

Business Intelligence Solution for Seamless Collaboration in USA's Tech Provider Operations

ABOUT CLIENT

- Leading U.S. tech provider focused on data management for large-scale transit and transportation agencies.
- The company serves over a million riders monthly and manages fleets of 500+ vehicles.
- They offer solutions such as real-time performance dashboards, MaaS platforms, and traveler information systems to improve operations and commuter experiences across the state.

PROBLEM STATEMENT

The company struggled with data management due to multiple, disconnected systems. Their main issues were:

- **No Unified Performance Tracking**
Financial and operational data were spread across systems, making it hard to measure KPIs and track overall progress.
- **Manual Reporting and Communication Gaps**
Dependence on manual reporting caused delays, inconsistent formats, and limited access to important data for teams and stakeholders.

Transportation & Logistics

- AWS Data Engineering,
- Business Intelligence (BI),
- Data Analytics,
- Data Warehousing,
- Digital Transformation,
- ETL,
- Tableau

North America

- Accounting and Finance,
- Facilities and Administration,
- Financial Planning and Analysis (FP&A),
- Strategy and Planning

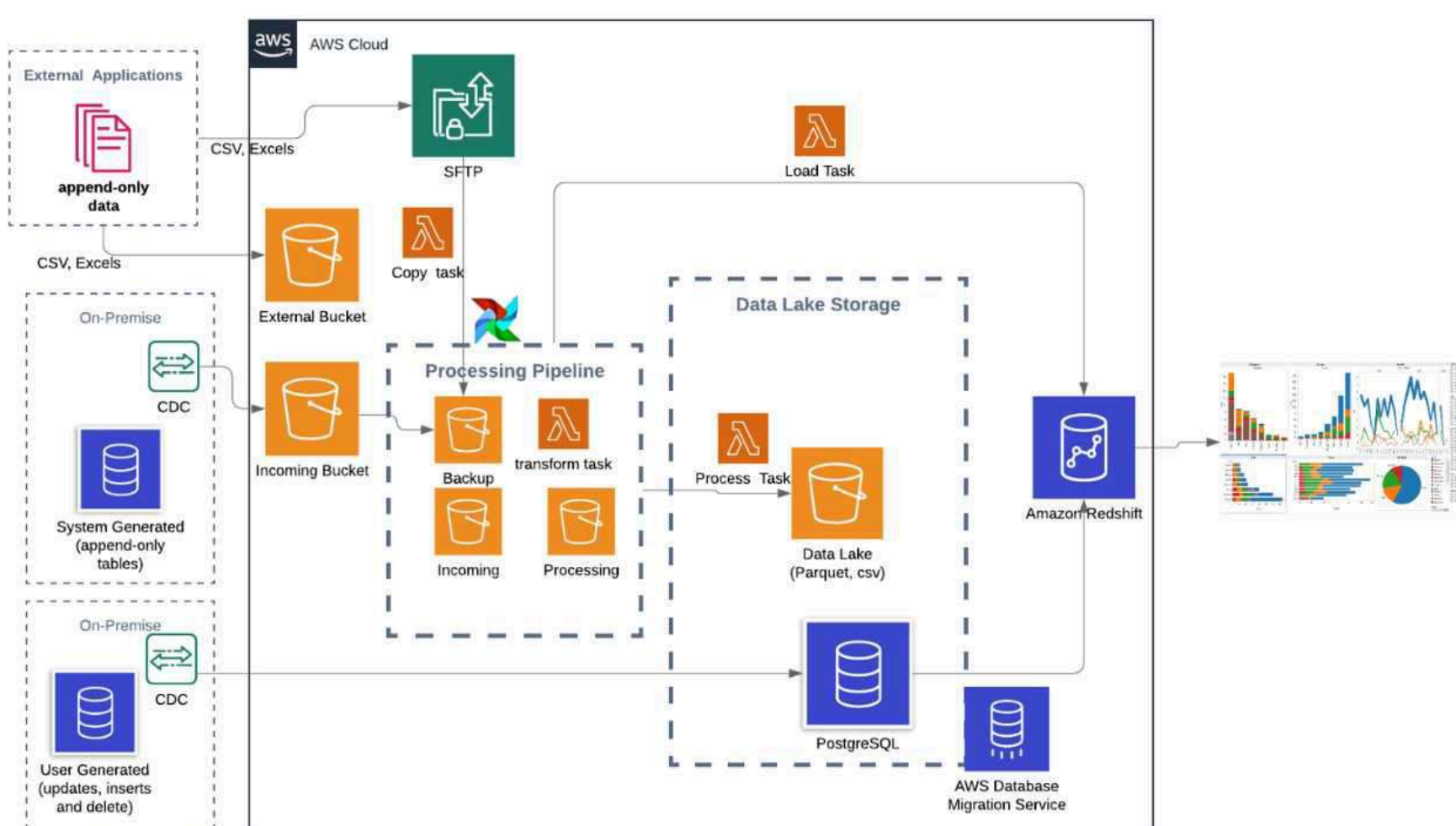
Managed Analytics

SOLUTION

To tackle these challenges, we implemented a comprehensive Business Intelligence Solution designed to unify and streamline the client's data flow and reporting. Here's what we did:

- **Centralized Data Warehouse**
We set up a single data warehouse using Redshift to bring together fragmented data from various sources, including real-time operational metrics and financial reports. This gave the client a one-stop location to access their most crucial data.
- **Automated Data Flow for Access**
We created an automated ETL process using Airflow, which handles data cleaning and transformation in the background. Now, data updates happen almost instantly, eliminating the need for time-consuming manual processing and ensuring fresh data is always available.
- **Tailored Data Views**
We developed custom tables in SQL and visual dashboards in Tableau to make performance data easy to access and interpret for different teams. The client can now quickly track KPIs, financial trends, and operational metrics from a single, intuitive interface.
- **Proactive Error Monitoring**
We added monitoring features in Airflow to catch any issues in data processing. When errors pop up, automatic email alerts notify the team immediately, helping them address issues fast and keep the data flow steady.

TECHNICAL ARCHITECTURE



BUSINESS IMPACT

The BIS implementation brought measurable improvements to the client's operations:

- **KPI Visibility**
Real-time tracking allowed the client to monitor KPIs instantly, increasing the visibility of key metrics by 200 data points weekly across operations and finance.
- **Faster Reporting**
Automated reporting cuts report generation time from days to just a few hours, saving around 13 hours per week and enabling teams to focus on analysis rather than data preparation.
- **Better Data Access**
Consolidated data from 10+ sources into one place, enabling unified performance tracking across all departments and making data accessible in under 10 seconds.
- **Standardized Communication**
Consistent report formats helped teams work together better, cutting misinterpretation incidents by nearly half.
- **Stakeholder Satisfaction**
Improved data accuracy and faster access boosted stakeholder satisfaction, with feedback showing a 45% improvement in the reporting process.
- **Error Reduction**
Automated data processing reduced manual errors by over 60%, ensuring that reports were accurate and dependable for both financial and operational analysis.