SUCCESS STORY

UNIFIED DATA ANALYTICS PLATFORM USING CASSANDRA & AWS

ABOUT CLIENT

An Indian fintech startup that focuses on enabling customers to meet their real life-goals by providing them intuitive & tailored financial solutions

BUSINESS

Data & Analytics

DOMAIN

FinTech

TECHNOLOGIES

Apache Airflow · amazon S3 · Amazon EC2 · APACHE Spark · cassandra

Amazon ECS · Amazon EKS · amazon QuickSight · Amazon RDS · PostgreSQL · Amazon Athena

"PROMPT IN THEIR ENGAGEMENT WITH US, INDIUM HAS BEEN A GOOD PARTNER TO WORK WITH AS WE SET UP ADVANCED DATA PIPELINES DESIGNED TO HANDLE LARGER SCALE DATA FOR OUR DATA MODELING AND RISK MANAGEMENT FLOWS. THEY HAVE SHOWN EXPERTISE IN AWS FROM A DATA AND ANALYTICS PERSPECTIVE."

- CO-FOUNDER
VC-FUNDED INDIAN FINTECH STARTUP

PROJECT OVERVIEW

The client was keen to partner with a digital engineering services firm with strong capabilities across Cloud, Big Data Analytics and AI/ML. Post analysis, the client deputed Indium Software to achieve the abovementioned objectives and modernize the homegrown data analytics platform to take advantage of the scalability, cost efficiency and innovative cloud-native features offered by AWS.

BUSINESS REQUIREMENTS

Backed by top Global VCs, the Client is a leading Indian FinTech Startup that serves over 16 MN underbanked customers from the informal sector. Goal-based savings, inclusive payments, ML-based automated credit health check, credit services platform are some of its key products /services aimed at increasing usage of formal financial services by the underserved. With new rounds of investment flowing in, the client decided to drive the below objectives:

- **Centralized Data Lake** – As customer base and tailored product offerings grew, the client needed a centralized data lake with a standardized structure that helps on-board data from all FinTech Partners

- **Build holistic customer profiles** – Enrich customer profile with data from new FinTech Partners before making it available for downstream credit health check ML model and risk management dashboards / reports

- **Deliver Strategic Insights** – Build dashboards that offer strategic and operational insight for key business teams

SOLUTIONS

Post requirements gathering, Indium had a fair idea on the business objectives and the rationale behind tech stack chosen by the client. It was mutually agreed to modernize the new platform, build ETL pipelines and load data from new FinTech partners to build new customer profiles and enrich existing ones, before moving on to building dashboards / reports. Given below are

key highlights of the solution designed and delivered.

- The AWS infrastructure was spin up to host the open-source services part of the tech stack – Cassandra, Airflow – and other native AWS services

- Data from FinTech partners was first staged in AWS S3, and then cleansed

- This cleaned data was then processed for downstream credit health check ML model and loaded into Cassandra

- Cleaned data from S3 was aggregated and loaded into AWS RDS (Postgres) for consumption by AWS Quicksight

- All data processing was handled using Spark ETL pipelines that ran on top of scalable analytics infrastructure

- The entire data & analytics solution was containerized using AWS ECS to ensure it can be deployed in end client's choice of cloud

- AWS Quicksight dashboards were built to glean insights on business operations, emerging patterns that drive new product features among other things strategic initiatives by key business leaders

BUSINESS IMPACT

- **5x shorter partner onboarding** – The centralized data lake and spark-based data ingestion pipelines cut down new partner onboarding time from 2 weeks to 3 days

- **10x faster insights** – Monthly Risk management dashboards and reports now run 10x faster thanks to the new centralized data lake and performant data ingestion pipelines

- **Holistic customer profiles** – With customer profile enriched through new partner data, the credit health check ML model offers holistic profiles of a larger group of population with additional parameters that eases underwriting

ABOUT INDIUM

Indium is a Digital Engineering Services leader and Full Spectrum Integrator that helps customers embrace and navigate the Cloud-native world with Certainty. With deep expertise across Applications, Data & Analytics, AI, DevOps, Security and Digital Assurance we "Make technology work" and accelerate business value, while adding scale and velocity to customer's digital journey on AWS.

indium
Make Technology Work

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