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# WebStore System Architecture and Design

Tsadkan Yitbarek, Aug 2021

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# 5 Microservices

## Customer Service

Handles customer CRUD  
and send email to customer

## Product Service

Handles product CRUD and  
product stock recalculation

## Order Service

Handles Creating and  
Placing order

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# ...continued

## ShoppingCommandService

Handles storing shopping cart and cart checkout events

## ShoppingQueryService

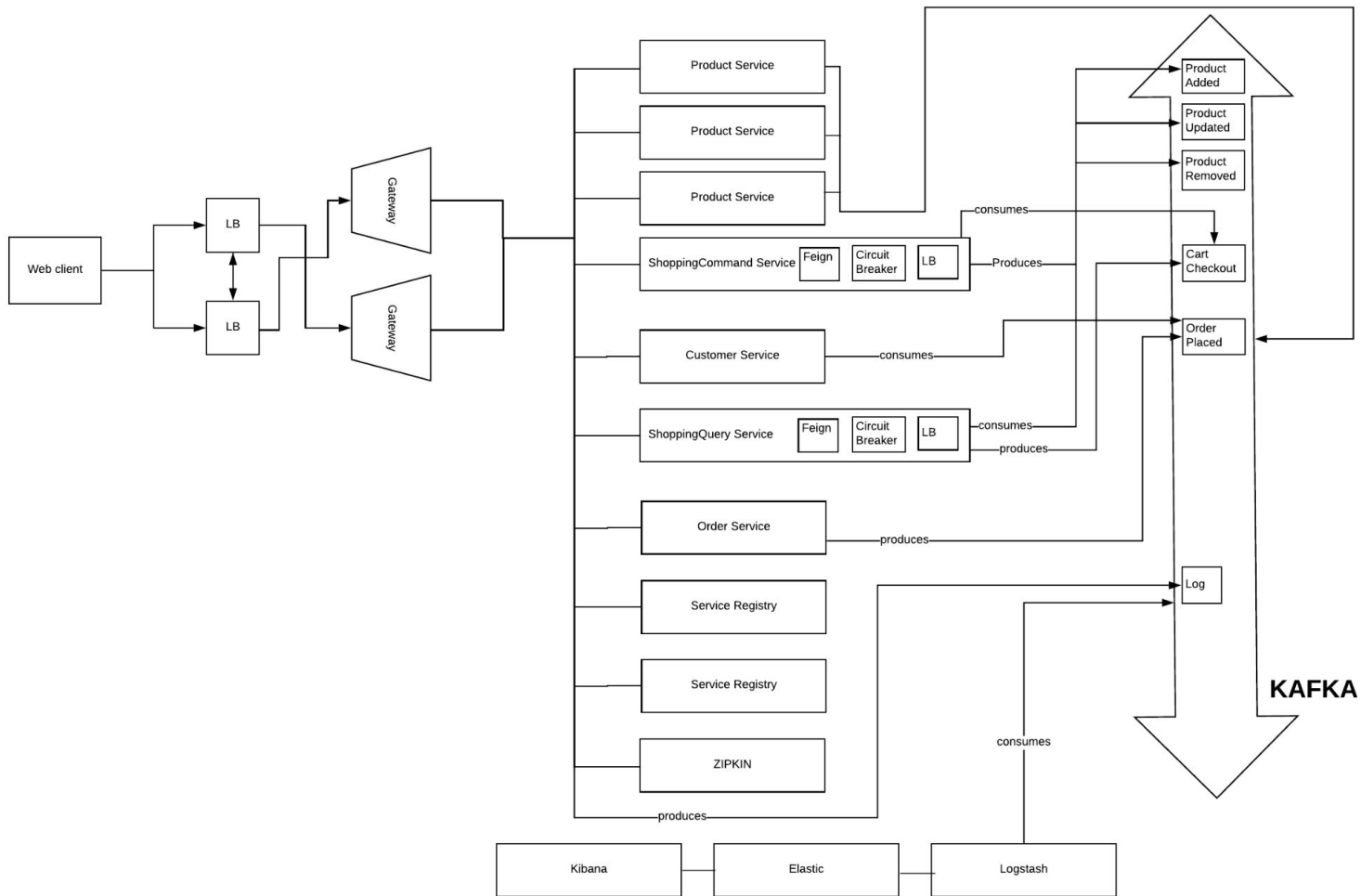
Acts as a query service to fetch shopping carts and handles cart checkout



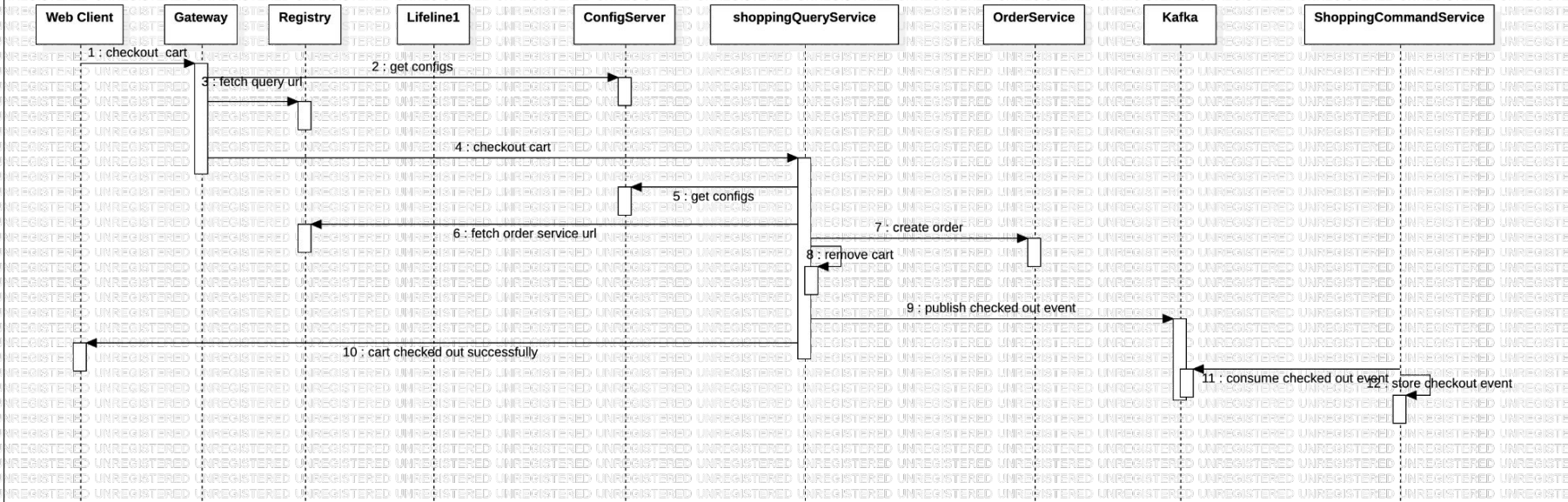
# 1. Main Points

**Architecture** wise, the following supporting services are used to have a scalable and reliable system

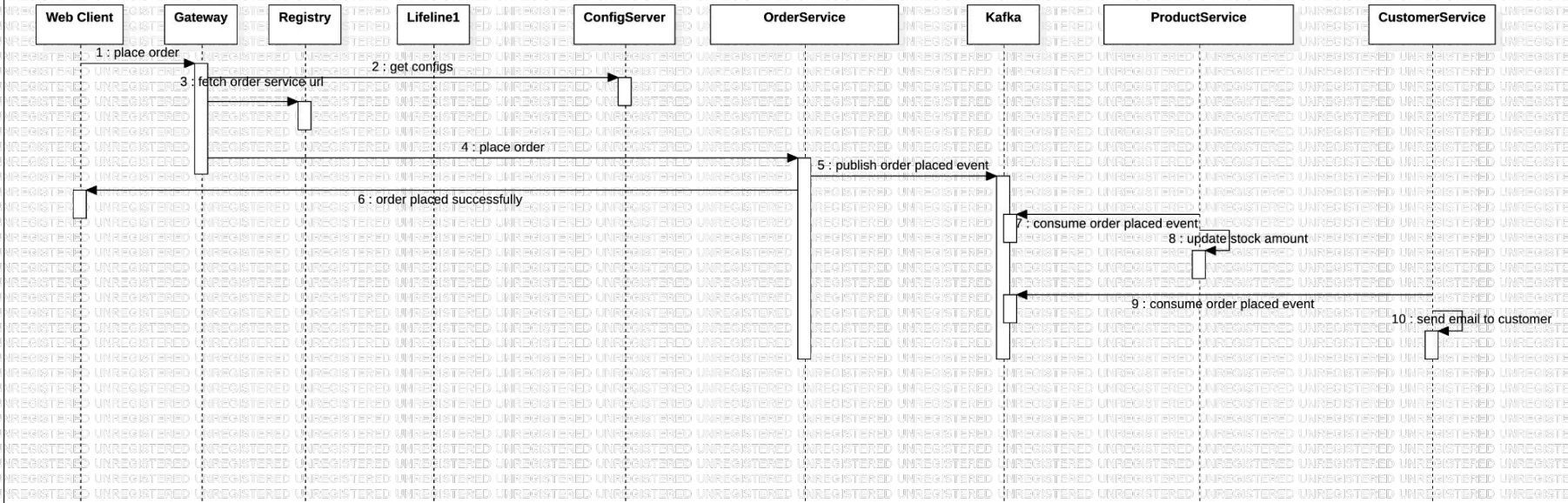
- Gateway with Load balancer
- Openfeign with Circuit breaker
- Event sourcing and CQRS
- Config Server
- Zipkin
- ELK with Kafka



sd Checkout Shopping cart Sequence Diagram



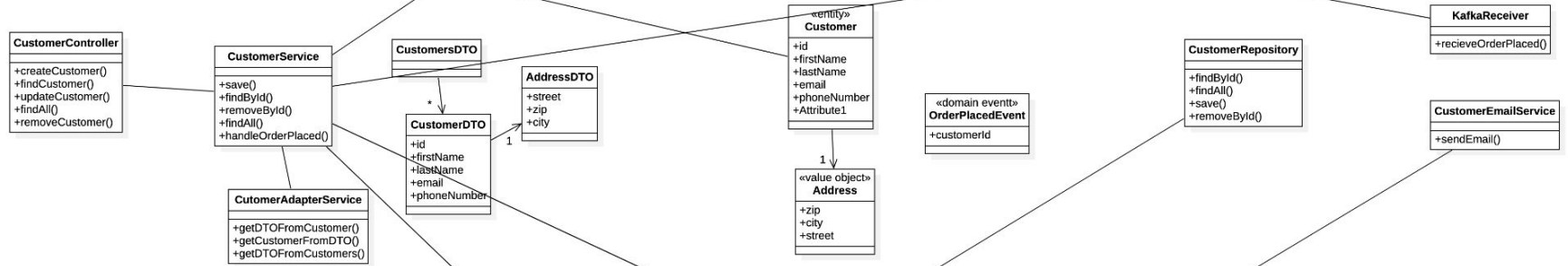
sd Order Place Sequence Diagram



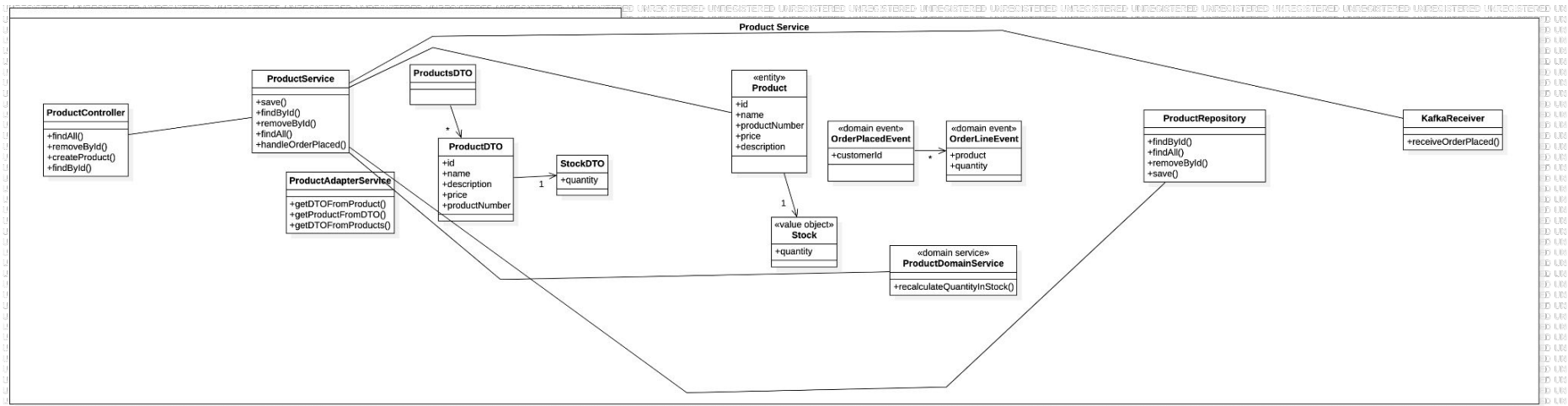
# Customer Service



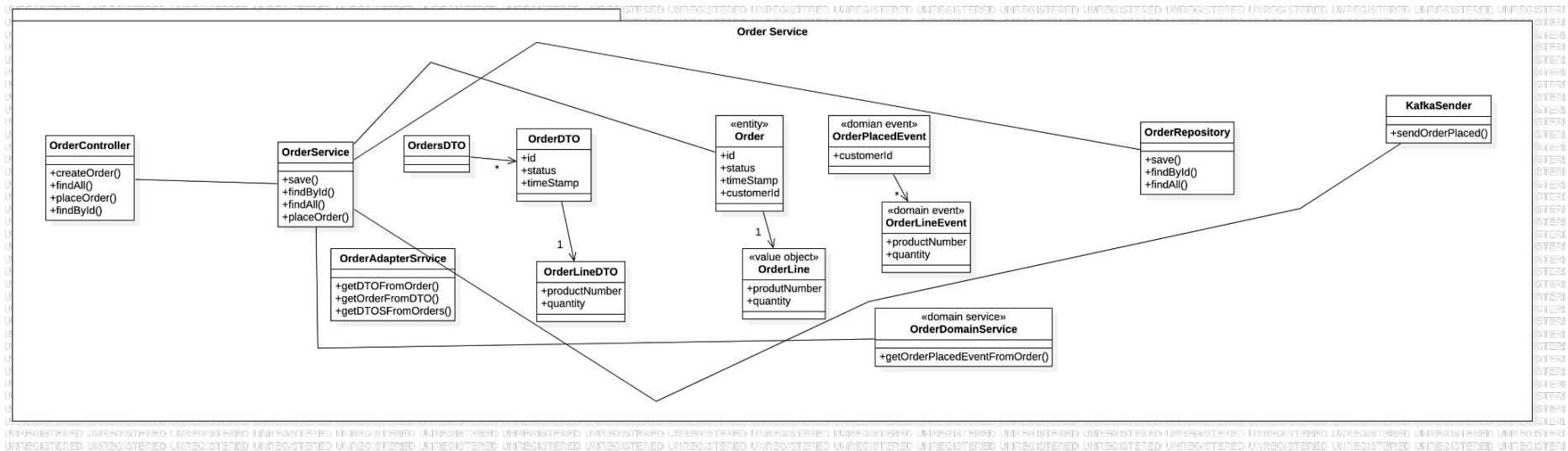
# Customer Service



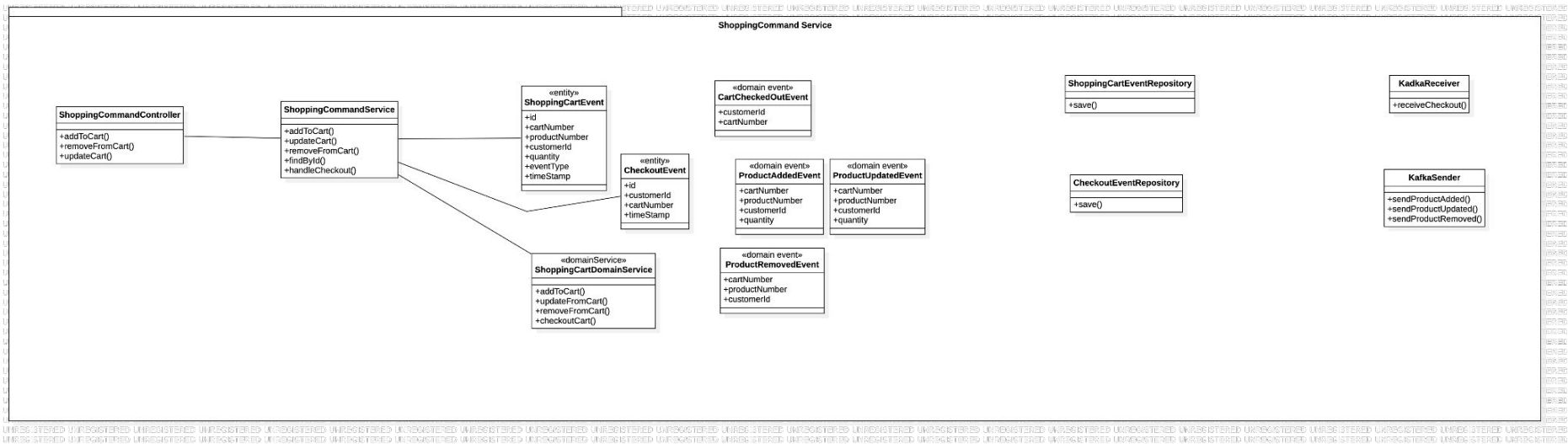
# Product Service



# Order Service

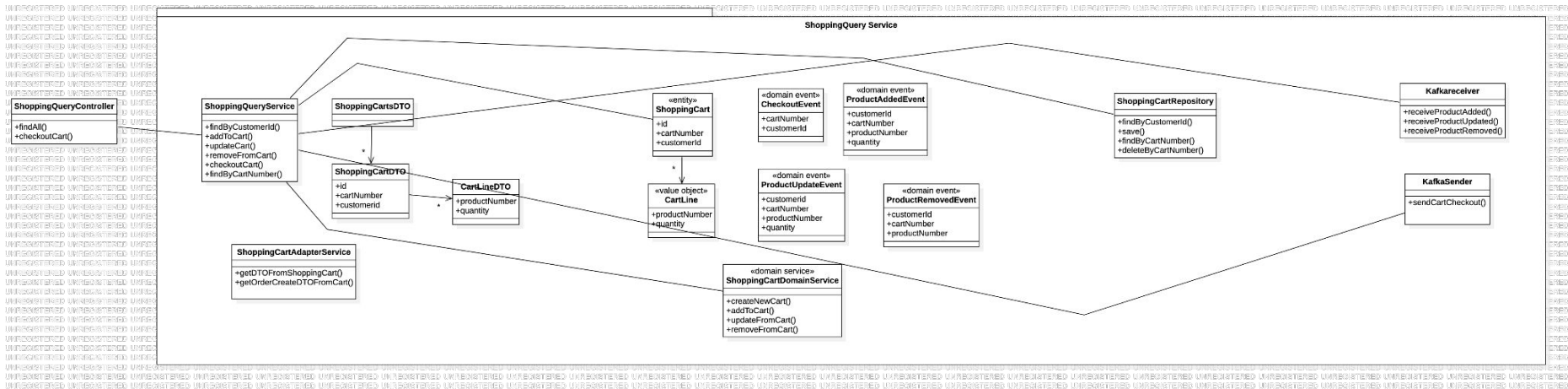


# ShoppingCommand Service



# ShoppingQuery Service







# Thank you

Implementation of the design can be found in github.

<https://github.com/orgs/XADMIU2021/repositories>