Integration of Salesforce and Master Data Management System

using Event Driven Architecture.

The PNC Financial Services Group, Inc. is one of the largest diversified financial services institutions in the United States. It is a coast-to-coast franchise with an extensive retail branch network and a presence in the country’s largest markets. PNC provides retail banking, including residential mortgage, corporate and institutional banking, and asset management.

# **Project Overview**

PNC happens to be one of the largest Salesforce customers in terms of number of users and the size of the org. Their org is used by multiple lines of business including Sales, Service, Retail, Wealth Management, Financial Advisors, Investment bankers etc. Each LOB requires a different set of data attributes to perform their work.

This effort was to make Master Data Management (Single Source of Truth) data available in Salesforce and leverage it across the LOBs and integrating it in customer engagement points to provide exceptional customer experience.

Wipro successfully led the effort to implement Event Driven Architecture on Salesforce platform based on Confluent Kafka which went live in February 2023.

# **Technology Stack**

Salesforce Service Cloud

Salesforce Sales Cloud

Salesforce Platform Components. e.g. Platform Events, REST APIs, Apex etc.

Cloud-based Sprint Boot Java Application

Confluent Kafka

# **Business Challenge**

In a financial company like PNC, business processes are interdependent on different enterprise systems. A process originated in one system cannot be completed without interacting with another enterprise system. Some of them are New Account Opening (NAO), Customer Due Diligence (CDD), Know Your Customer (KYC) etc.

An MQ based integration was in place to fetch latest data from their MDM system. However, it had several issues to synch up 90 million plus Account, Contact and other custom object records including message delay, message loss, order of messages, partial data etc.

Business wanted a solution that meets SLA, is reliable and can make multiple systems interaction easier.

# **Technical Challenges**

After initial Apex code was in place to process events, the main challenges were around volume of data, unexpected surges in volume, huge number of duplicate events, event payload size, Salesforce governor limits for CPU time out and Heap size, REST API limitations.

# **Solution**

While starting out with Salesforce Platform Events, the team learnt about several limitations around it and had challenges with error handling. After discussing with Salesforce Support on multiple different occasions and for several different cases, team decided to go with Custom Objects and REST APIs to receive the events on the platform.

Since these were full data synch events, dealt with payload size and batch size issues, huge volume of bulk updates, exceeding SLA, and consumer lag.

We resolved every issue and delivered a successful integration that met all needs of the client.

# **Business Benefit**

Useful data became available in Salesforce CRM for all the lines of business.

This has improved and expedited several of the business processes.

Event Driven Architecture is in place for the organization to facilitate future integrations.