

Company Name: **Toyota Motor**

Video Link: <https://www.youtube.com/watch?v=Kp51k6LY-2c&list=PLhr1KZpdzukdeX8mQ2qO73bg6UKQHYSHb&index=46>

Solution: **Toyota Motor NA: Lake House Architecture for Data and Analytics**

Toyota manufactures and distributes cars worldwide that are meticulously logged in vehicle **data warehouses and data marts** to provide **insights** on **service checks** and **sales reports**. Toyota migrated and modernized its **on-premises** vehicle data warehouse and data marts by **leveraging a Lake House architecture** on AWS. Data is securely migrated from the source systems on-premises to AWS using **AWS Direct Connect** and ingested in data integration tools running on Amazon EC2 such as **Kafka, Talend, and Databricks**.

Data is pushed into different layers for transformation with **Amazon S3, AWS Glue, and Amazon RDS**. To obtain read-optimized data, data is ingested into Amazon **Redshift**. Amazon Redshift Spectrum and Amazon **Athena** are leveraged by Toyota's Data Scientists, Analysts, and Business user teams to produce self-service reports. With this Lake House architecture, Toyota has **improved their time to market and eliminated the duplication of data**.

