

## Golang consumer

### Project motivation:

Currently with the high flow of data circulating in registrations, registrations and online purchases, customer data is increasingly exposed to fraud. Thinking about it, we have data protection laws, which come with the intention of protecting this data, however, we can always think of new solutions.

A company that sells various products, which captures information from customers who make purchases, through discount campaigns on the internet and through account registrations on the sales site, and stores them in an SQL database (Bank 1). Knowing the sensitivity of the data, the company needs a solution for the telesales team to have access only to the necessary data in real time, so that it only has access to the customer's name, telephone number and region, so that it can call to sell.

Given the scenario, the IT team set up an API structure (producer and consumer) that guarantees that the data is saved in another SQL database (Bank 2), in real time, and in a way that only the necessary data is recorded.

The project consists of a structure (Figure 1) composed of 2 SQL databases, 1 producer and 1 consumer.

At this stage, only the consumer of the project will be built.

### Architecture:

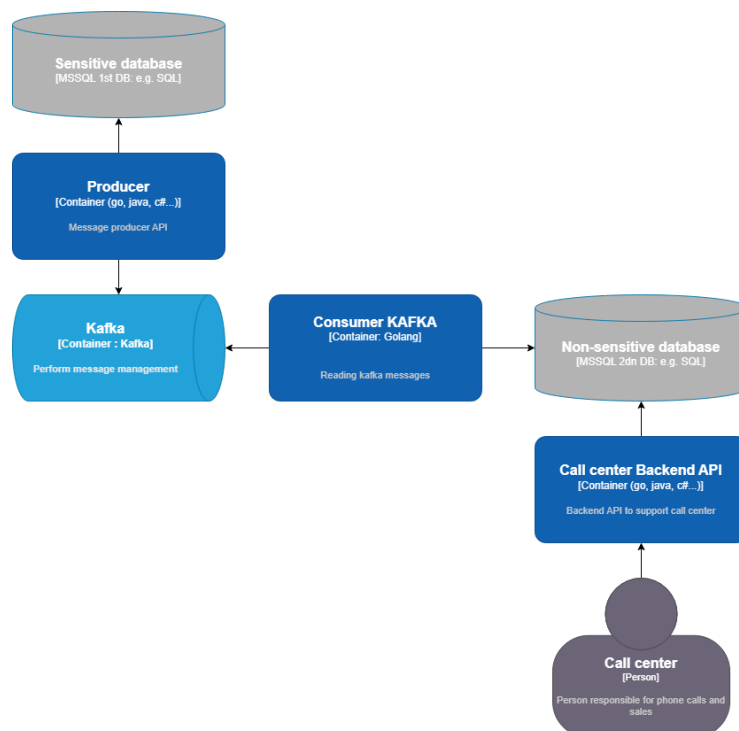


Figura 1: Diagrama geral

## **Project data:**

Apache Kafka is a streaming platform based on a distributed publish/subscribe system, where there is a process called producer, which sends messages to a topic, which is managed and stored by a cluster of brokers, and a process called consumer, which subscribes to the topic to read and process messages.

The chosen language was Golang due to the low memory consumption on cloud machines (thinking about azure), which results in savings and ease of scaling new API instances in case of consumption peaks (black friday or other sales campaigns).

The construction will be using the Domain Driven Design (DDD) architecture, aiming to make the code as generic as possible, so that in case there is a need to build new consumer APIs, it is necessary to modify the code as little as possible.