Streamlined Cloud-based BI Solution Empowers Apogee Gardens' Reporting

Executive Summary

Apogee Gardens, a Montana-based dispensary, lacked experience with Cloud services. They manually processed Excel reports to track inventory and item status. To streamline their workflow, NMD implemented a solution using Docker, Python, AWS Lambda, S3, OneDrive, Athena, Glue Data Catalog, and PowerBI. Now, Apogee Gardens benefits from automated BI reporting and dashboards, providing them with valuable insights into their business. Although setting up Power BI Gateway with Amazon Athena posed challenges, NMD overcame them using the ODBC connector. Apogee Gardens is exploring additional opportunities for collaboration with NMD.

Customer Description

Located in the State of Montana, Apogee Gardens is a licensed, recreational & medical dispensary, which empowers quality-minded patients with an innovative approach to alternative medicine.

Description of Service

Apogee Gardens had no previous experience with Cloud services. Their business intelligence workflow utilized Excel reports from a 3rd party website, which contained data related to business inventory and item status. The Excel reports included basic processing, such as de-duplication and aggregation, done by hand in order to produce monthly inventory valuations and counts.

NMD determined that automatic downloading of the reports into Cloud Storage (S3) with secondary storage in OneDrive (the cloud storage used/preferred by the client) would be beneficial.
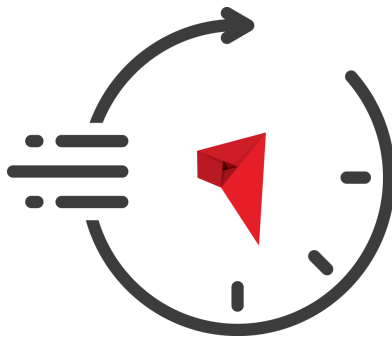
Once data ingestion was scheduled, the processing and formatting of data into useful BI reports were also possible. Automated and accessed through BI software displaying the tabular data and related charts were produced with no additional analyst work.

Description of Solution

NMD implemented a web scraper using Docker and Python (selenium) to download reports from the 3rd party website.

The containerized app was deployed via AWS Lambda and set to run on a daily schedule using EventBridge.

S3 was the main storage endpoint for report data with an integration with Onedrive to sync data there.

Athena and the Glue Data Catalog were used on the data in S3 to impart structure to the data by creating tables and partitions.

Two EC2 instances were set up for PowerBI Desktop and PowerBI Gateway, respectively, and PowerBI was connected to the structured data in S3 via the Athena ODBC driver.

The EC2 instances were scheduled to start and stop daily, loading S3 data into PowerBI Desktop and then refreshing the data and reports in the PowerBI Service Web Application.

Reporting and visualizations were built in PowerBI to allow the client to easily access custom reports and visualizations that detail the status and history of their business.
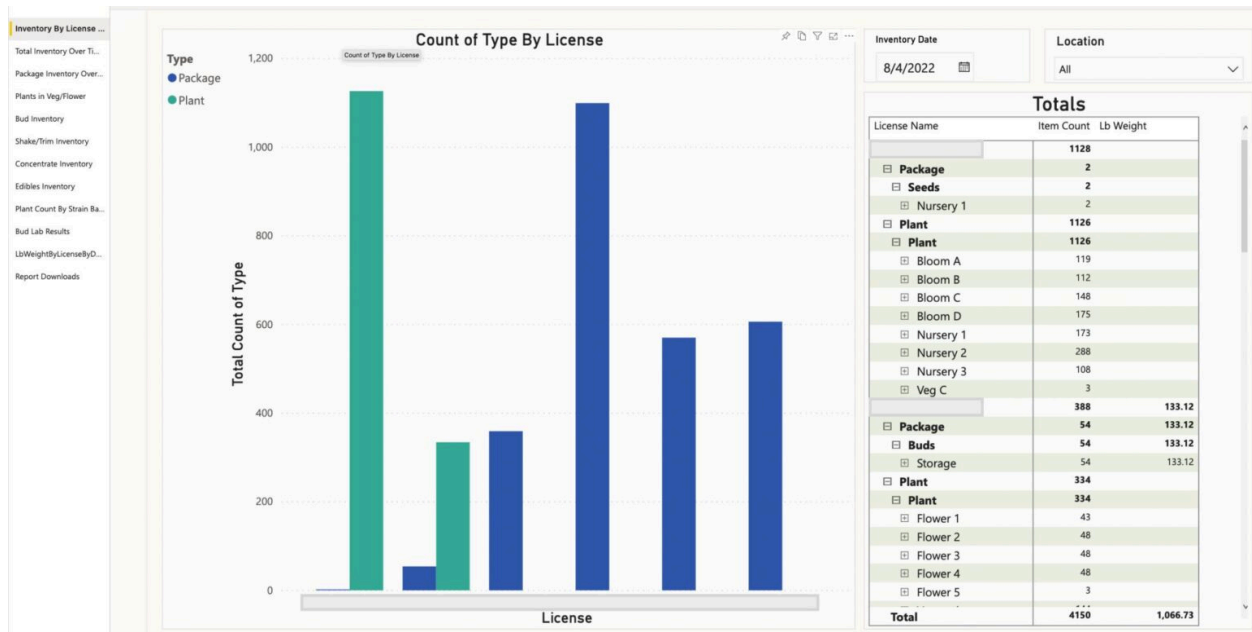
Description of Outcome

Apogee Gardens now has access to BI reporting and dashboards. All reporting and data management is automated and occurs daily. The reports have been customized to give the client exactly the views they wanted in their data.

Lessons Learned

Power BI Gateway was difficult to set up with Amazon Athena. Instead of using the Athena connector, NMD used the ODBC connector to get it working.

Current Relationship

Apogee Gardens continues to validate automated inventory reporting as NMD stands by for additional scope regarding sales data.