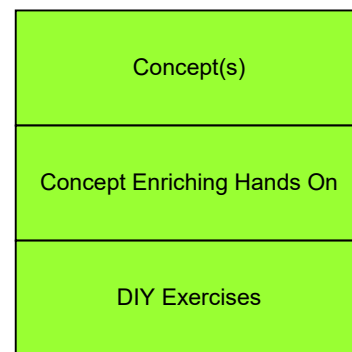
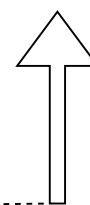
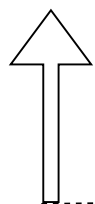
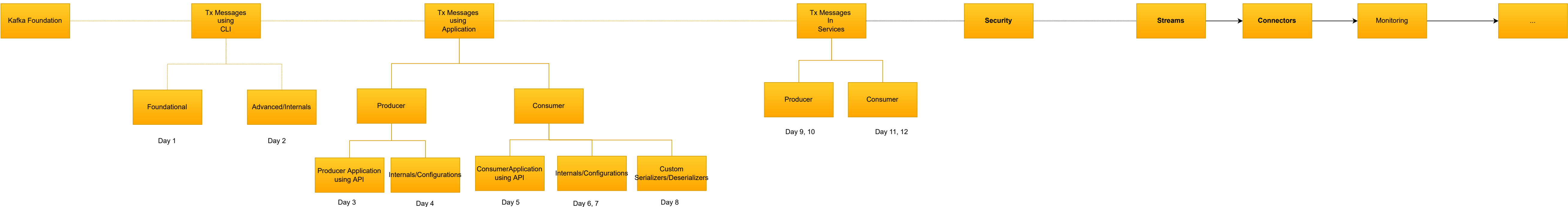
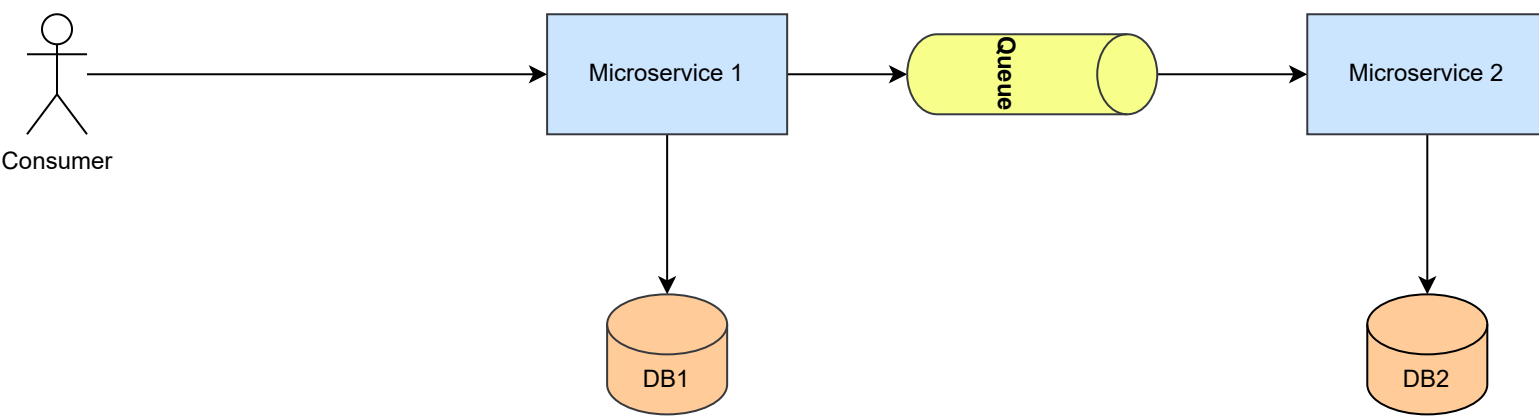
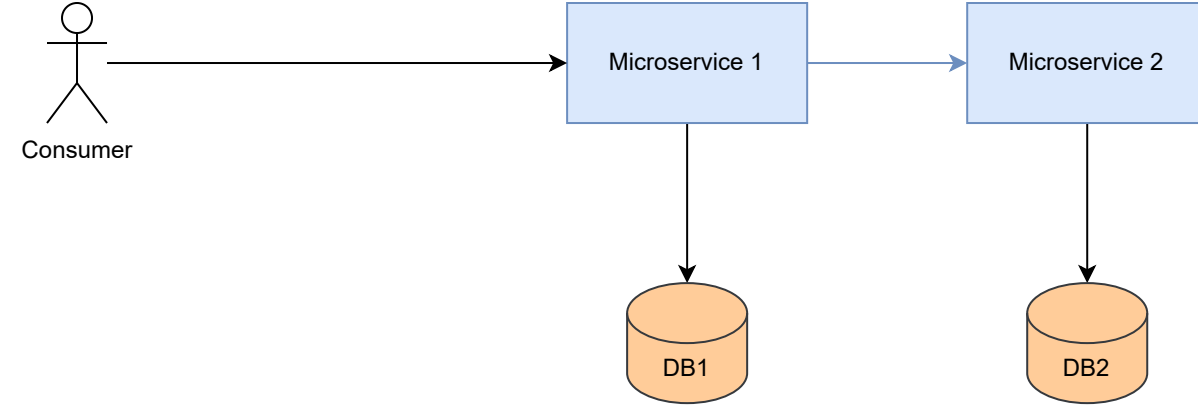


## Teaching Principle

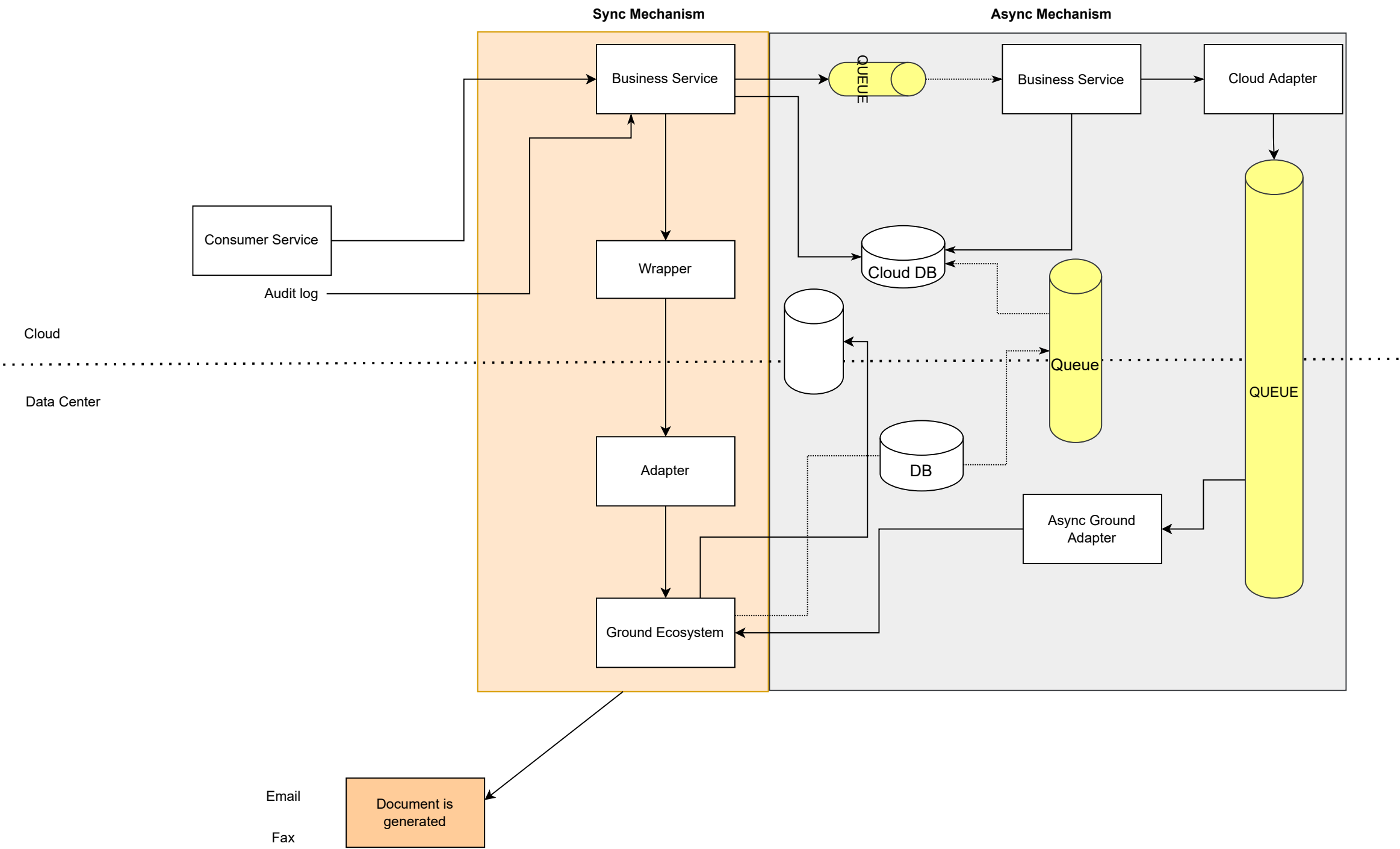


## Learning Map

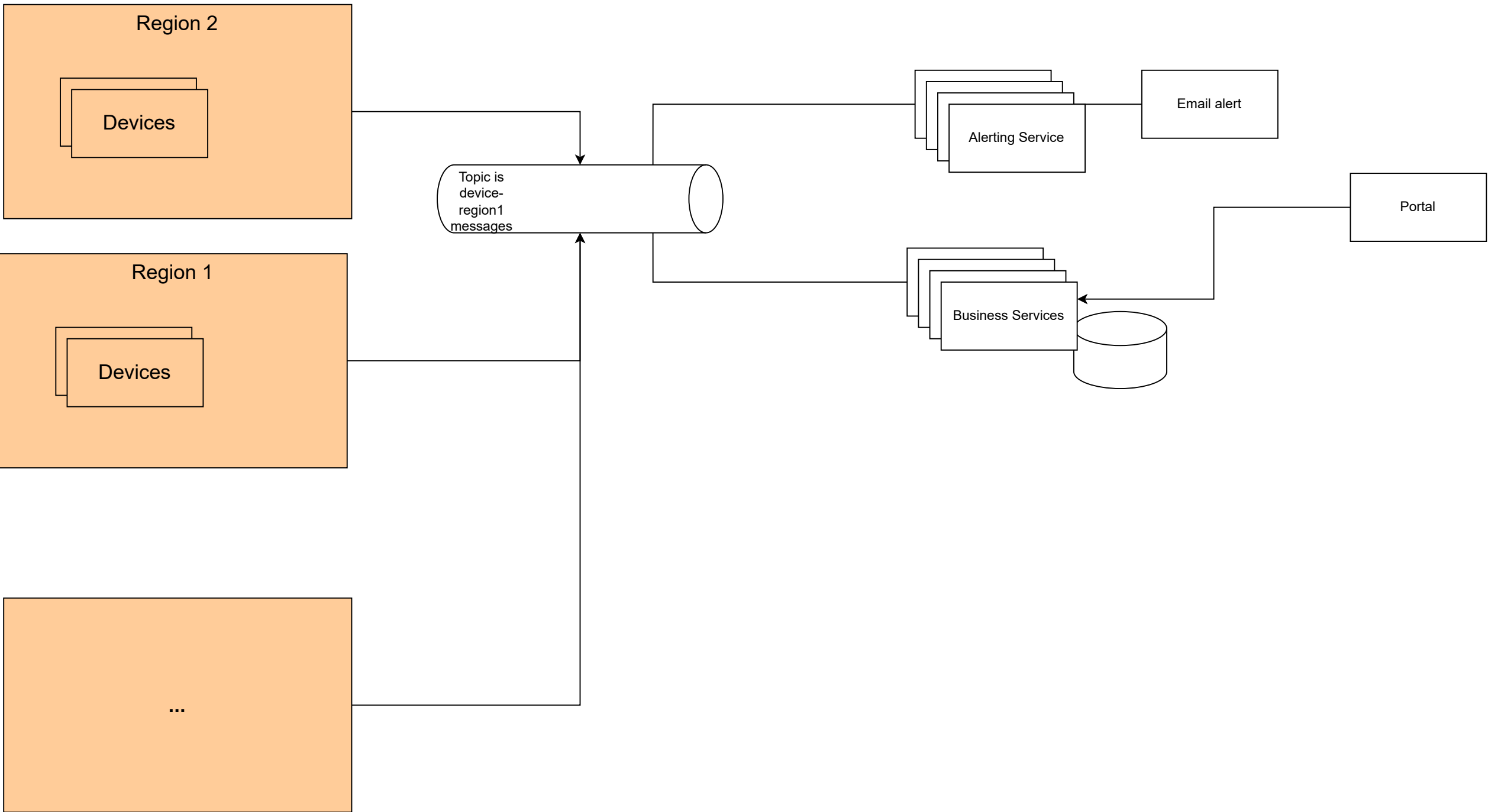




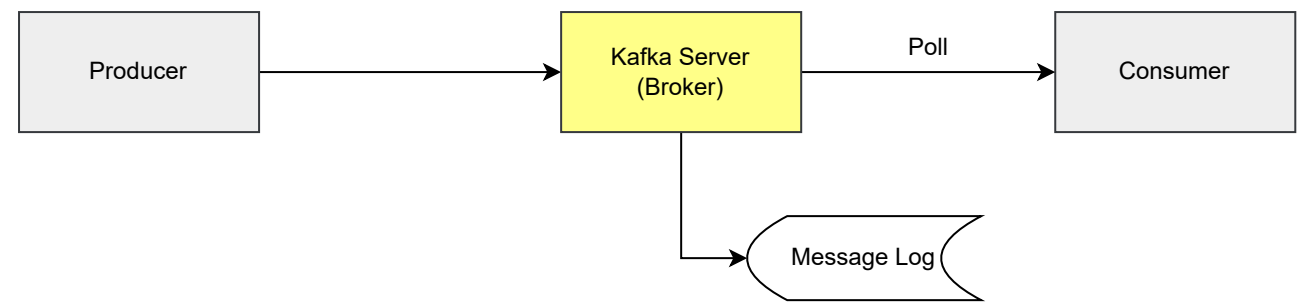
Use case 1



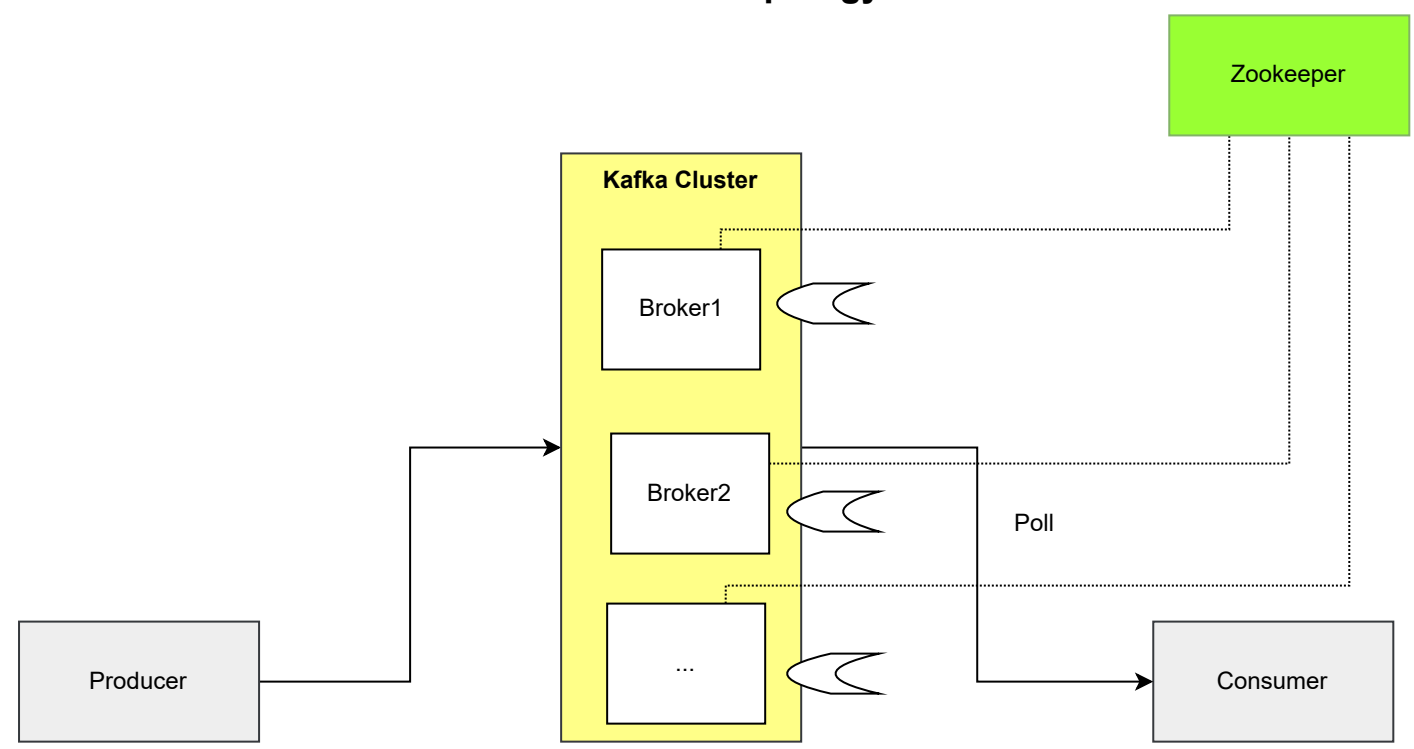
Use case 2



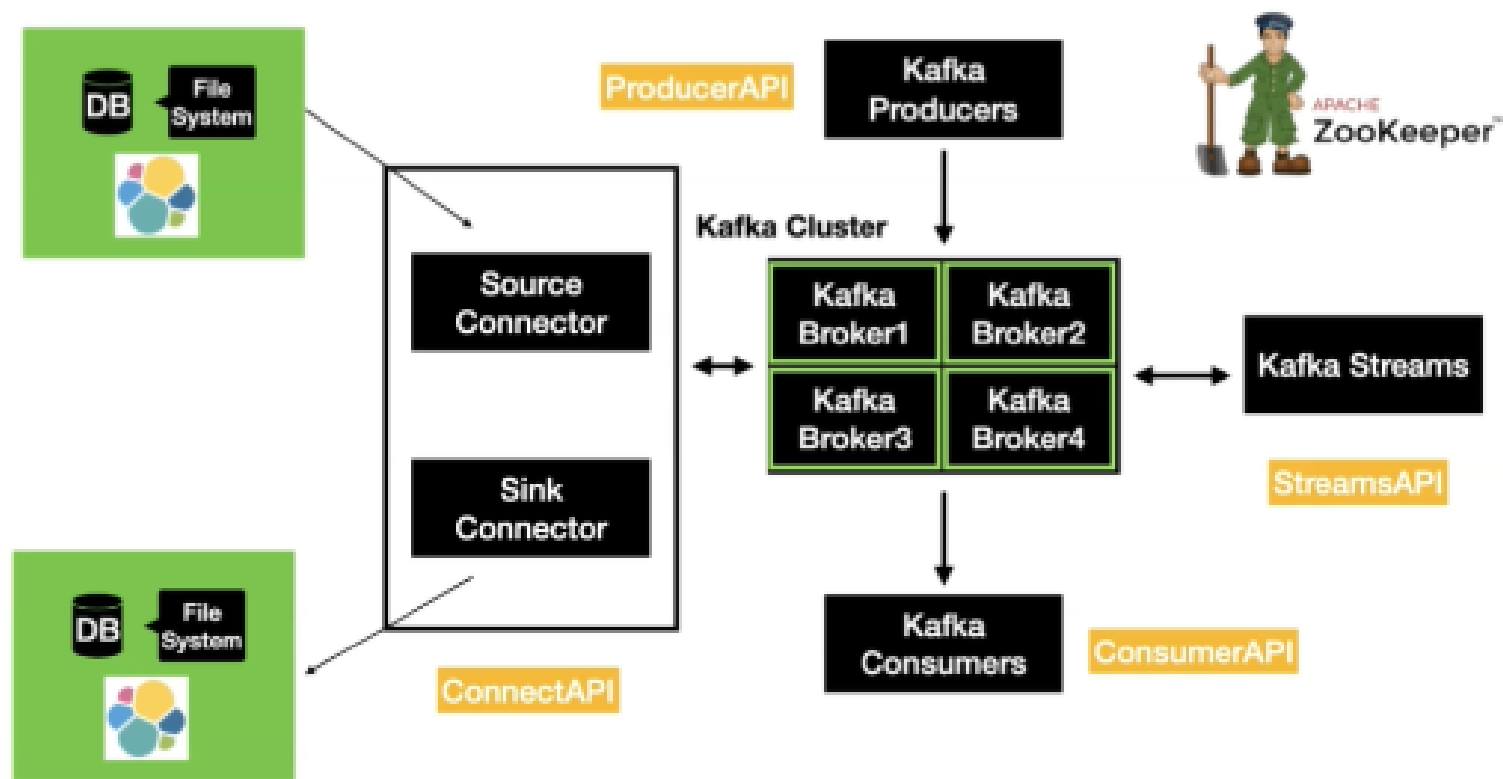
### Basic Topology



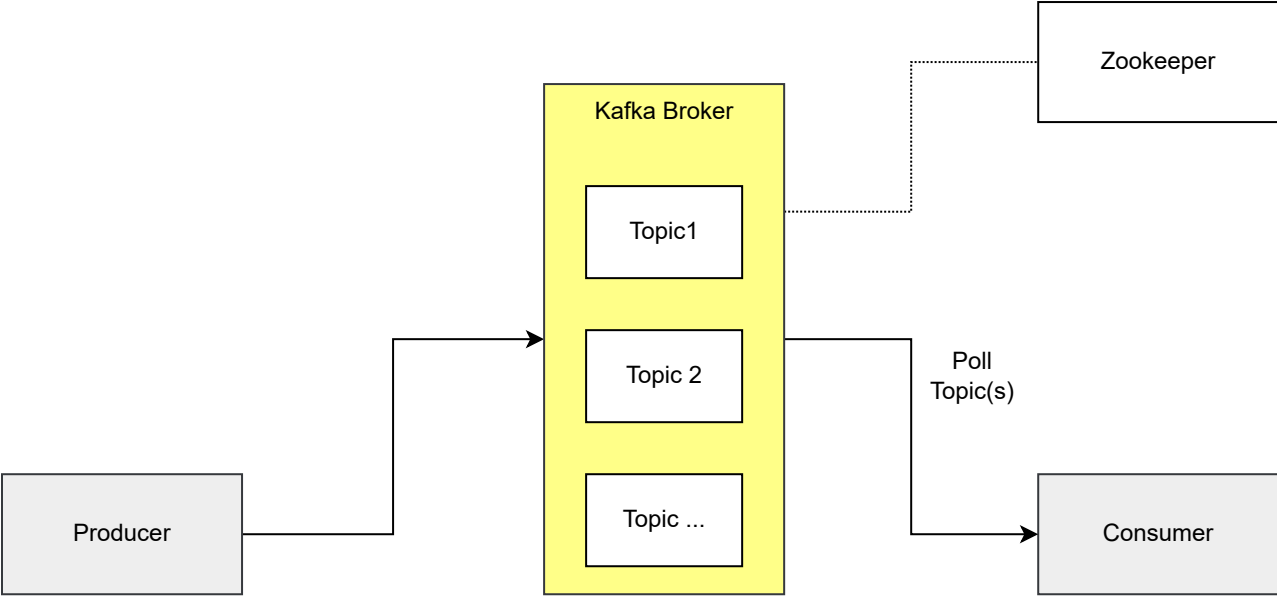
### Distributed Topology



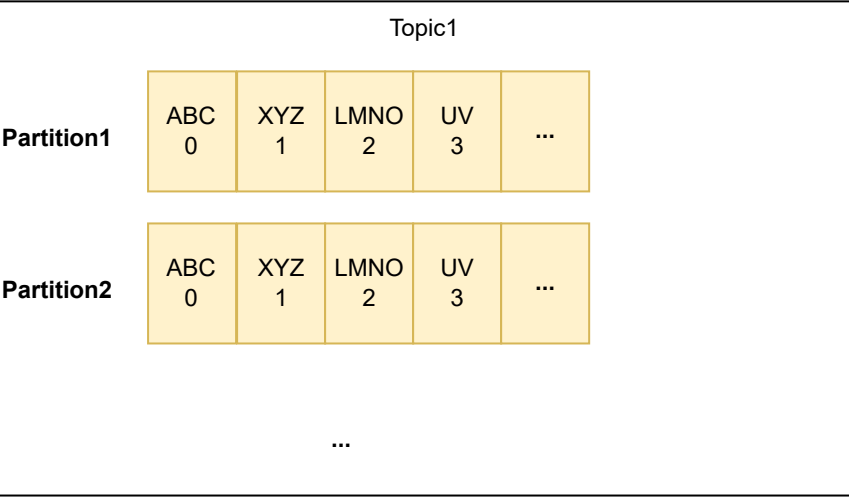
## Kafka Landscape



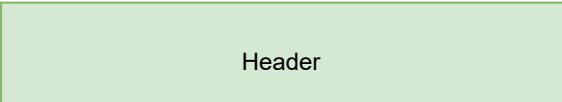
Broker Anatomy



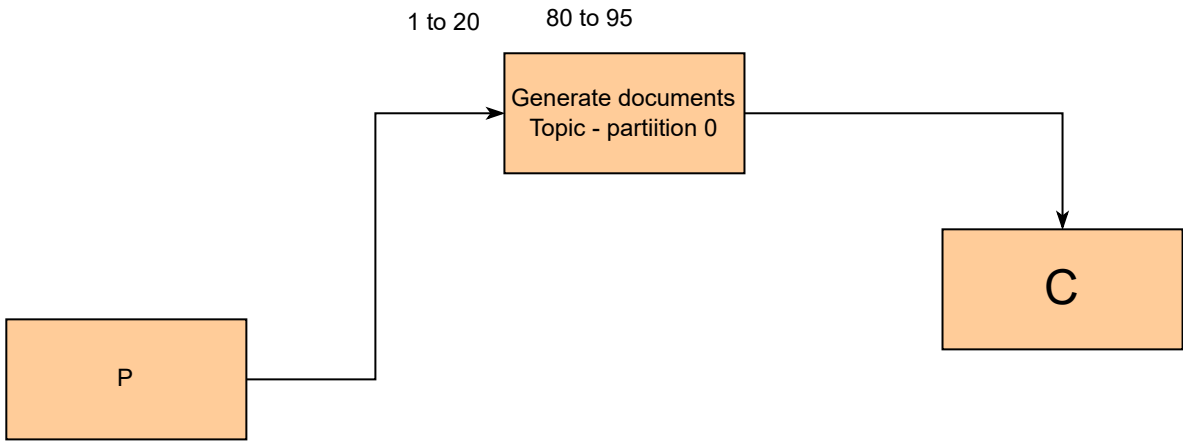
Topic Anatomy



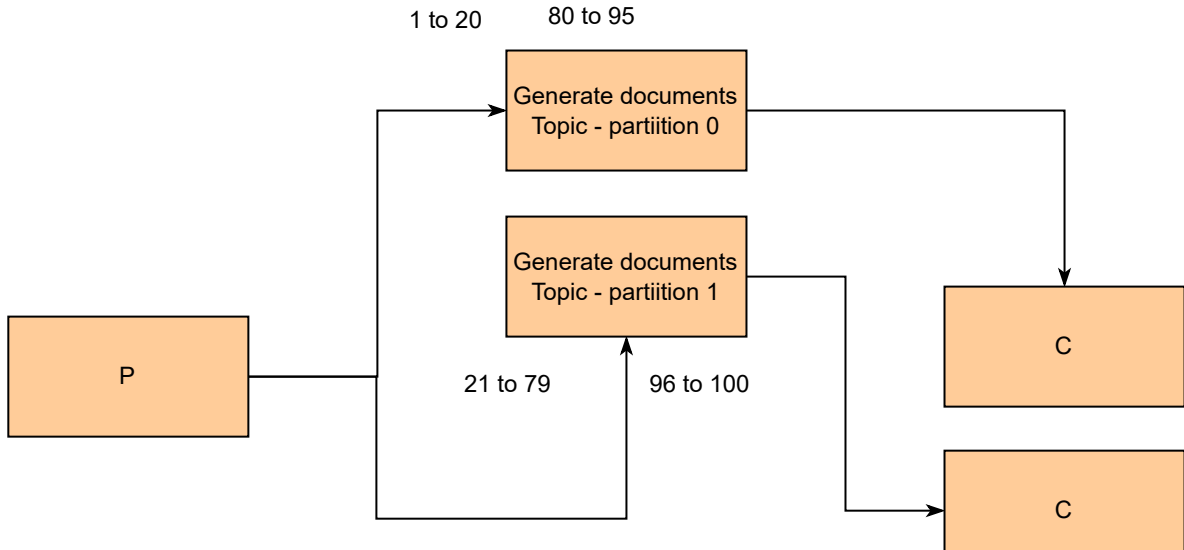
Message Anatomy



Topic-Same

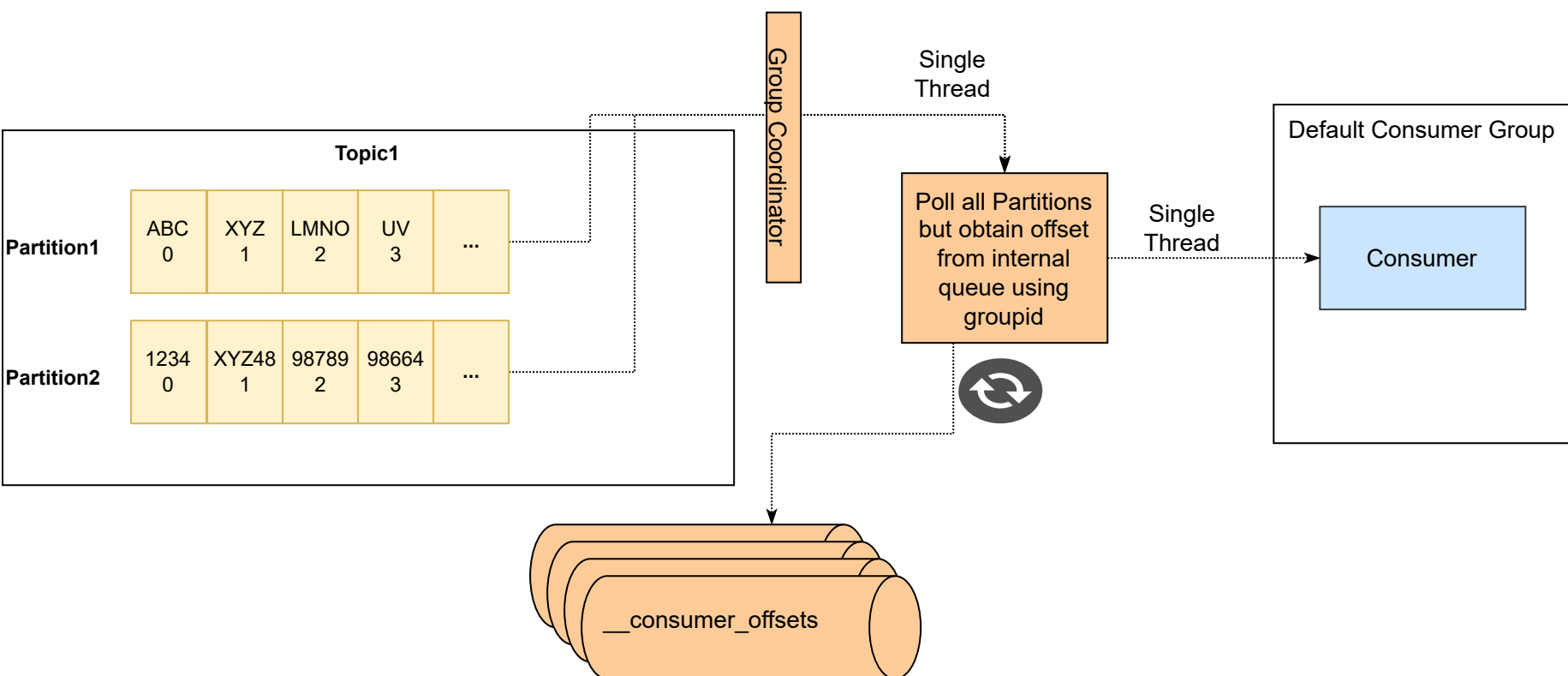


Topic-Same

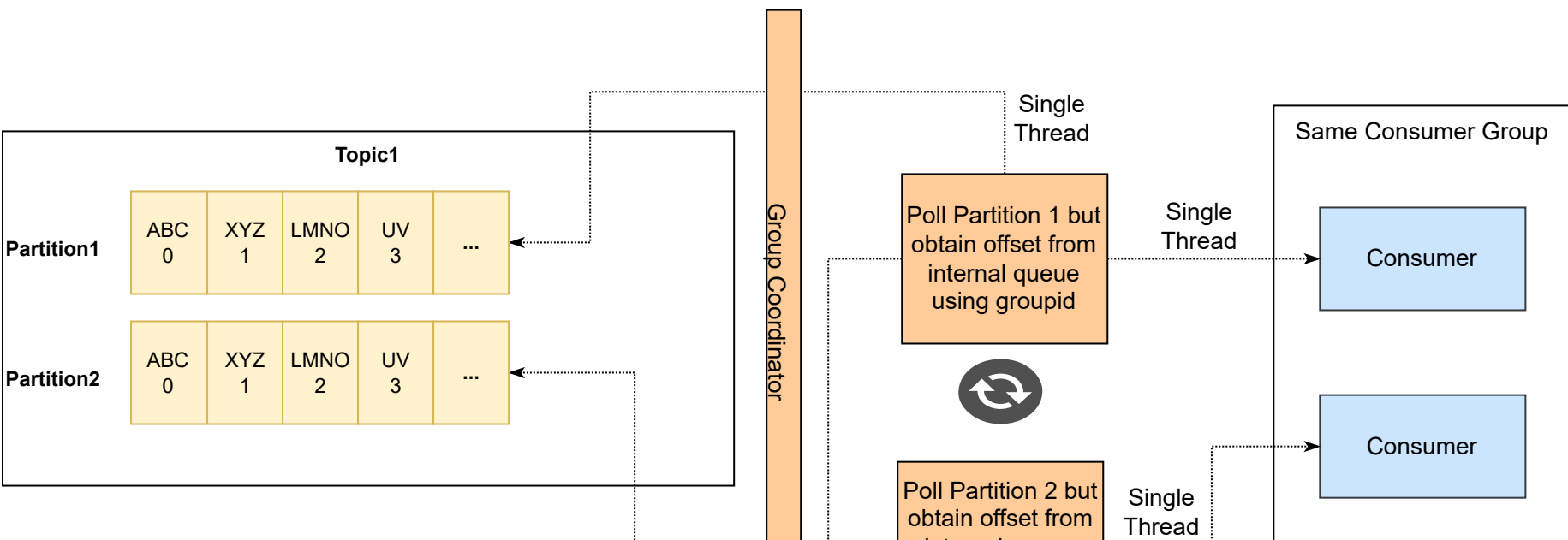


Key(optional)
Value
Timestamp

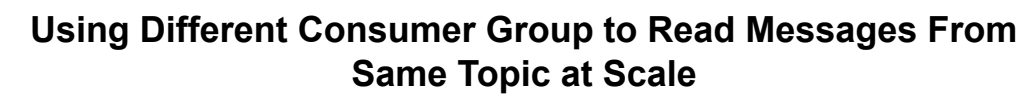
Default Consumer Group

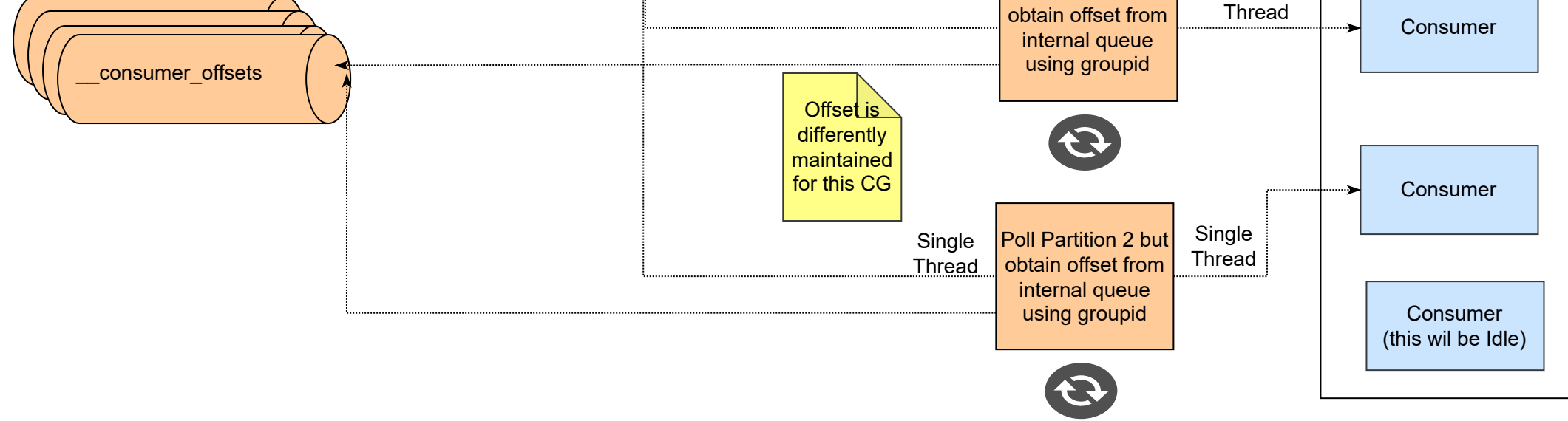


Using same Consumer Group to Read Messages at Scale

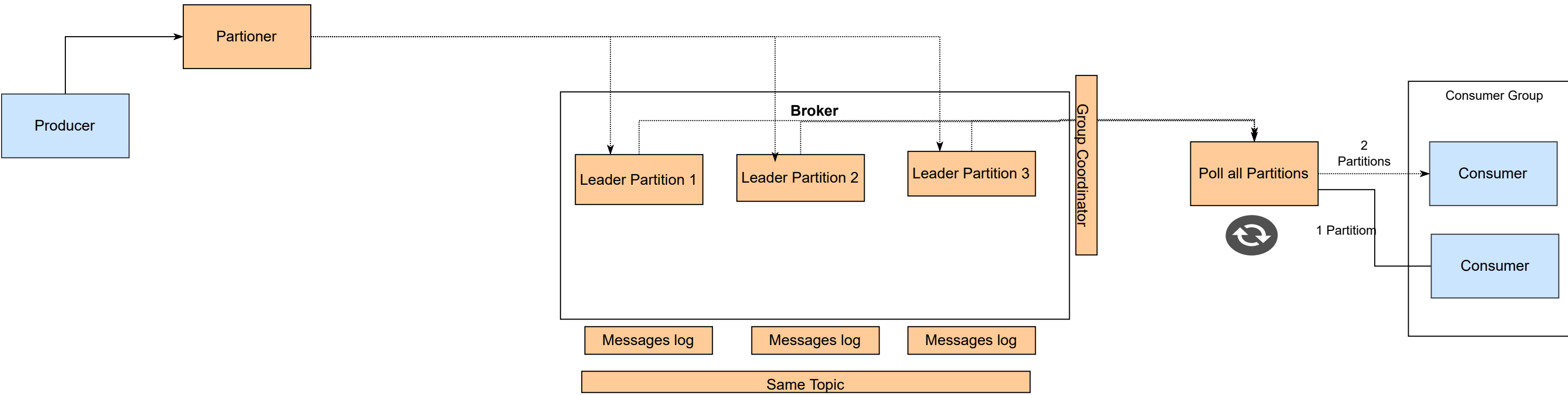




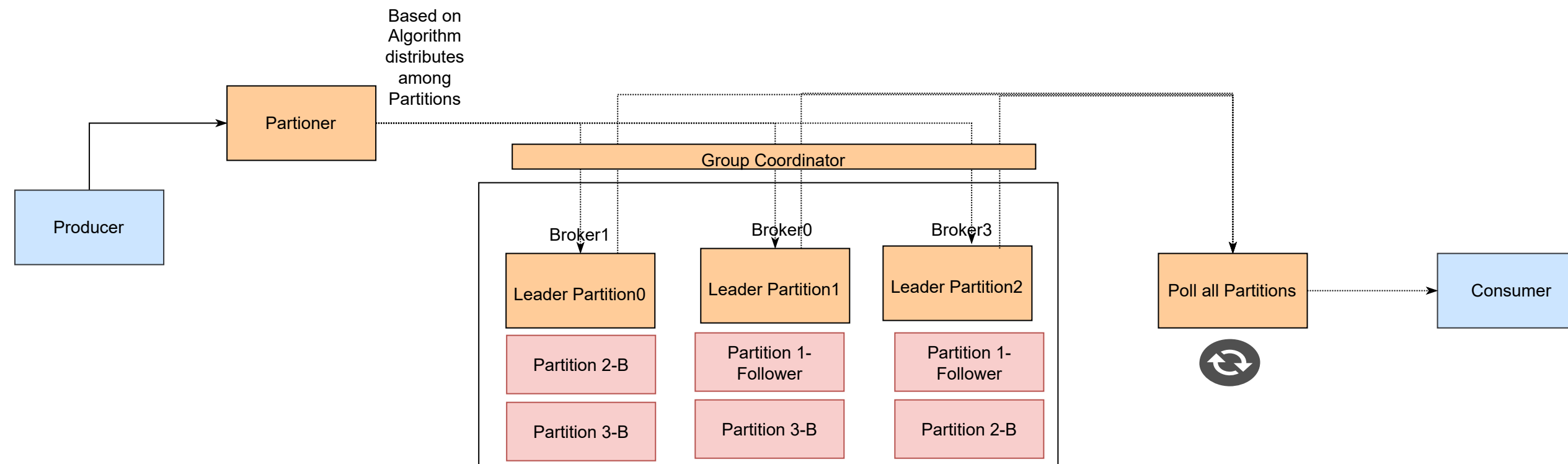




## Standalone Topology



## Distributed Topology

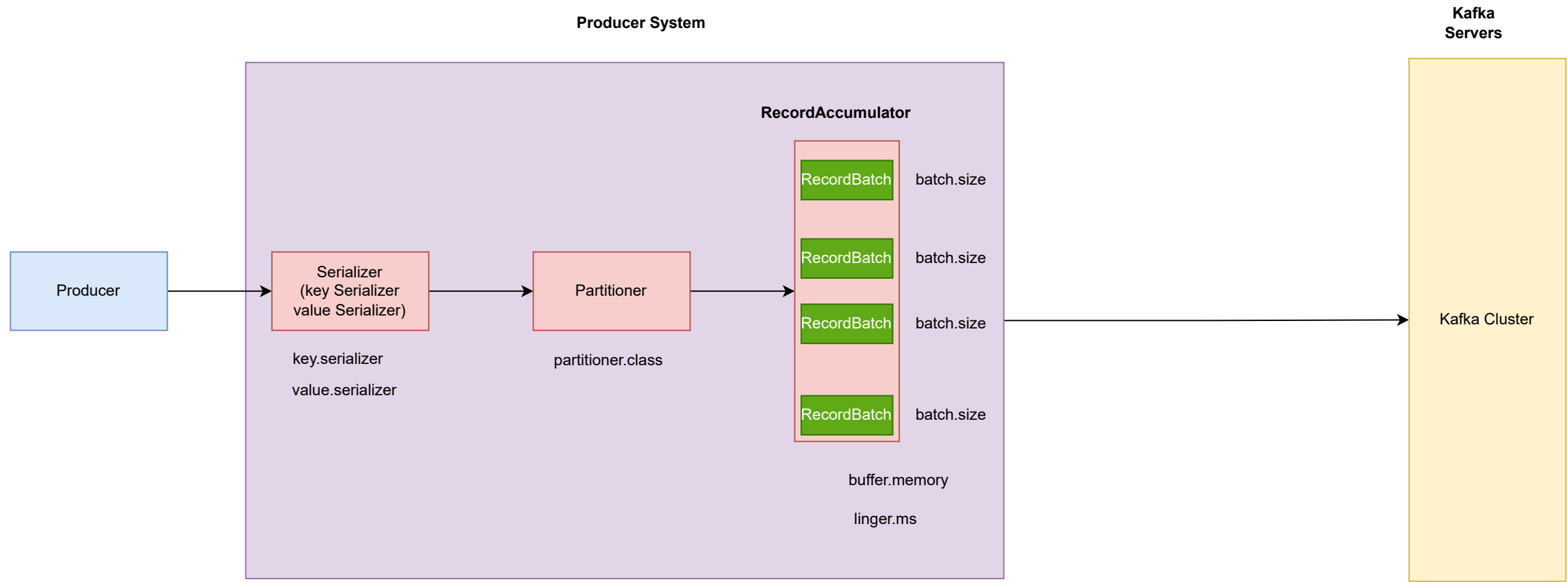


Messages log

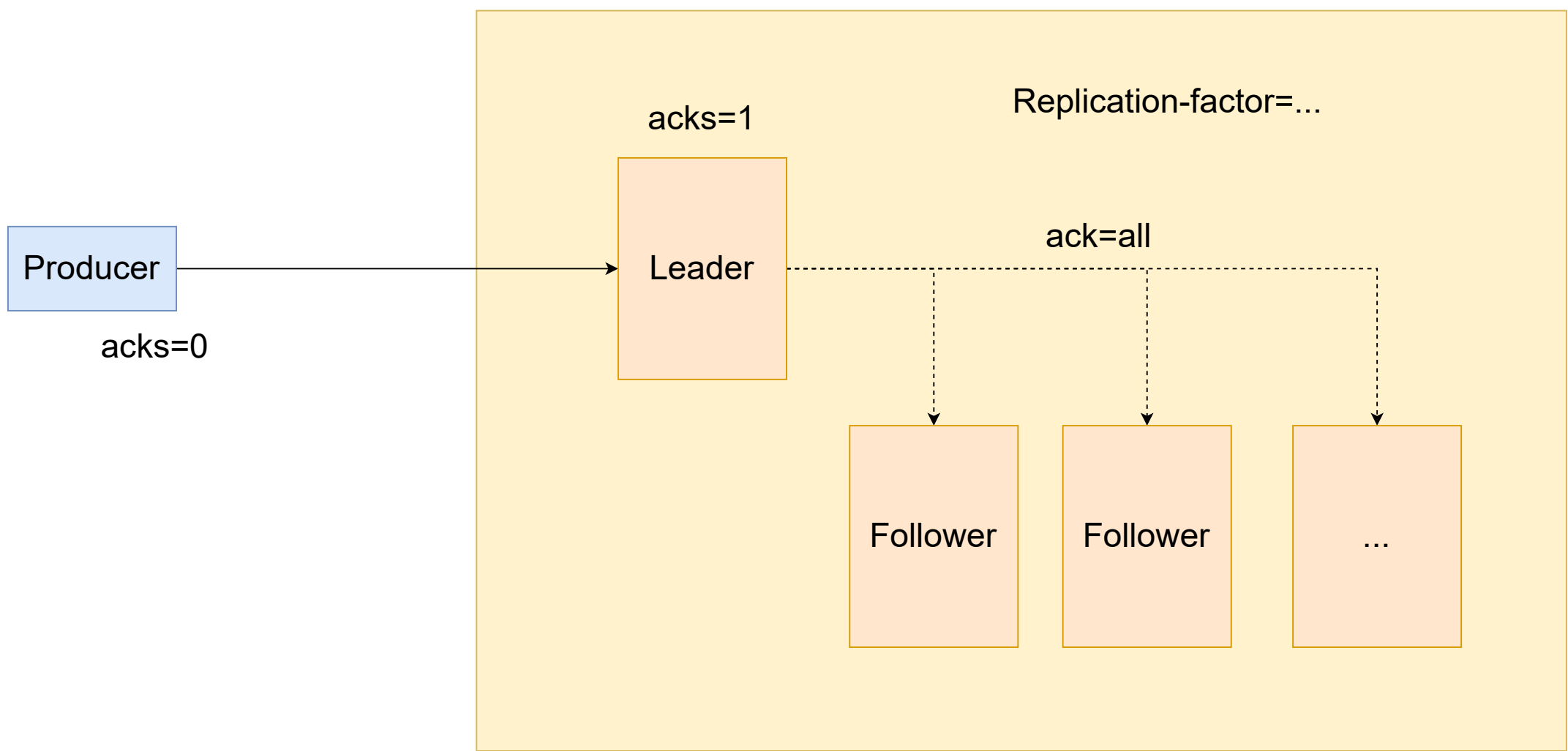
Messages log

Messages log

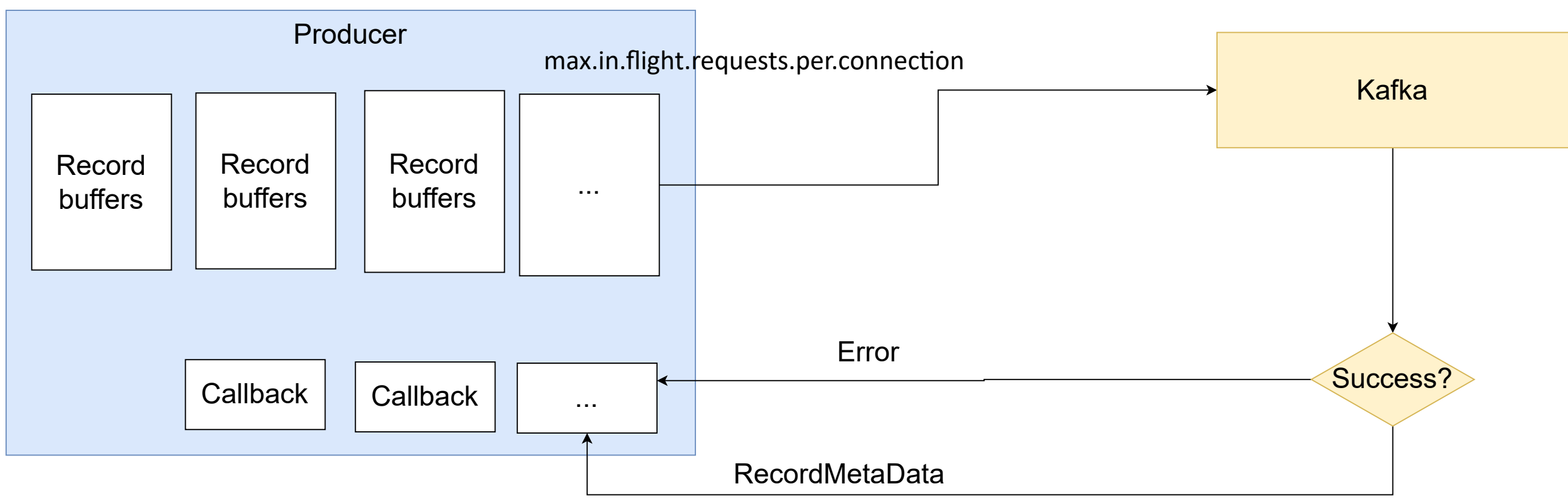
Same Topic



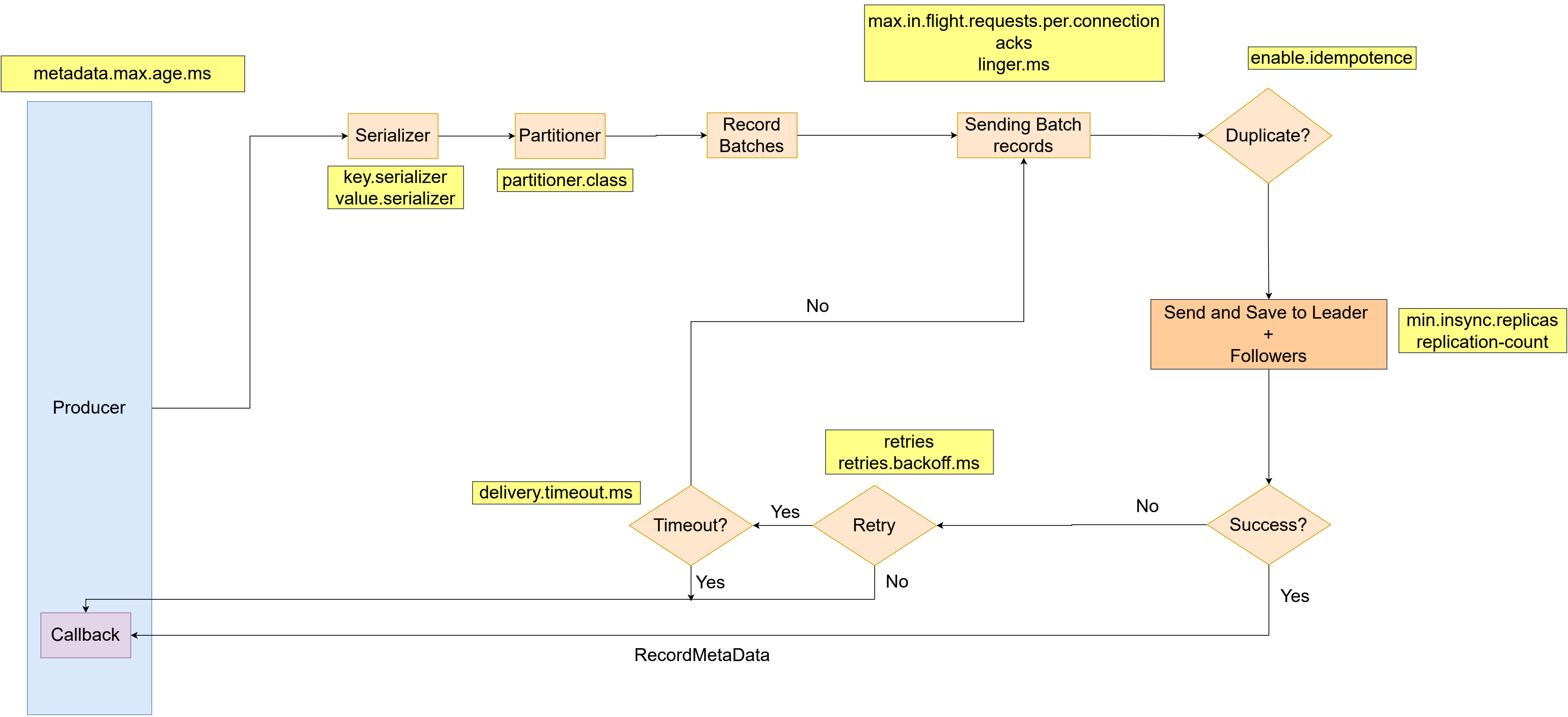
ack configuration



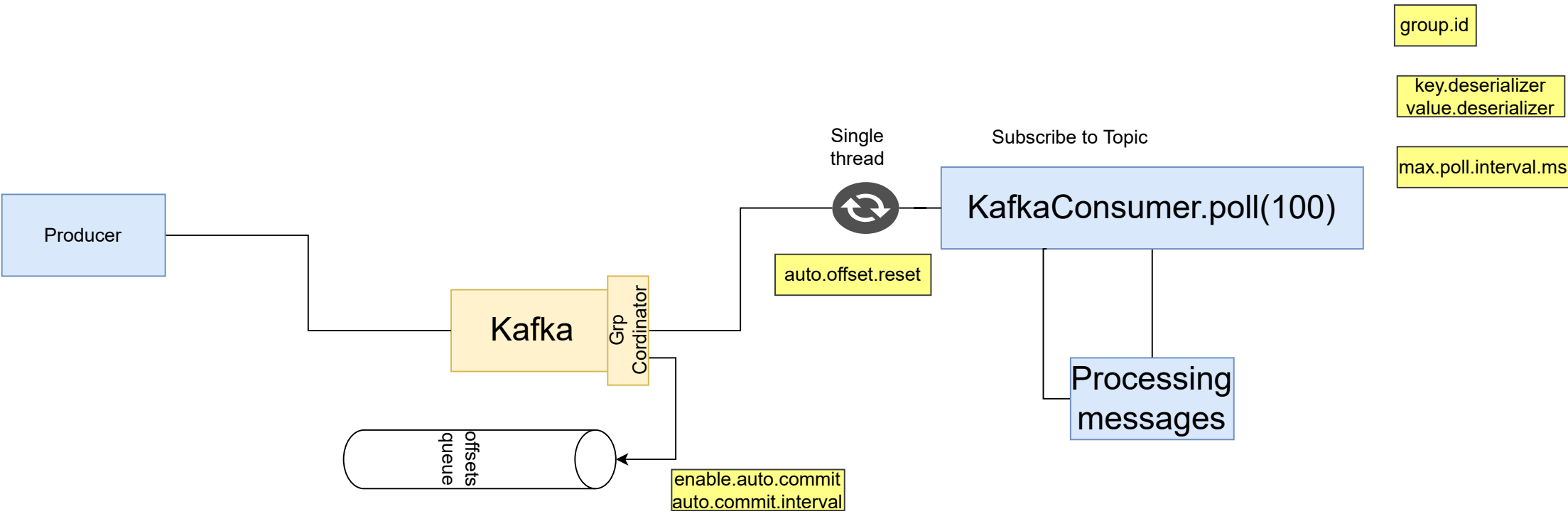
max.in.flight.requests.per.connection Configuration



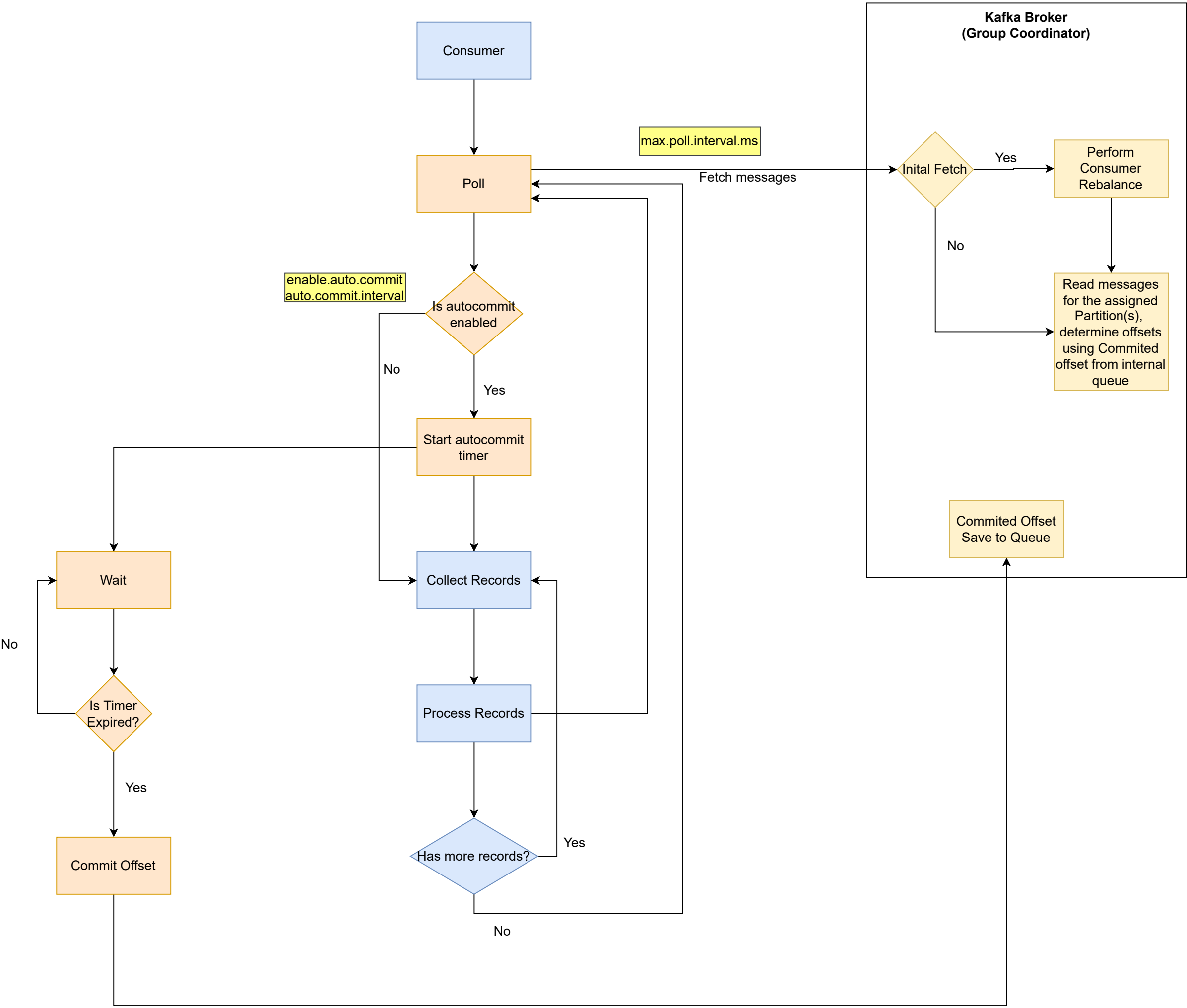
## Consolidated Flow



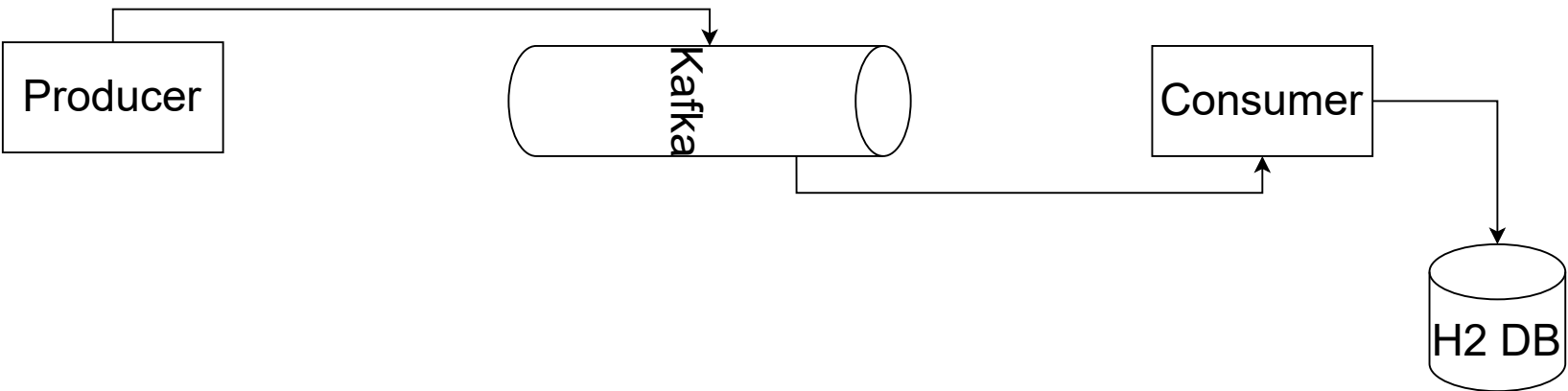
Consumer Pooling

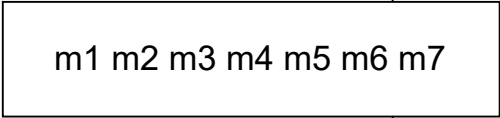
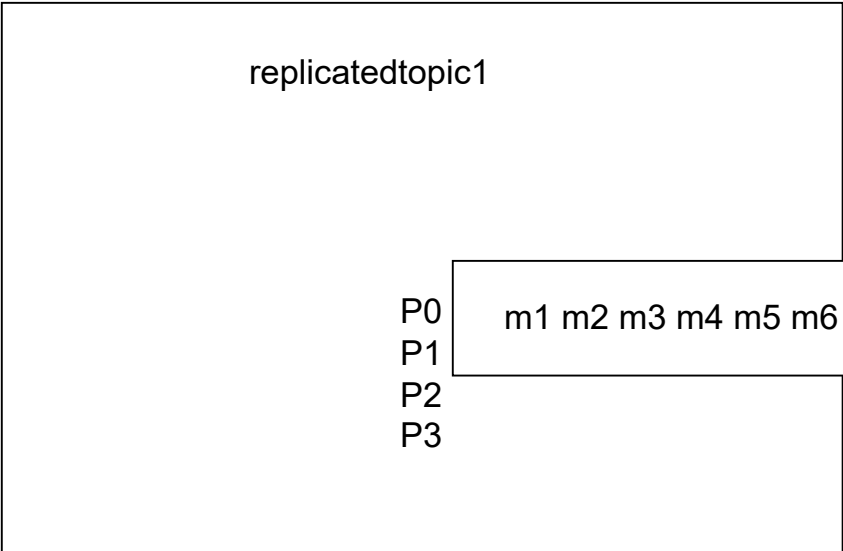
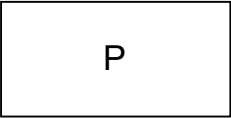


Consumer Internal Working



# Persistency of read messages





P0  
P1  
P2  
P3



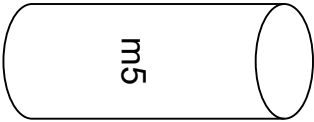
m6 m7

m1 m2 m3 m4 m5

Current offset

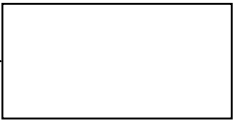
C



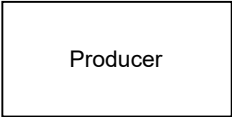


Committed offset

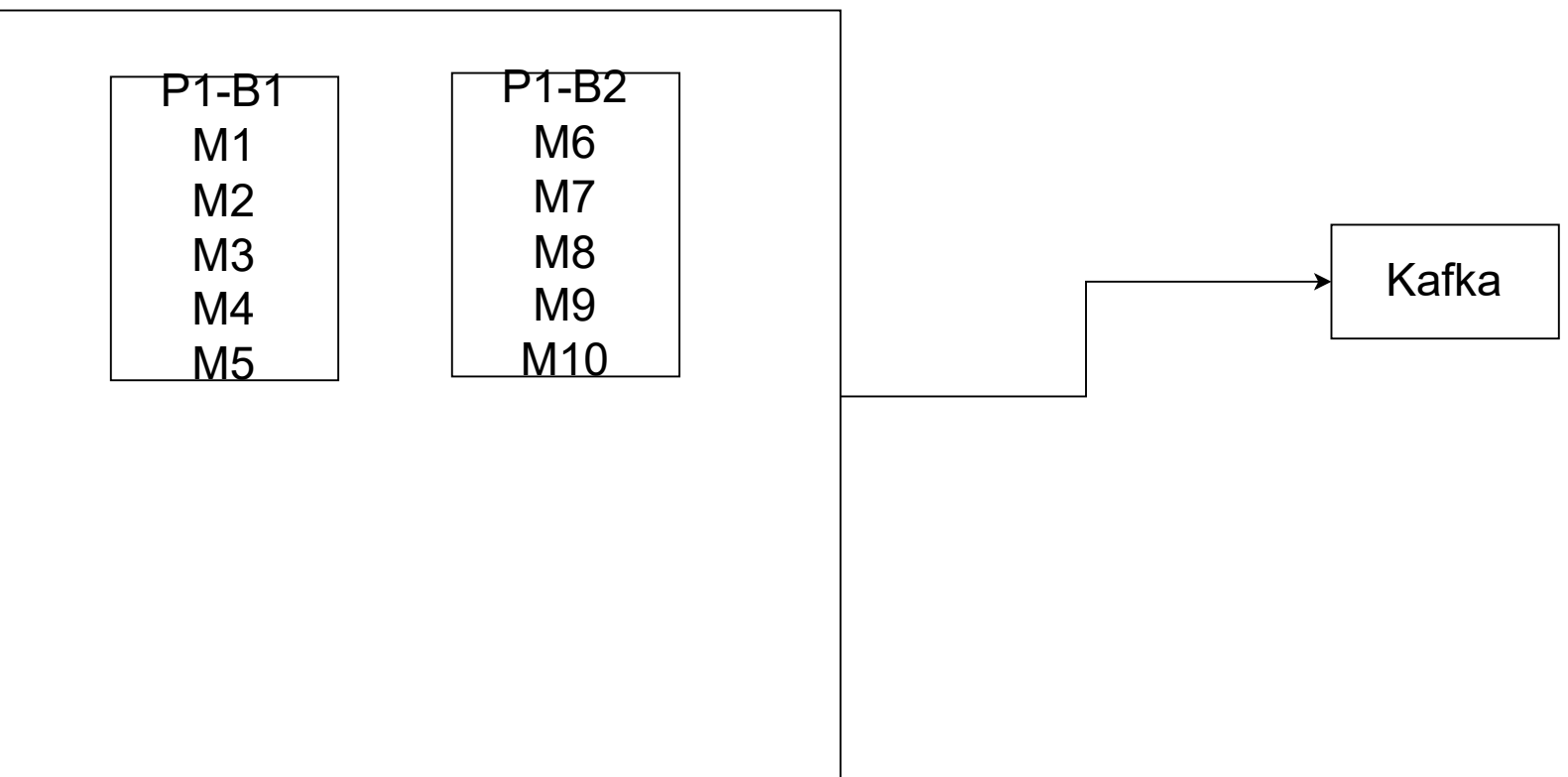
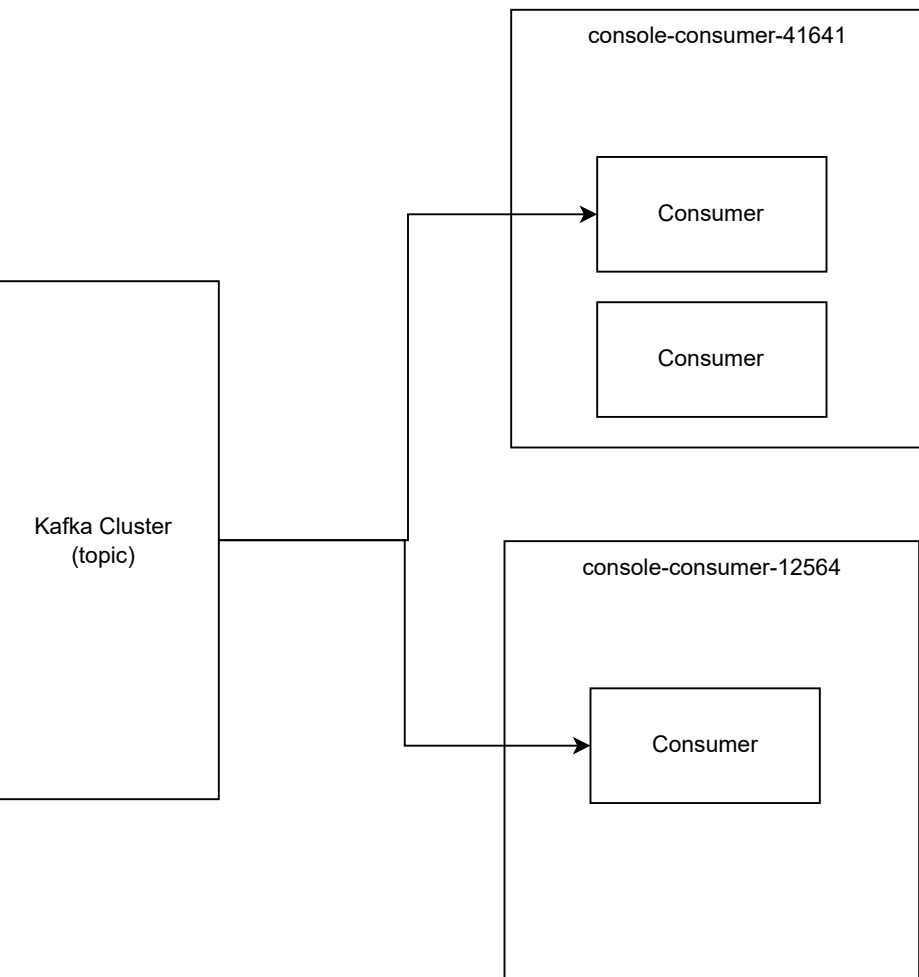
Partitions

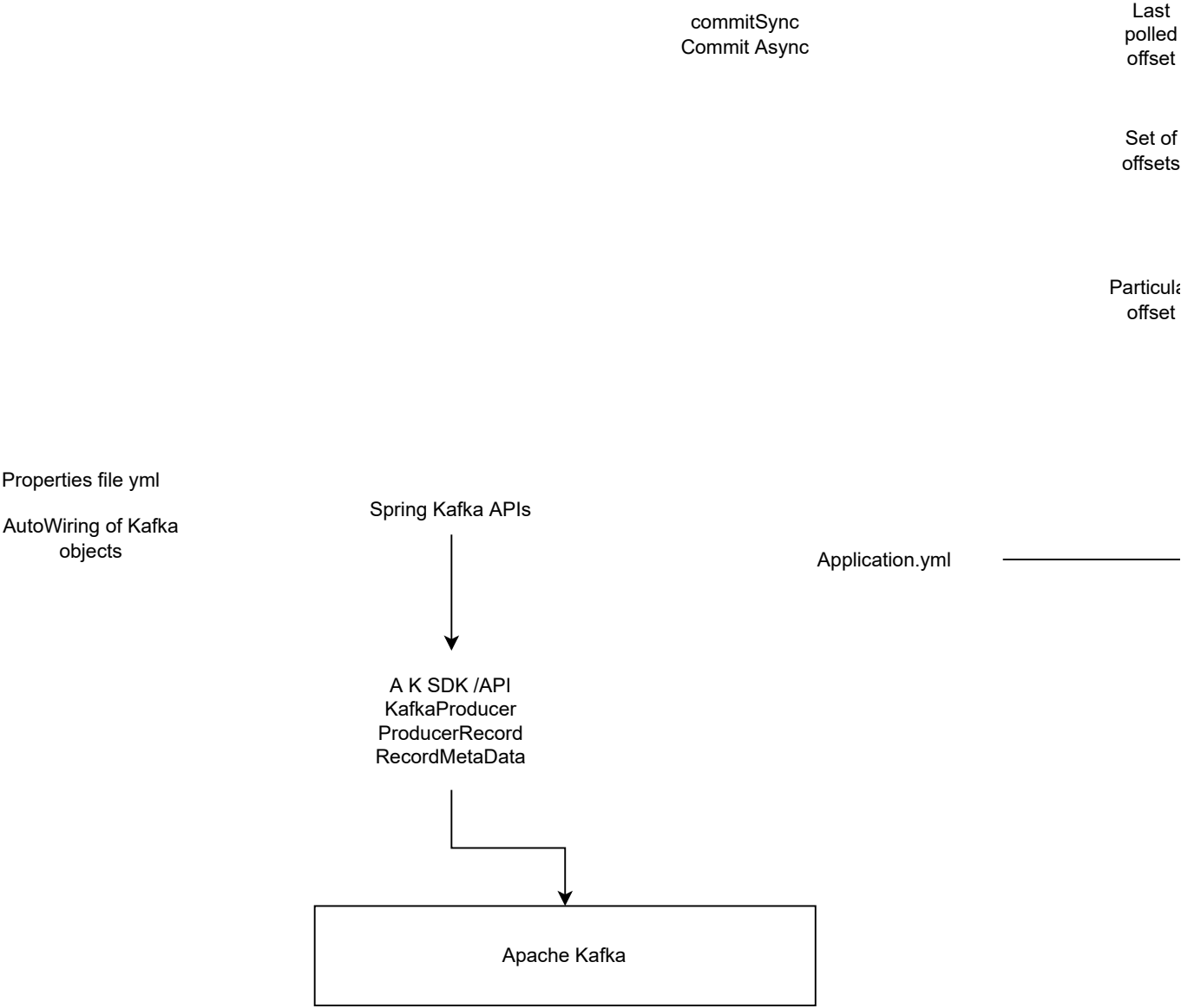


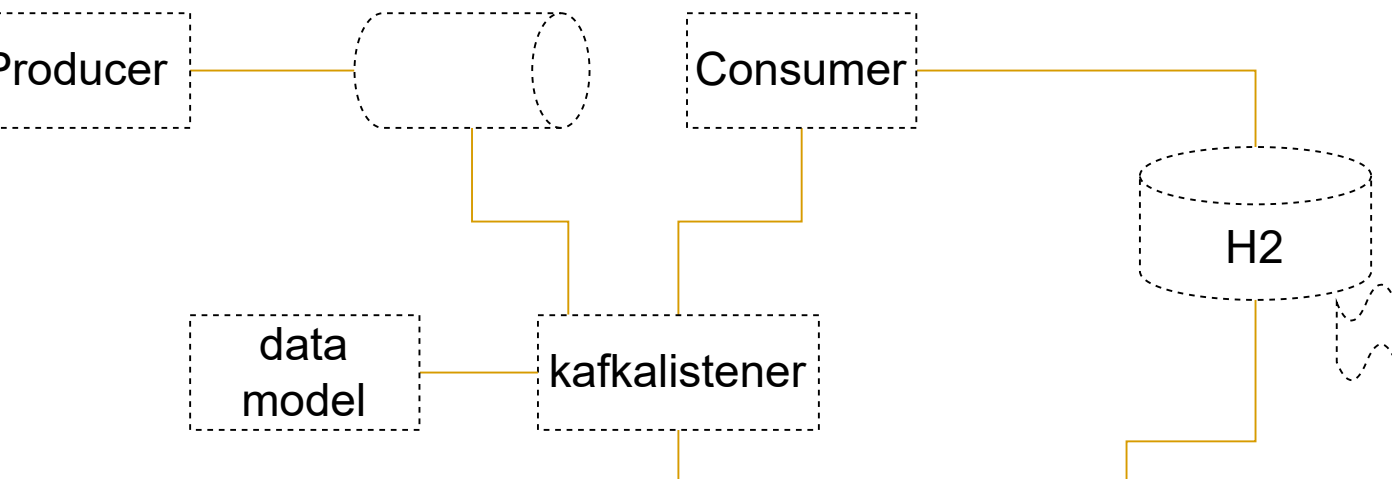
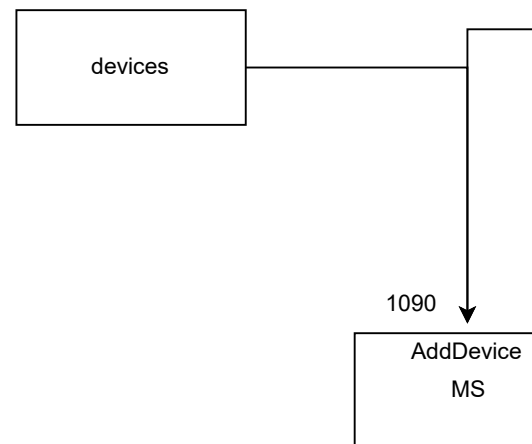
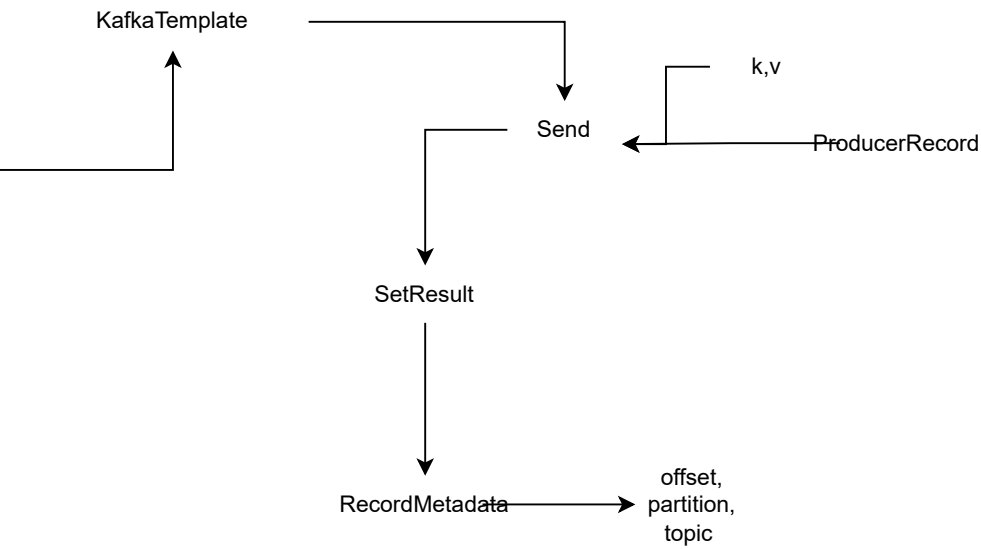
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Assignme

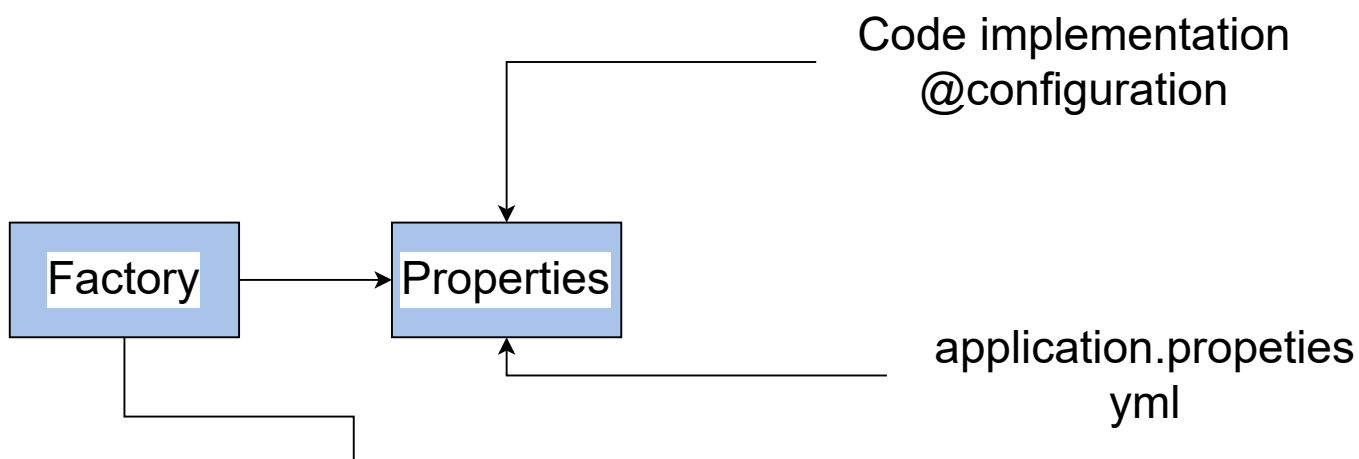
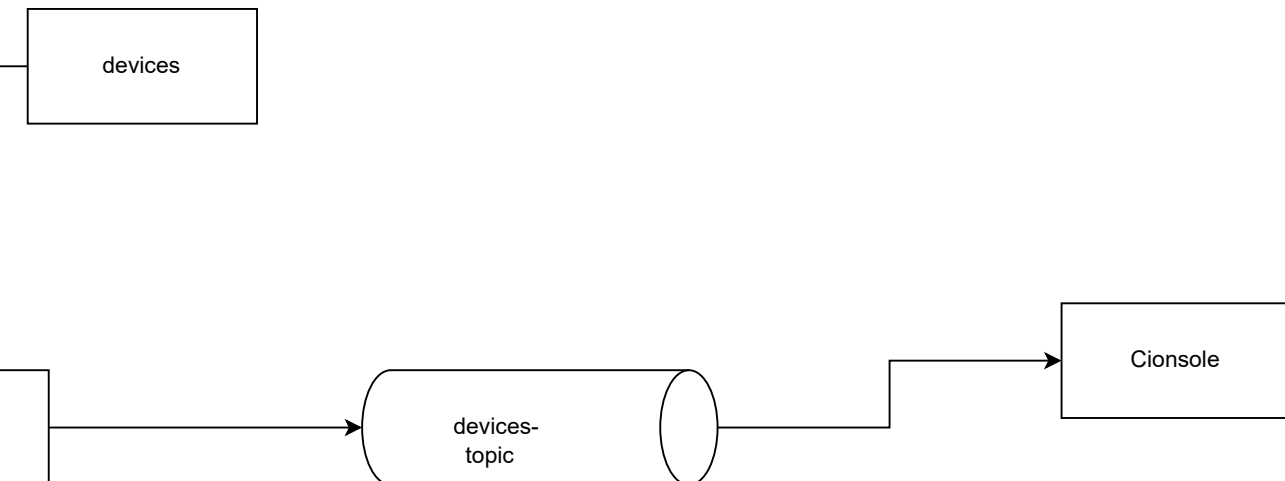


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message

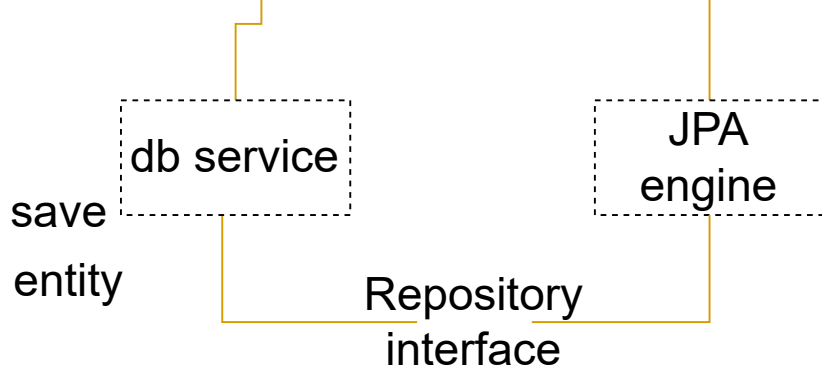
Queue←

Partion

Partion

Partion

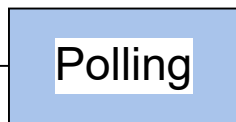




message message

message

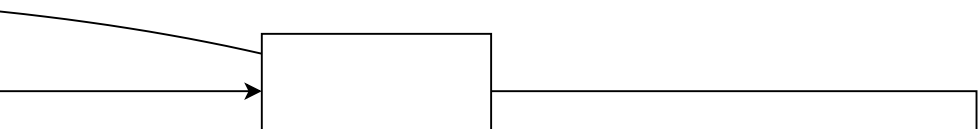
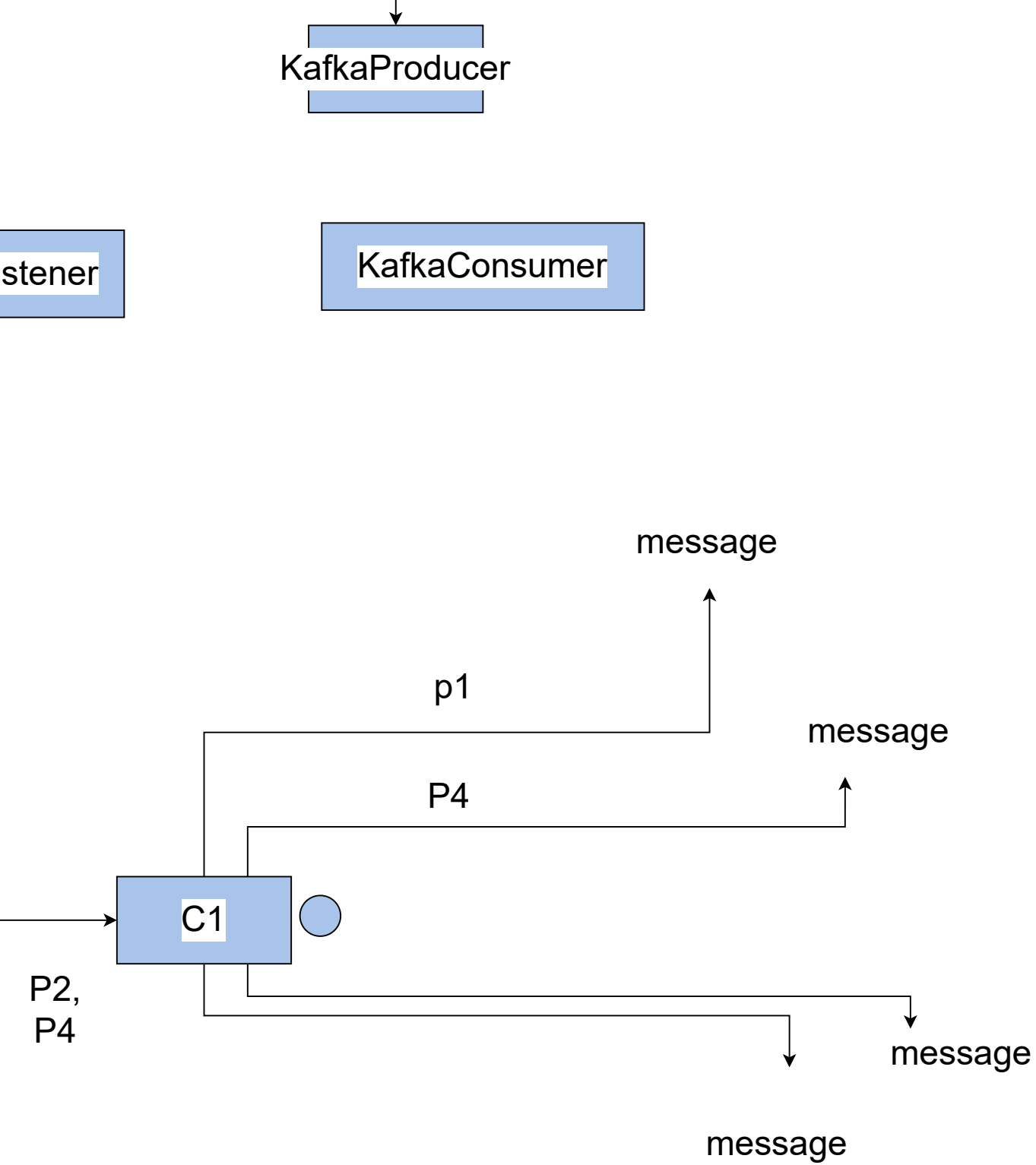
message message

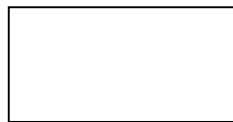


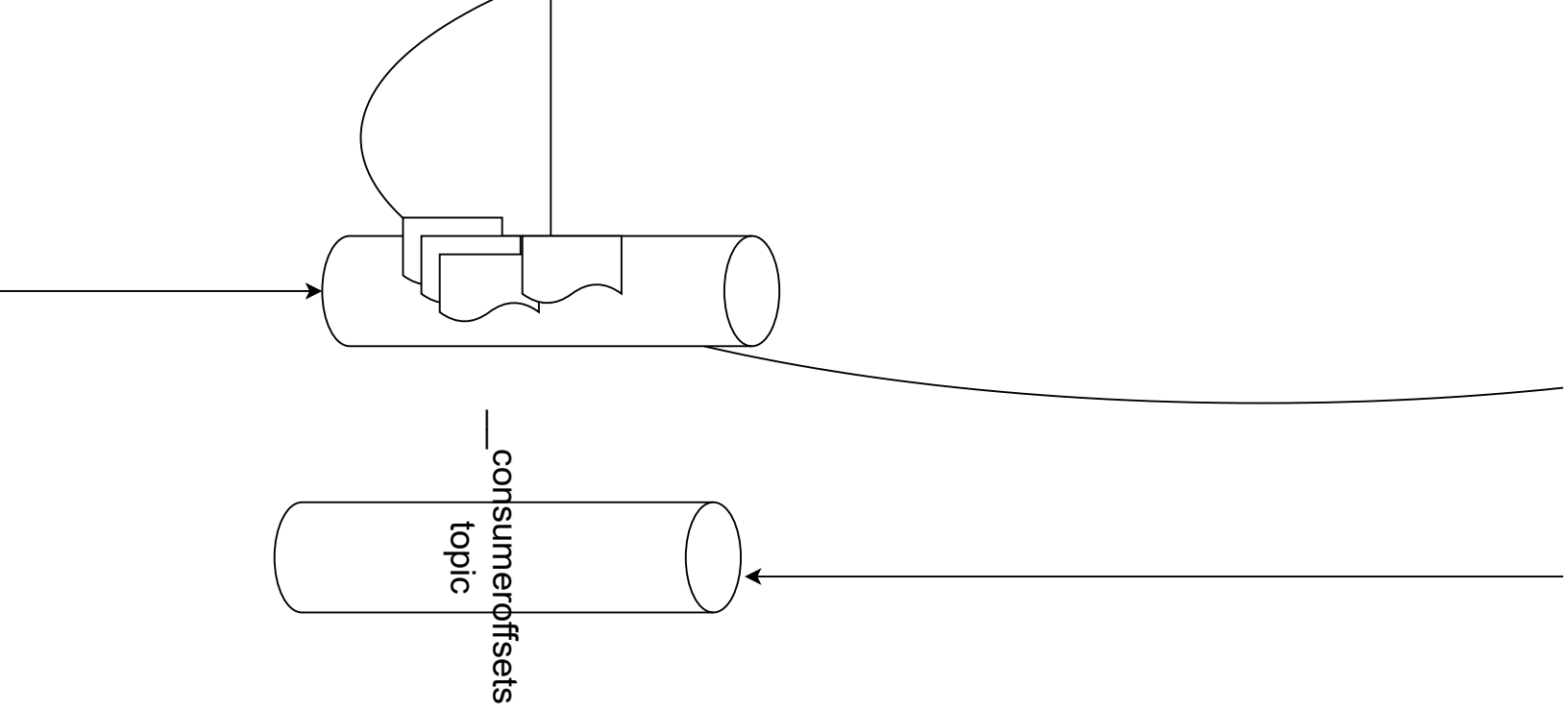
thread 1

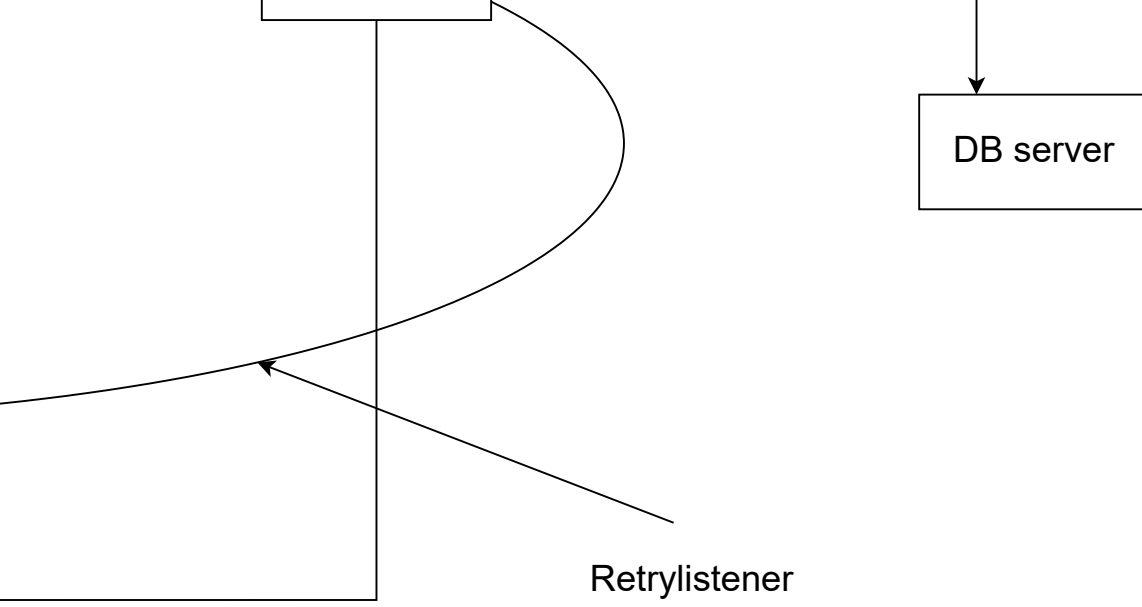
p1,  
p2,  
p3,  
p4



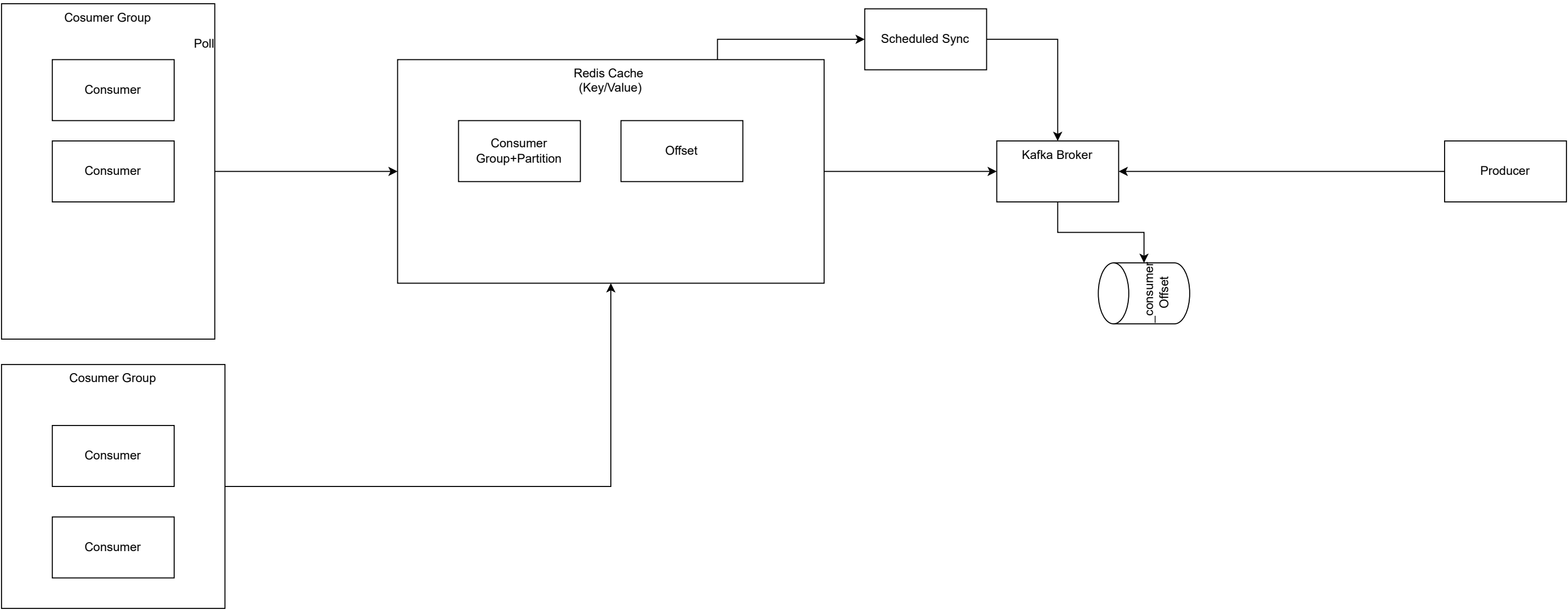




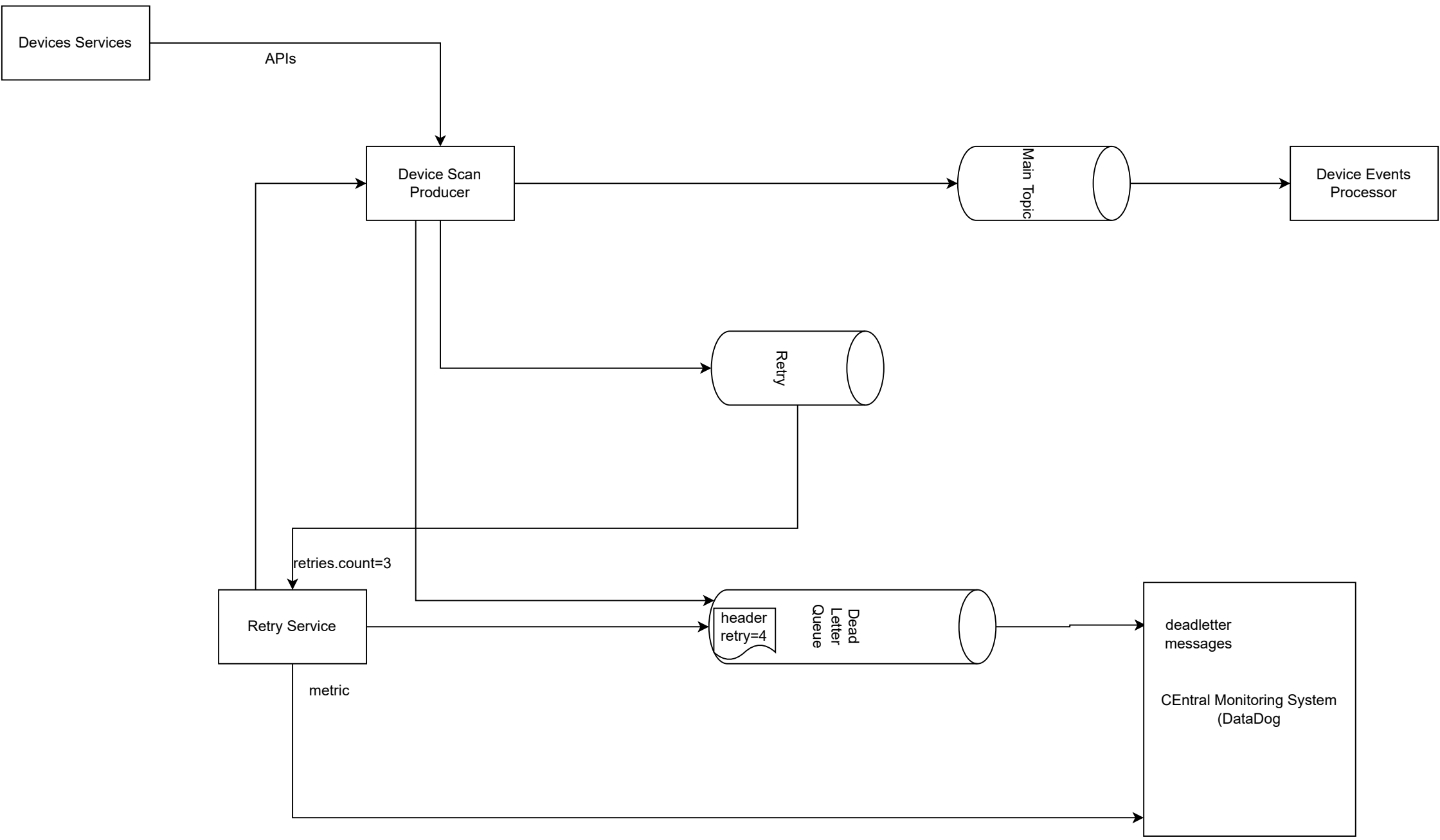




# DIY Exercise - day 7



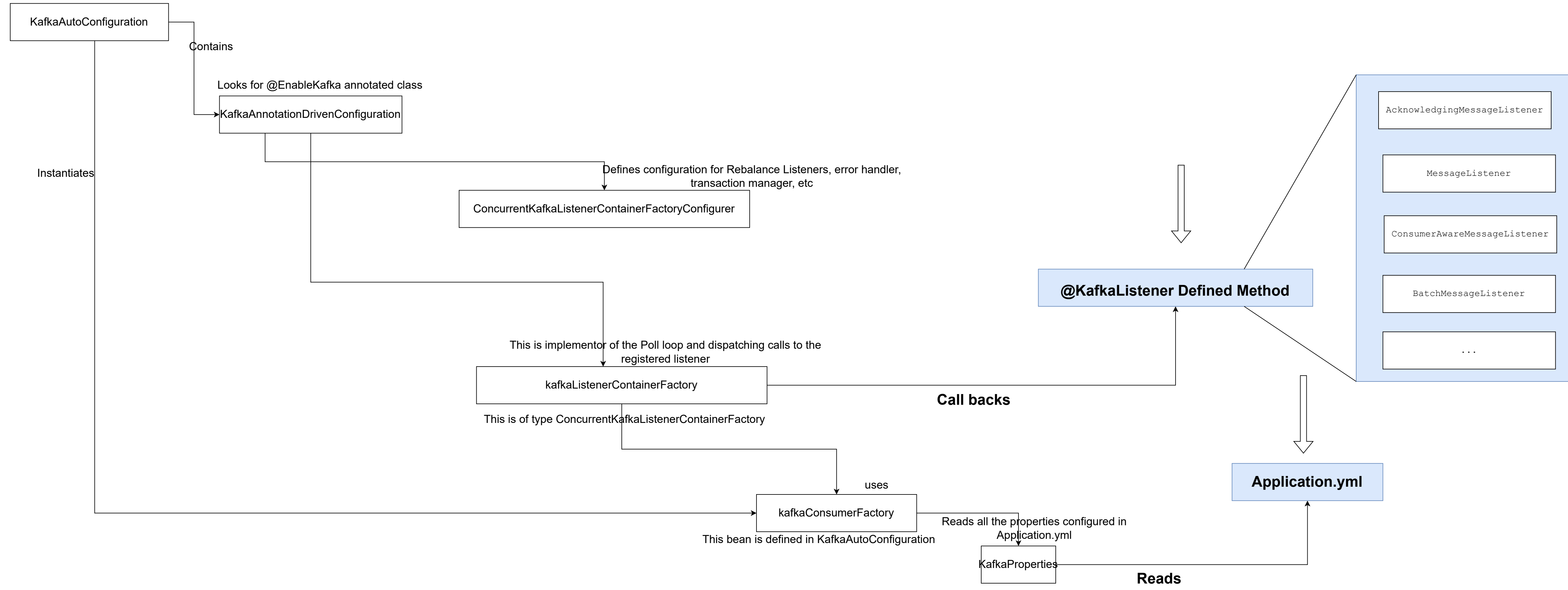
# Producer Retry Mechanism



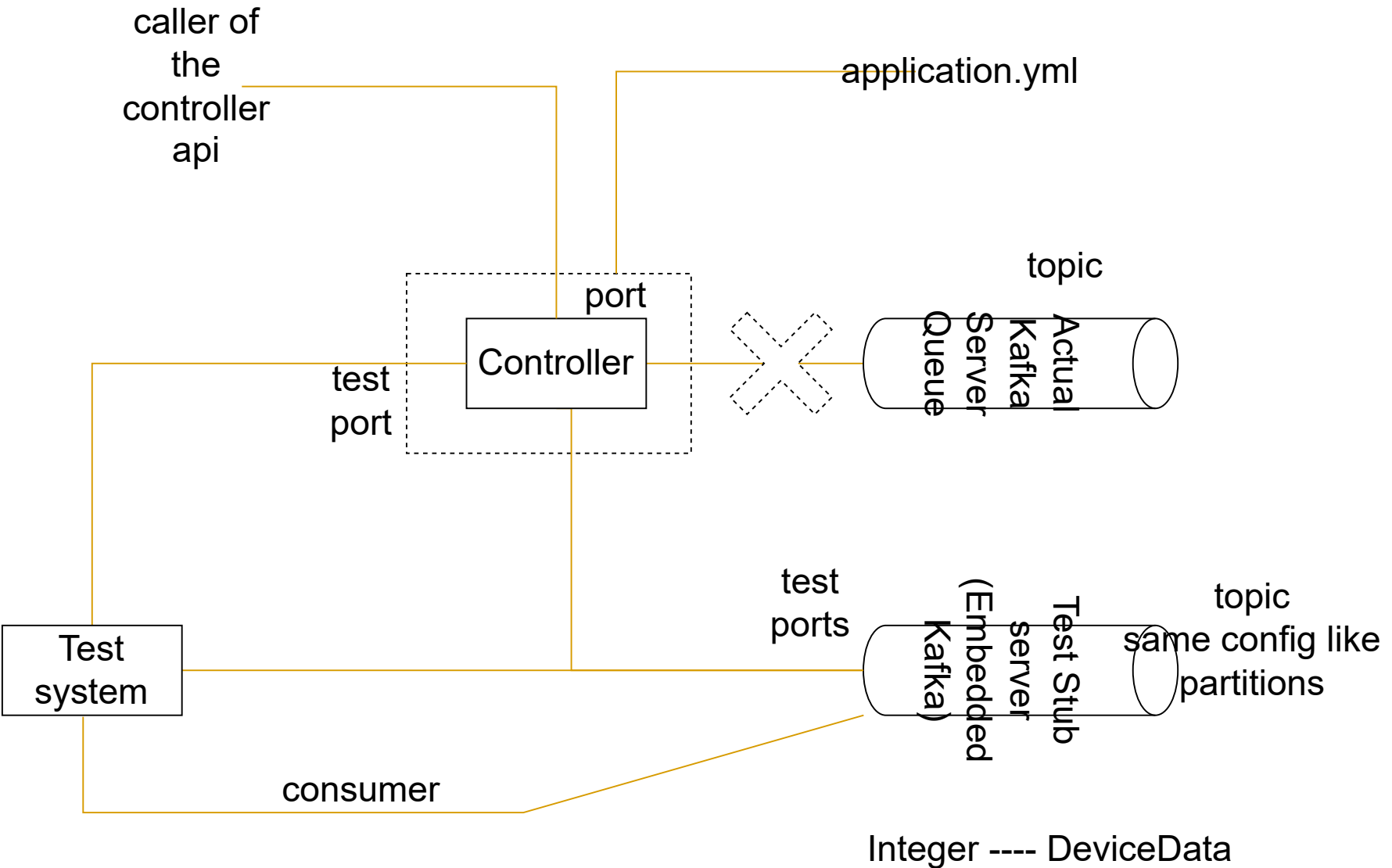


# Spring Kafka Consumer Internals

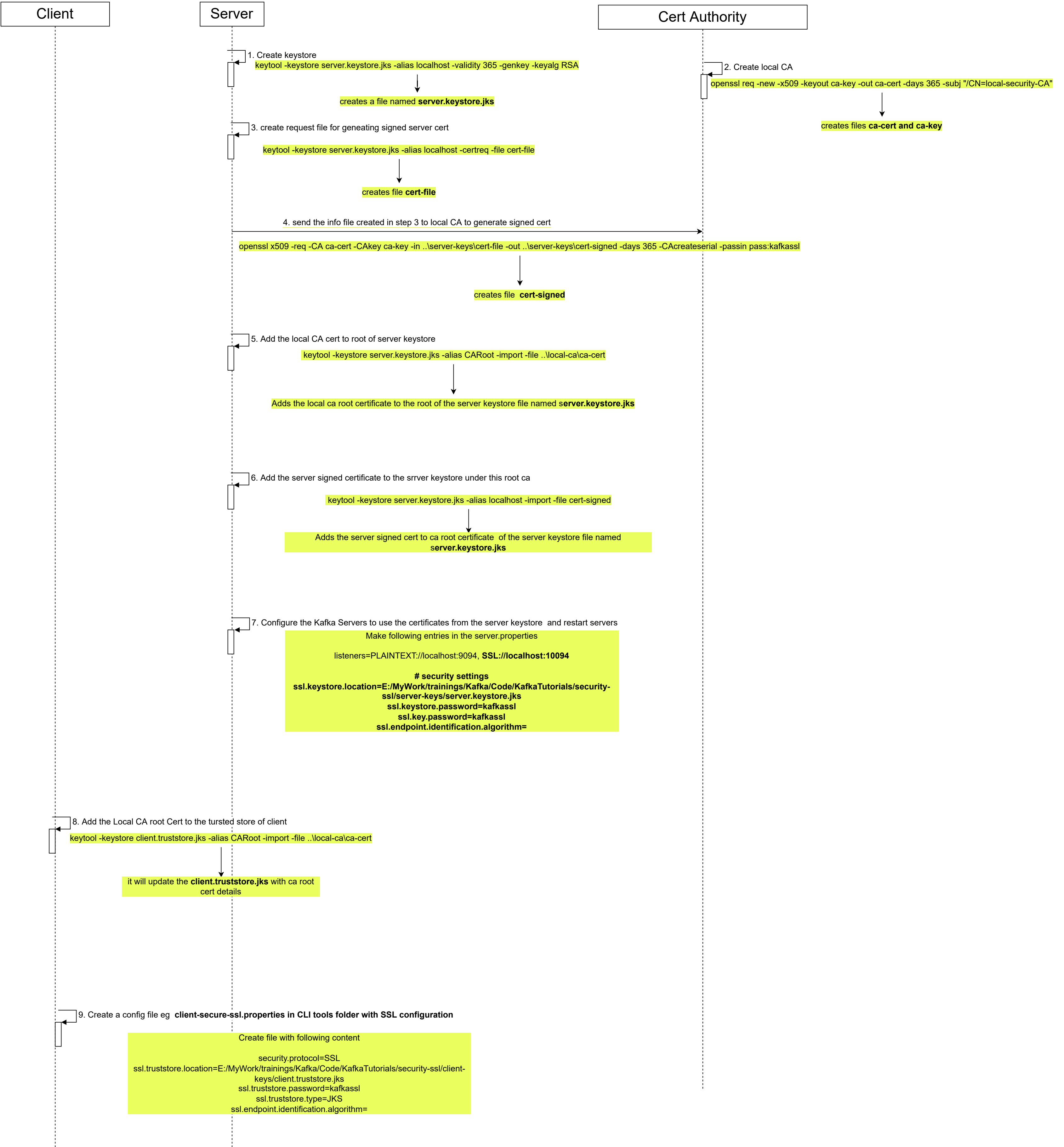
Instantiate needed beans and initiates Other objects

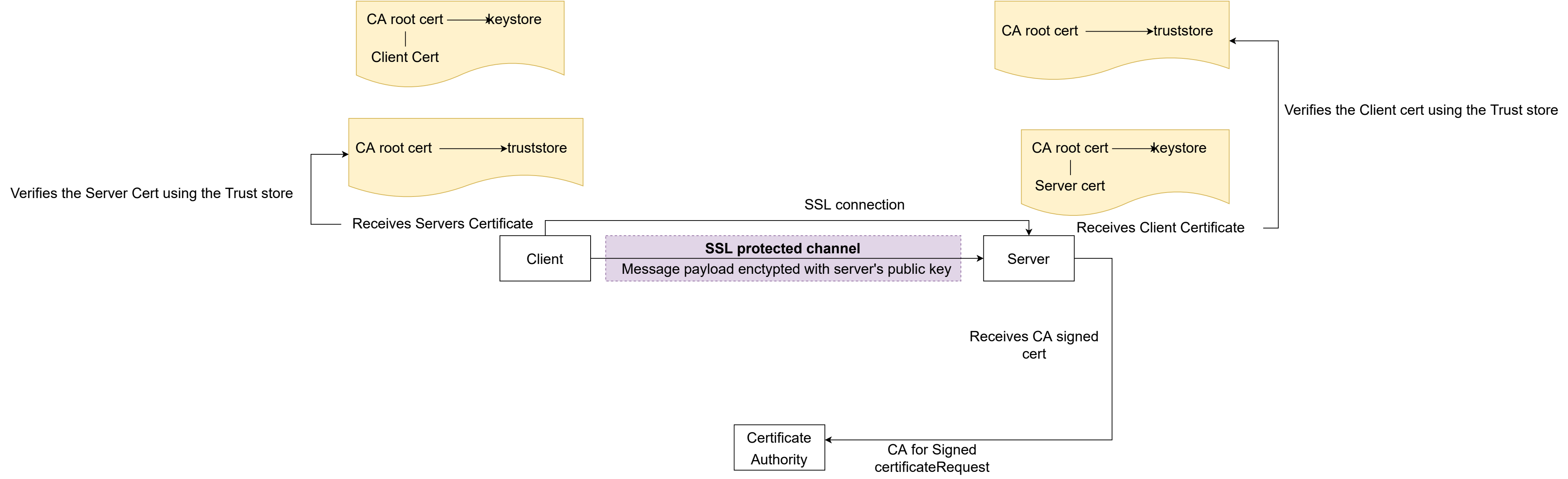


# Producer Test



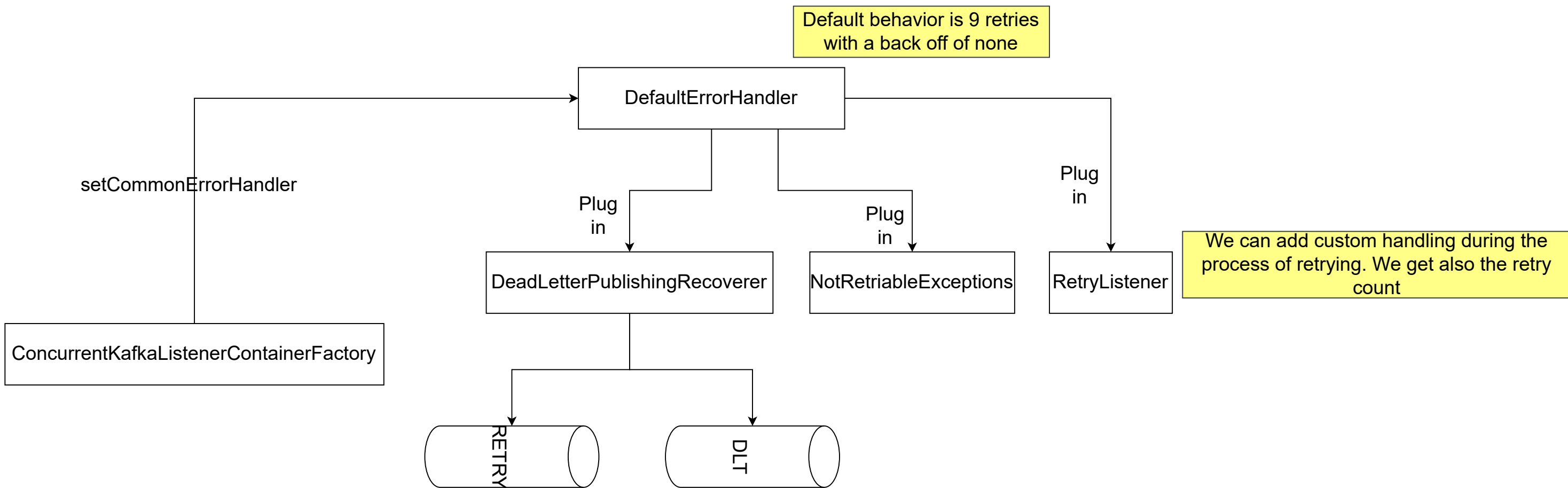
# SSL Setup for securing Kafka Server and Clients





# Consumer Error Handling & Recovery Mechanism

## Spring Kafka Consumer Classes



## Recovery

