shipment status to make informed business decisions.
- 9** **Amazon Redshift**, a cloud data warehouse, analyzes structured and semi-structured data.
- 10** **Amazon EMR** provides the cloud big data platform for processing vast amounts of data using open source tools.
- 11** **Amazon SageMaker** builds, trains, and deploys ML models, and **AWS AI services** add intelligence to supply chain applications.
- 12** **Amazon Neptune** graph database optimizes network queries for speed and accuracy.