

KAFKA 1883 - 1924

IN A *Nutshell*

Certificate of Completion

This is to certify that Martin Seeler successfully completed 4 hours of Apache Kafka Series - Learn Apache Kafka for Beginners online course on Dec.

20, 2017

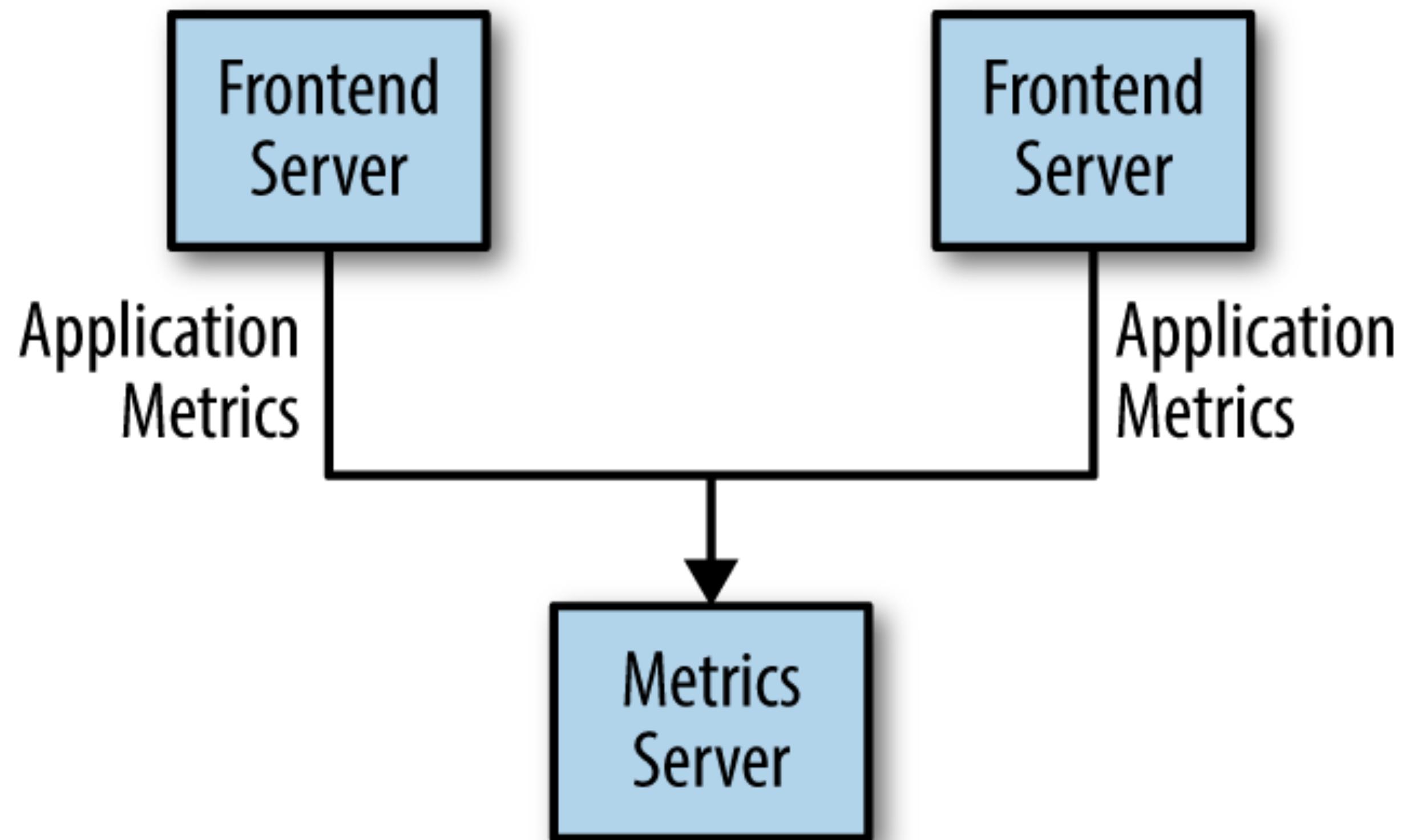
Stephane Maarek

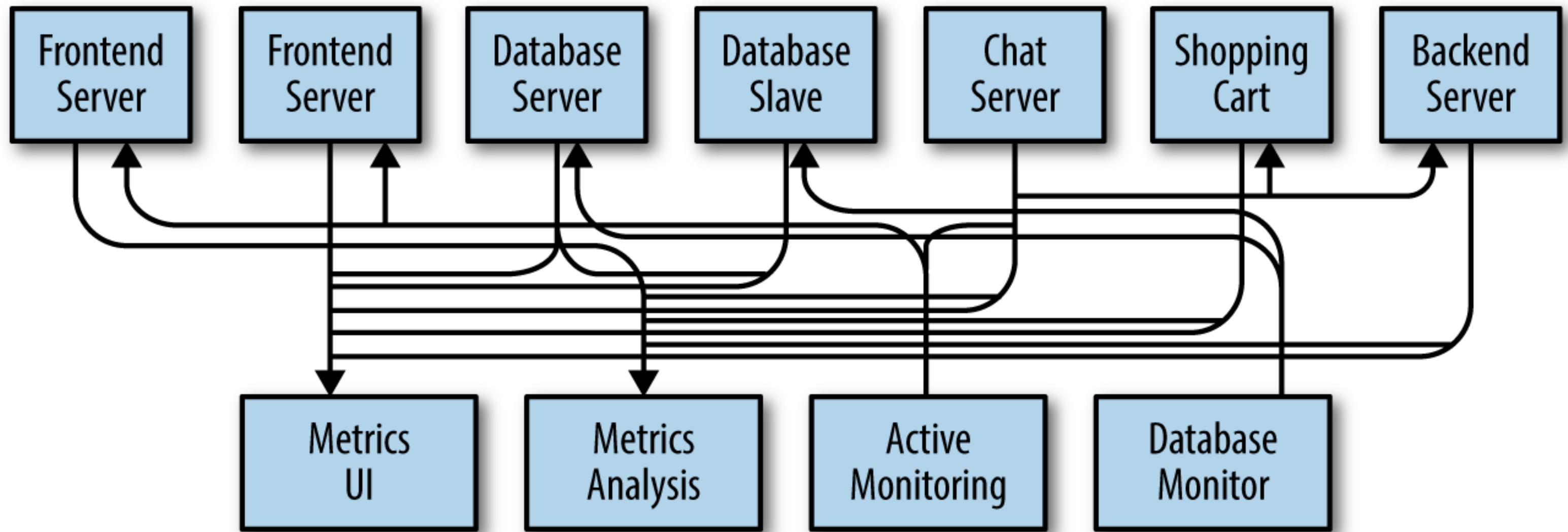
Stephane Maarek, Instructor

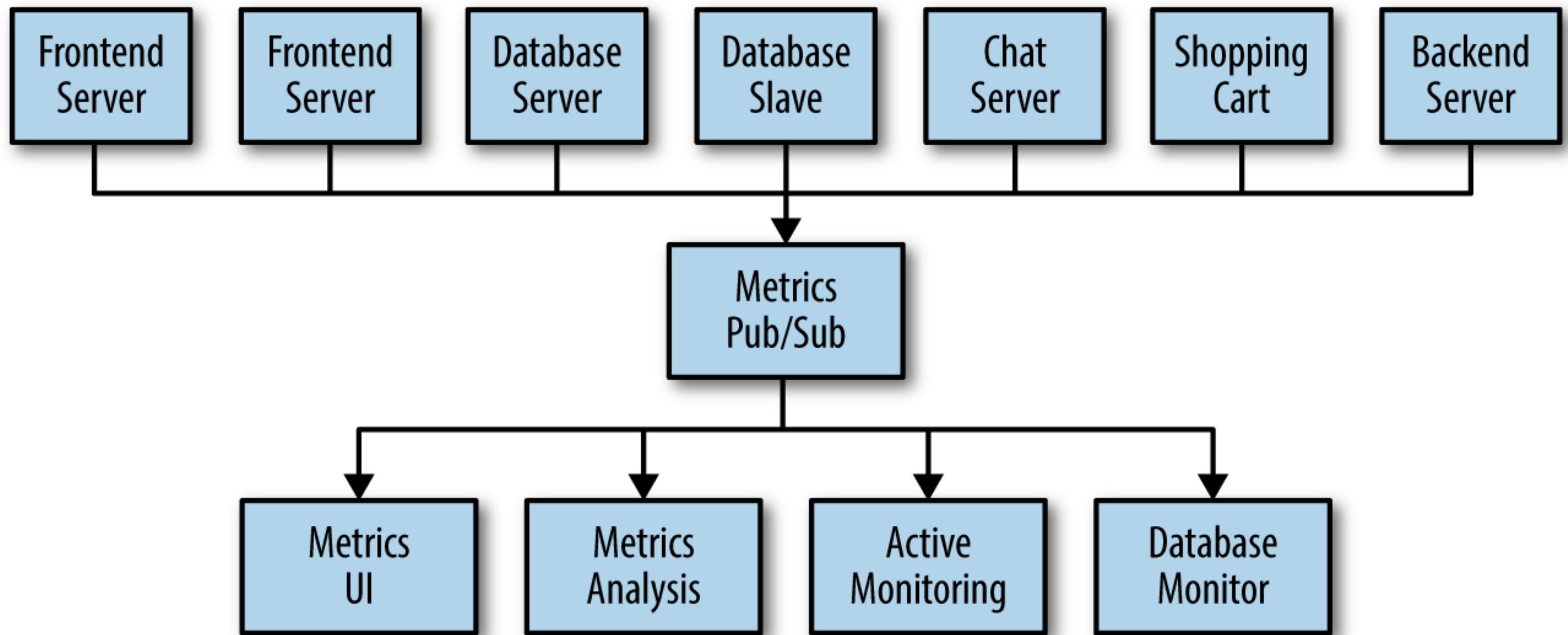


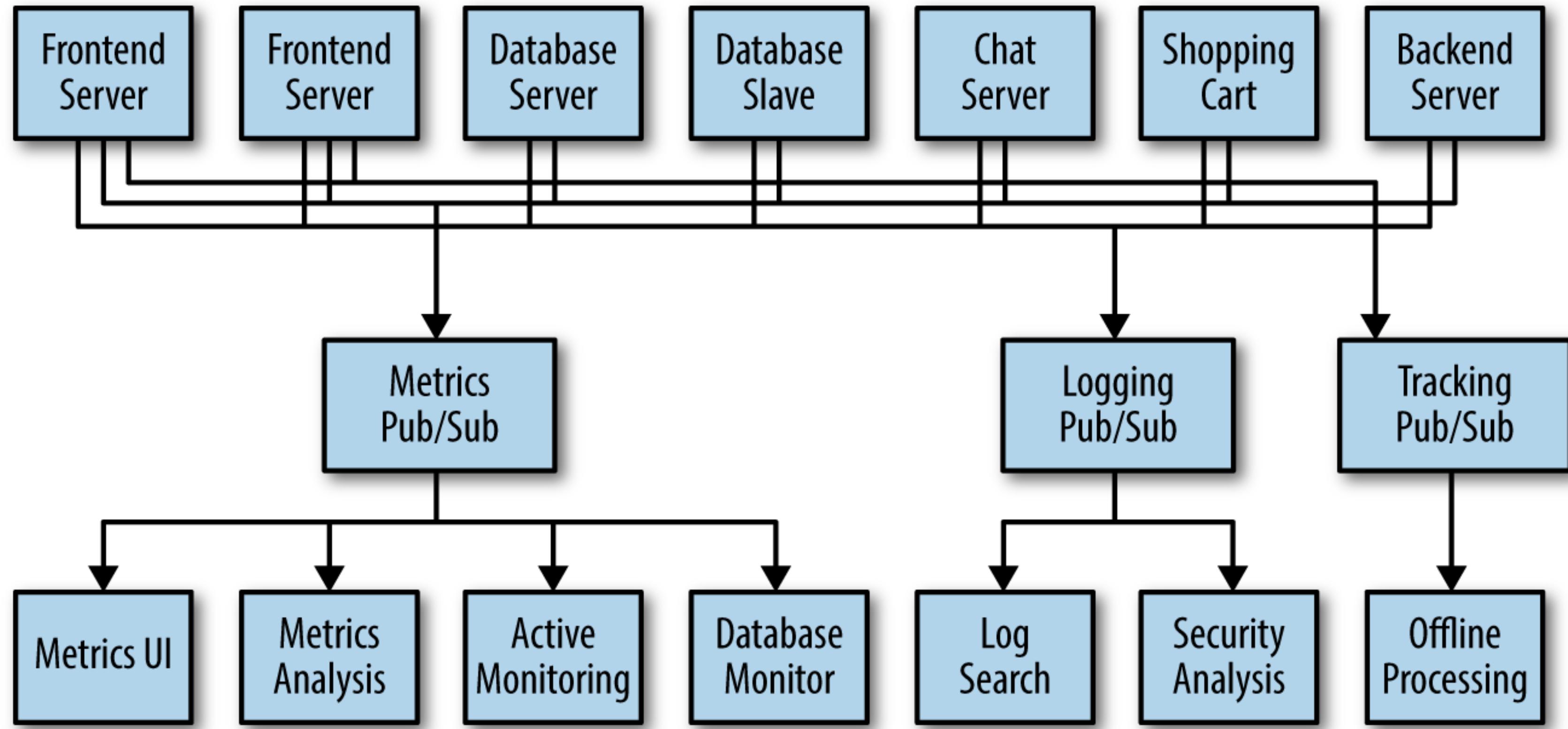
#BeAble

Certificate no: UC-P29R8Y6N
Certificate url: ude.my/UC-P29R8Y6N









A black and white portrait of Franz Kafka, an older man with glasses and a pipe, looking thoughtfully to the side.

MEET Kafka

PRODUCERS *produce*
CONSUMERS *consume*
IN LARGE **DISTRIBUTED RELIABLE**
WAY AND **REALTIME**

Messages IN KAFKA
~1 million MESSAGES/S

Topics AND Partitions **IN KAFKA**

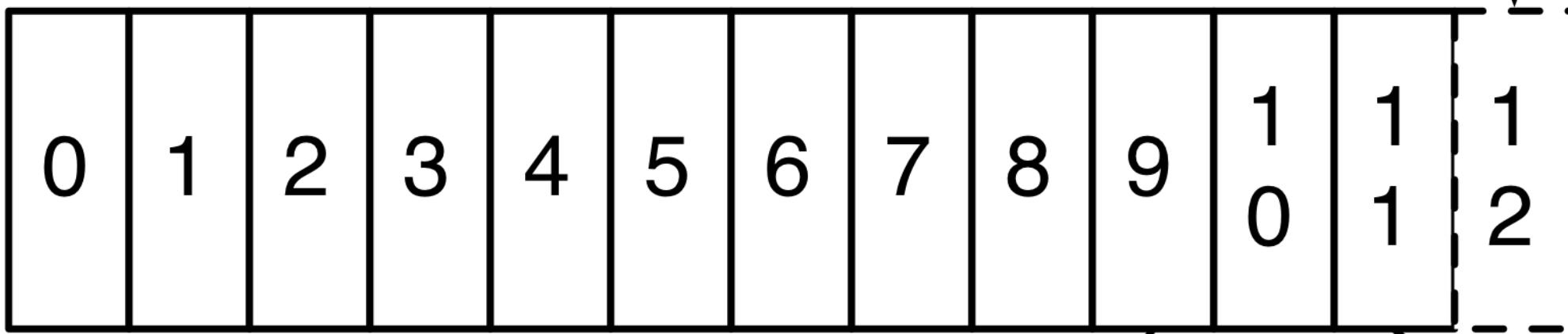


THE CORE OF KAFKA
IS THE *Log*

**THE LOG IS SIMPLY A *time-ordered,*
append-only SEQUENCE OF DATA INSERTS
WHERE THE DATA CAN BE ANYTHING**

Producers

writes

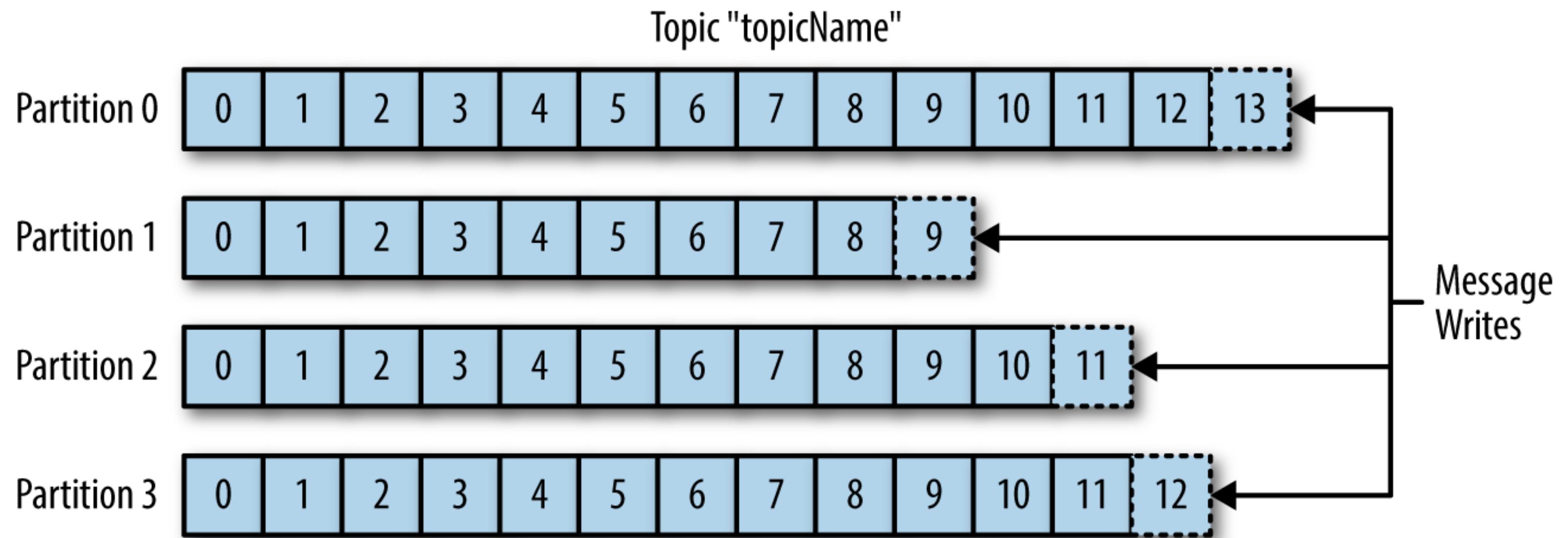


reads

Consumer A
(offset=9)

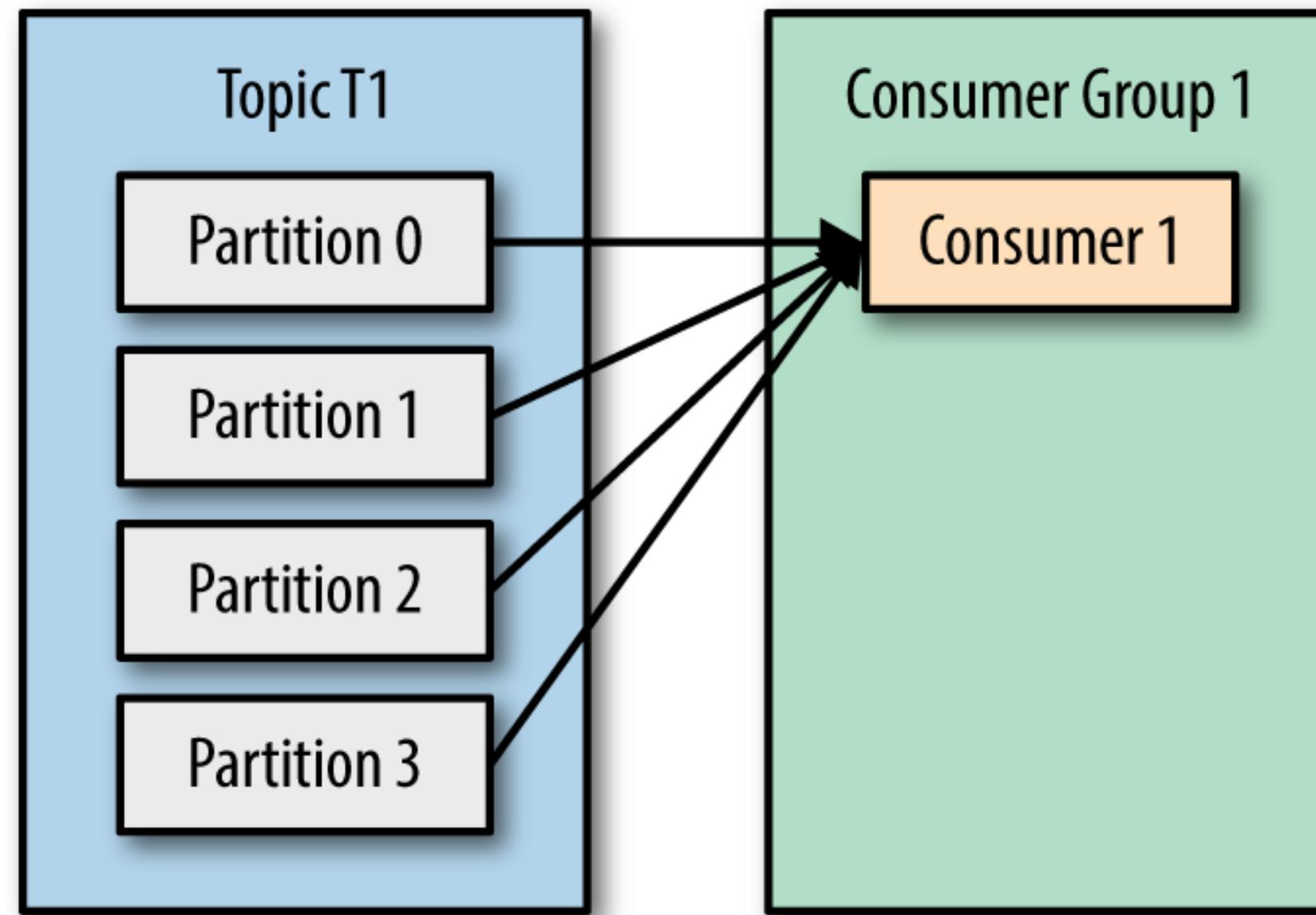
Consumer B
(offset=11)

Partitions IN KAFKA

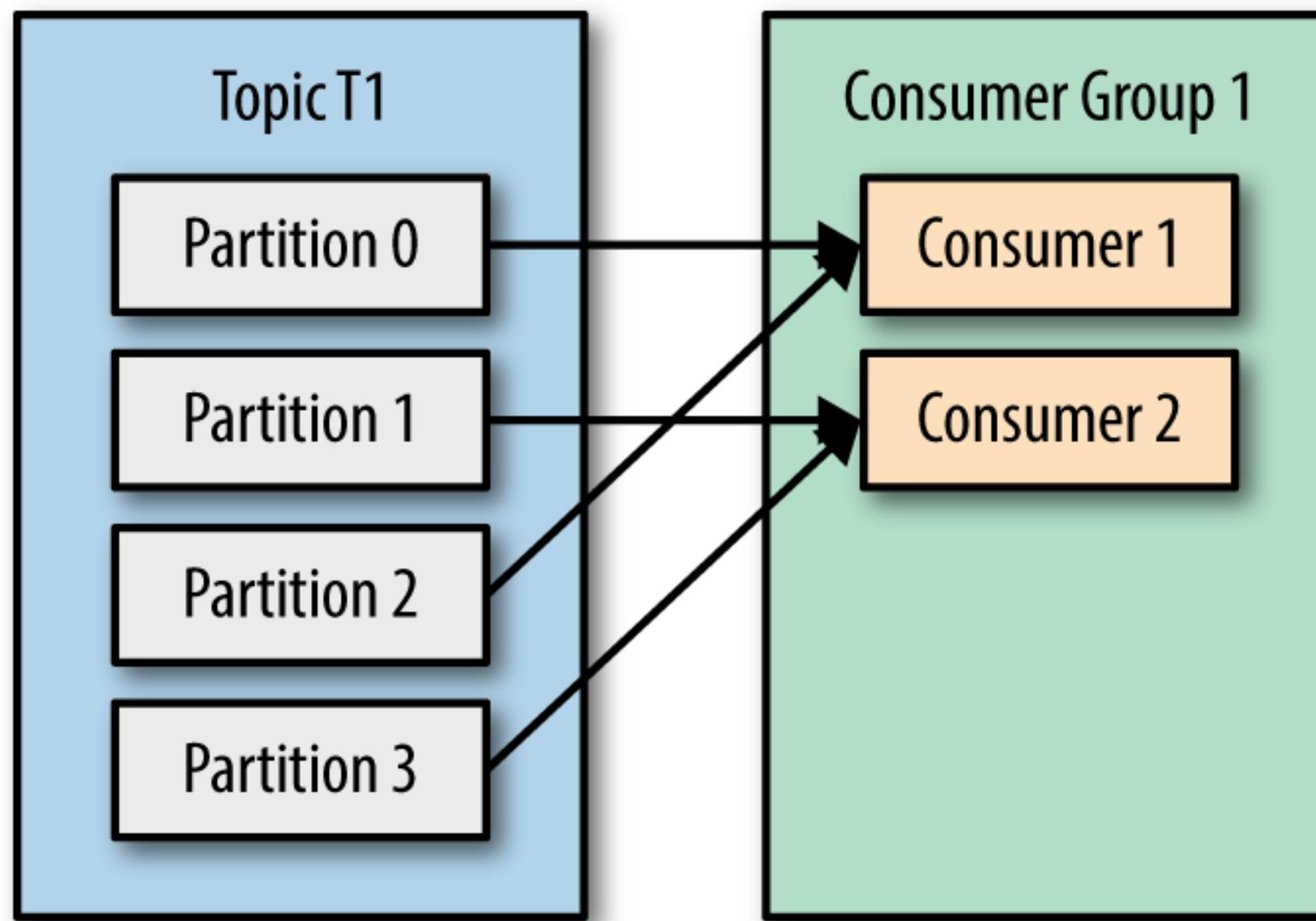


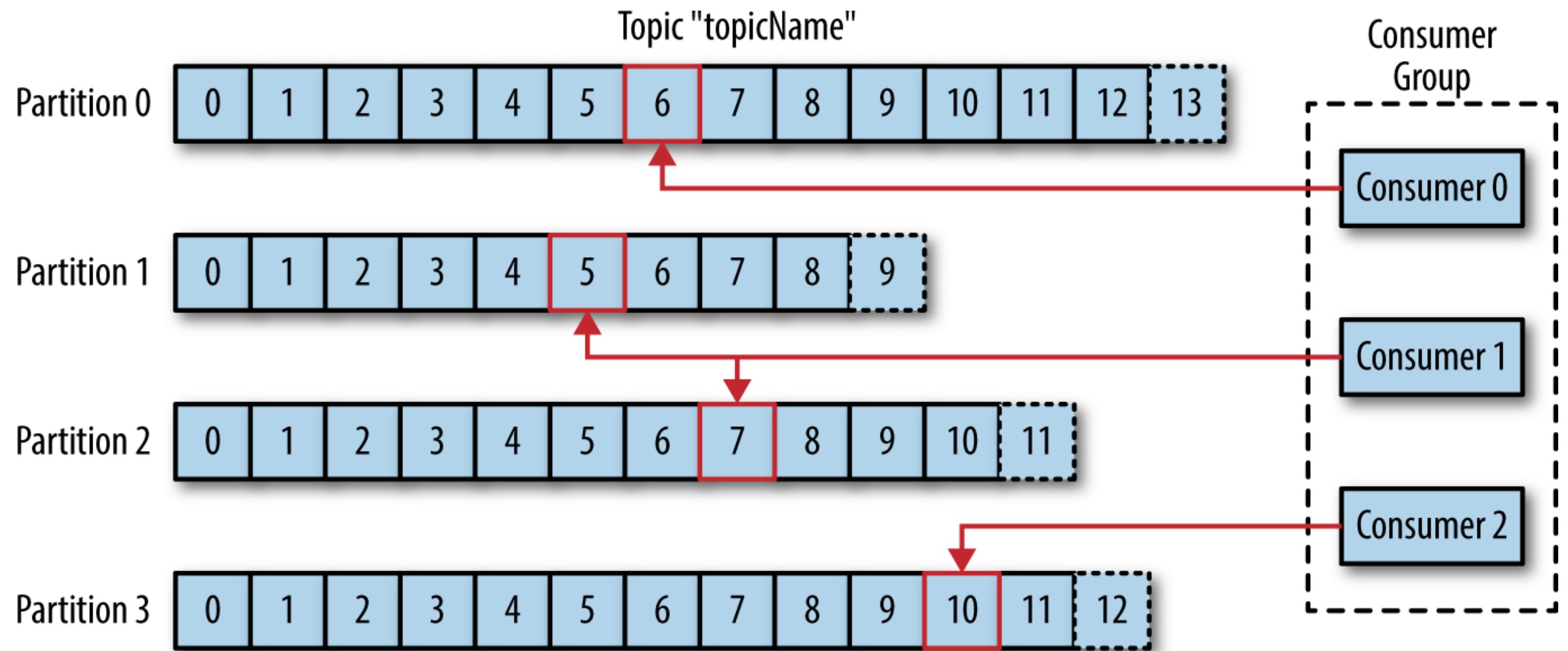
*Ordering IS only
GUARANTEED *inside* A
SINGLE *Partition* !!! ELF*

1 CONSUMER FROM 1 GROUP

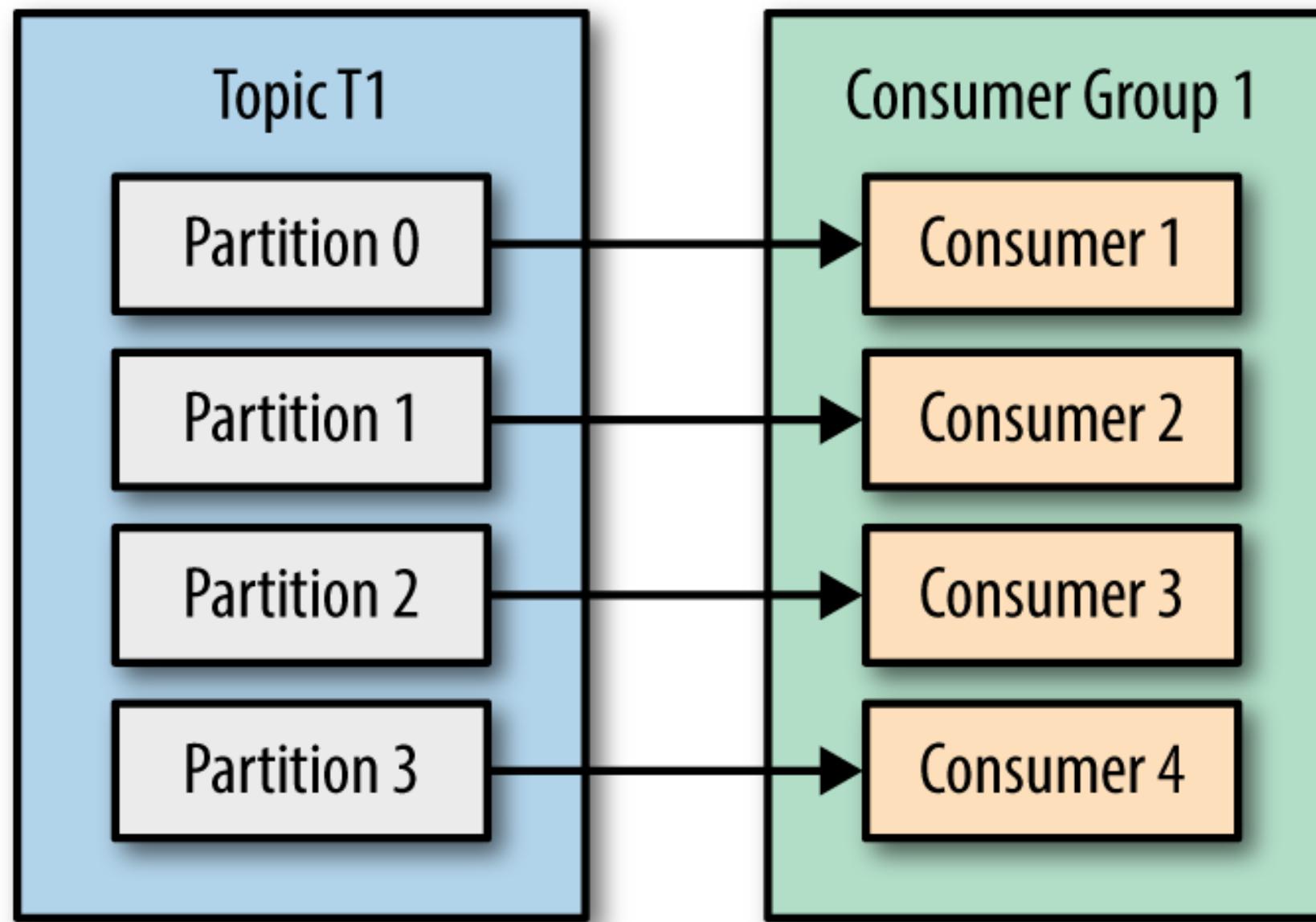


2 CONSUMERS FROM 1 GROUP

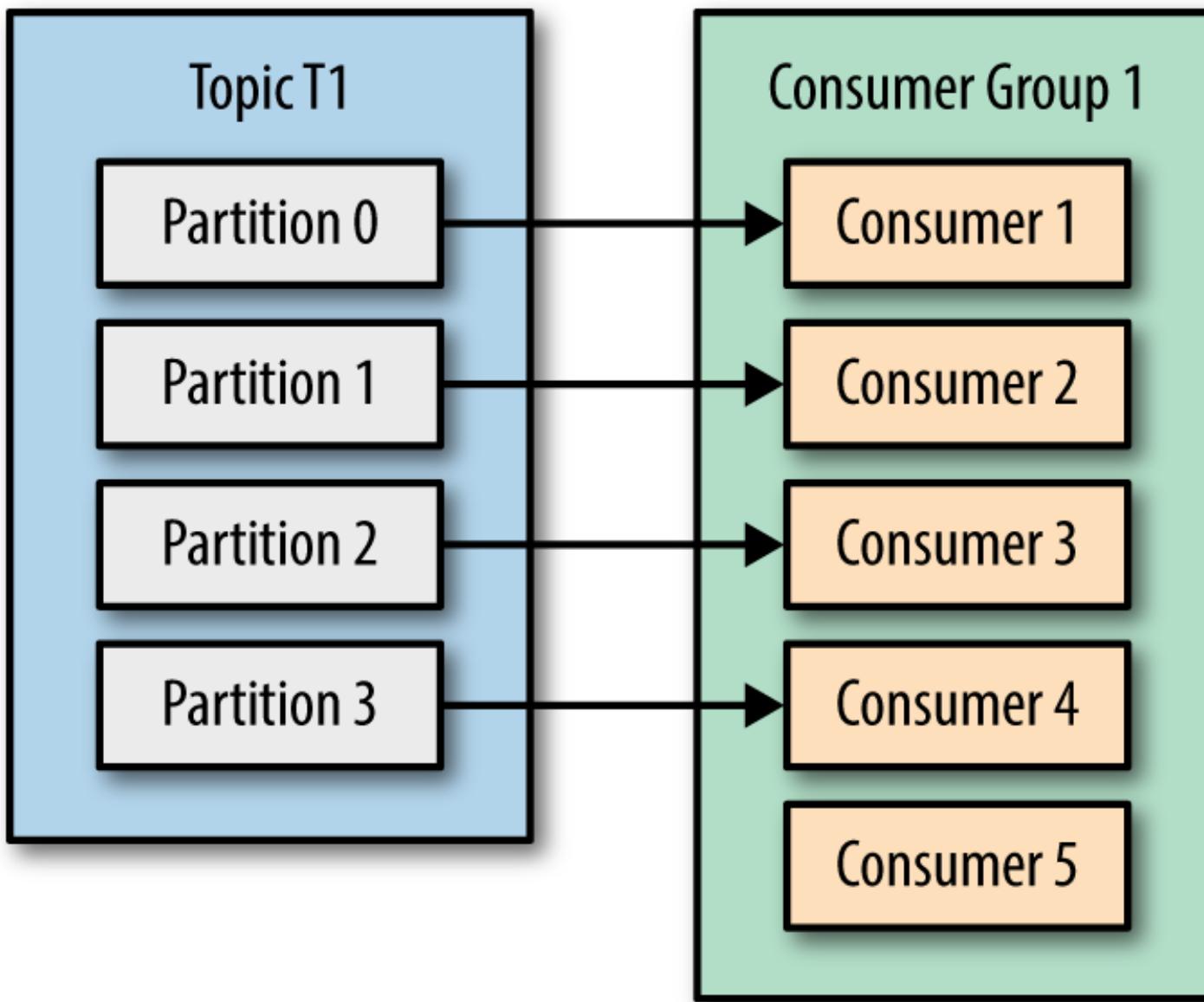




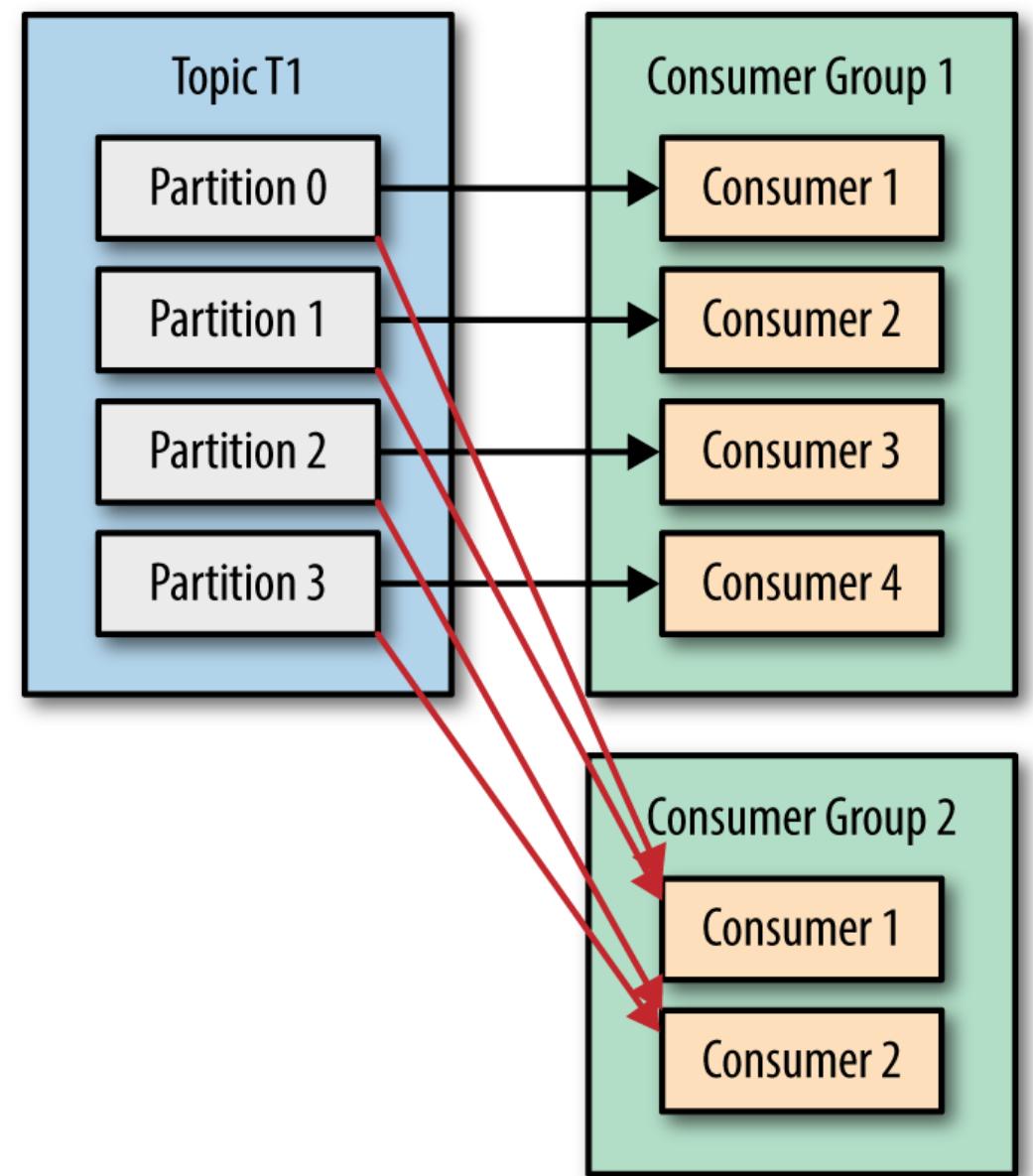
4 CONSUMERS FROM 1 GROUP



5 CONSUMERS FROM 1 GROUP



2 CONSUMER GROUPS





WHERE WILL IT GO?

**WHEN NOTHING IS SPECIFIED,
round robin BEHAVIOUR IS
USED**

**WHEN ONLY A *key* IS
SPECIFIED, PARTITION IS
CHOOSEN BASED ON**

hash of the key

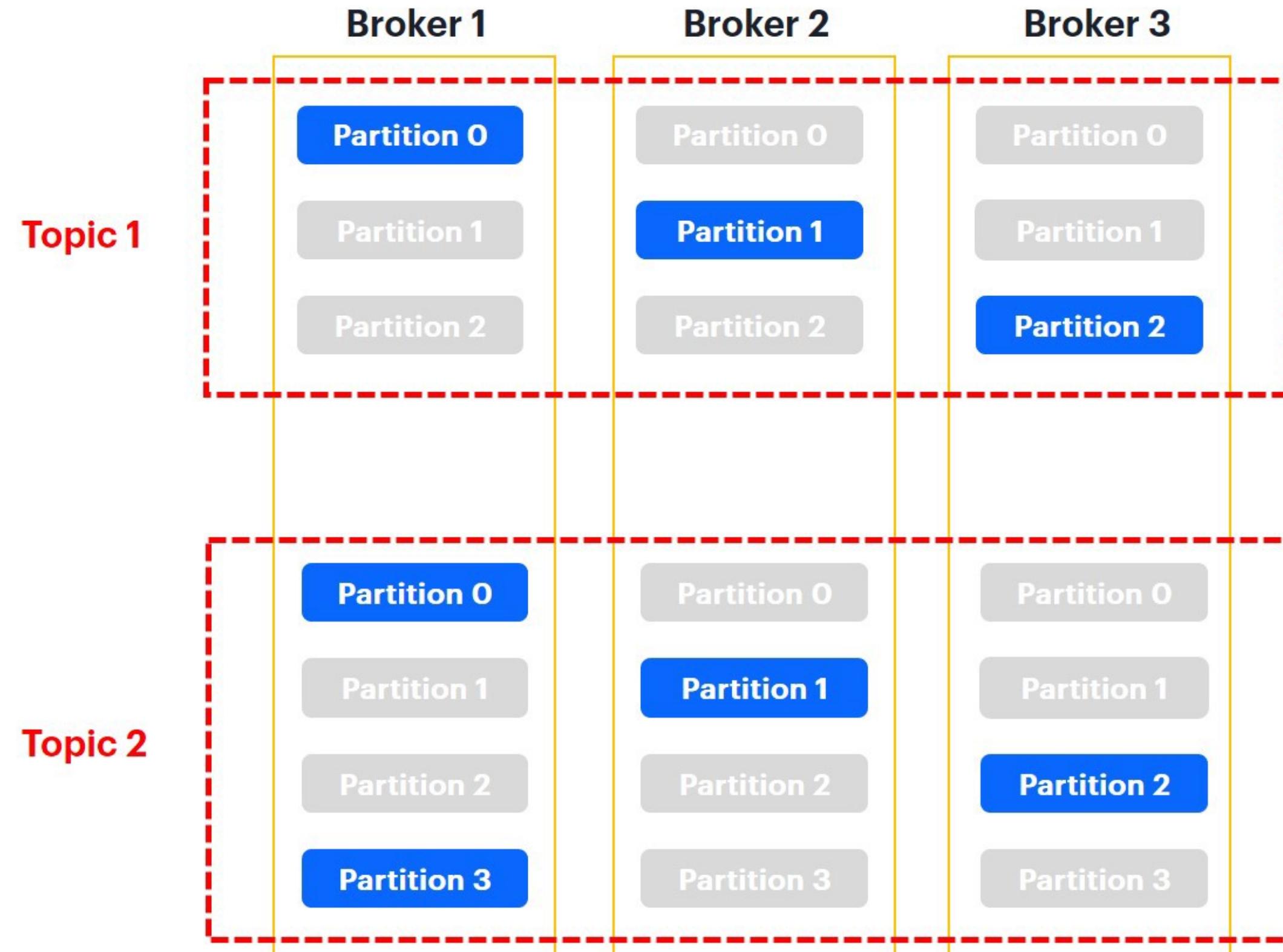
IF A VALID *partition number*
IS SPECIFIED, THAT *partition*
WILL BE USED

LOG *Compacted* **TOPIC**



Redundancy IN KAFKA

PBS
NEWS
HOUR



**TO TOLERATE N FAILURES,
YOU NEED $2N+1$ REPLICAS**

WHY *not* KAFKA?

Costs AND Infrastructure

Kafka VS PubSub

Alternatives TO KAFKA



BUT Why KAFKA?

PAUL KRAVISET FESTIVAL
2018

Multiple PRODUCERS
AND SOURCES

Multiple CONSUMERS AND SINKS

CUSTOMIZABLE
Data Retention

Immutable DATASTORE
WITH *Replay* FUNCTIONALITY

MEET *KSQL*

```
CREATE TABLE pageviews_per_region_per_minute AS
SELECT regionid,
       count(*)
FROM pageviews_enriched
WINDOW TUMBLING (SIZE 1 MINUTE)
GROUP BY regionid
EMIT CHANGES;
```

A close-up profile of a man's face, showing his forehead, eye, nose, and mouth. He has short brown hair and is wearing a dark suit jacket over a white shirt and a dark tie. His gaze is directed downwards and to the right. The background is blurred, showing what appears to be an office or industrial setting with pipes and equipment.

ANY Questions?

Thanks &&

AT LEAST ONCE DELIVERY Rulez

12:43 **Lunch Train** APP ALL ABOARD! Time to leave for @artur's lunch train to Ramen 1974.

| Meet @artur by the entrance.

ALL ABOARD! Time to leave for @artur's lunch train to Ramen 1974.

| Meet @artur by the entrance.

ALL ABOARD! Time to leave for @artur's lunch train to Ramen 1974.

| Meet @artur by the entrance.

ALL ABOARD! Time to leave for @artur's lunch train to Ramen 1974.

| Meet @artur by the entrance.