

Spring for Rabbit Super Stream and SQL Filters



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Hello! My is Name

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Broadcom

I **LOVE** SPRING + DATA



Agenda

Application Messaging Challenges/Opportunities

Introducing RabbitMQ Streams

Streams with Spring Applications

How does streams help?

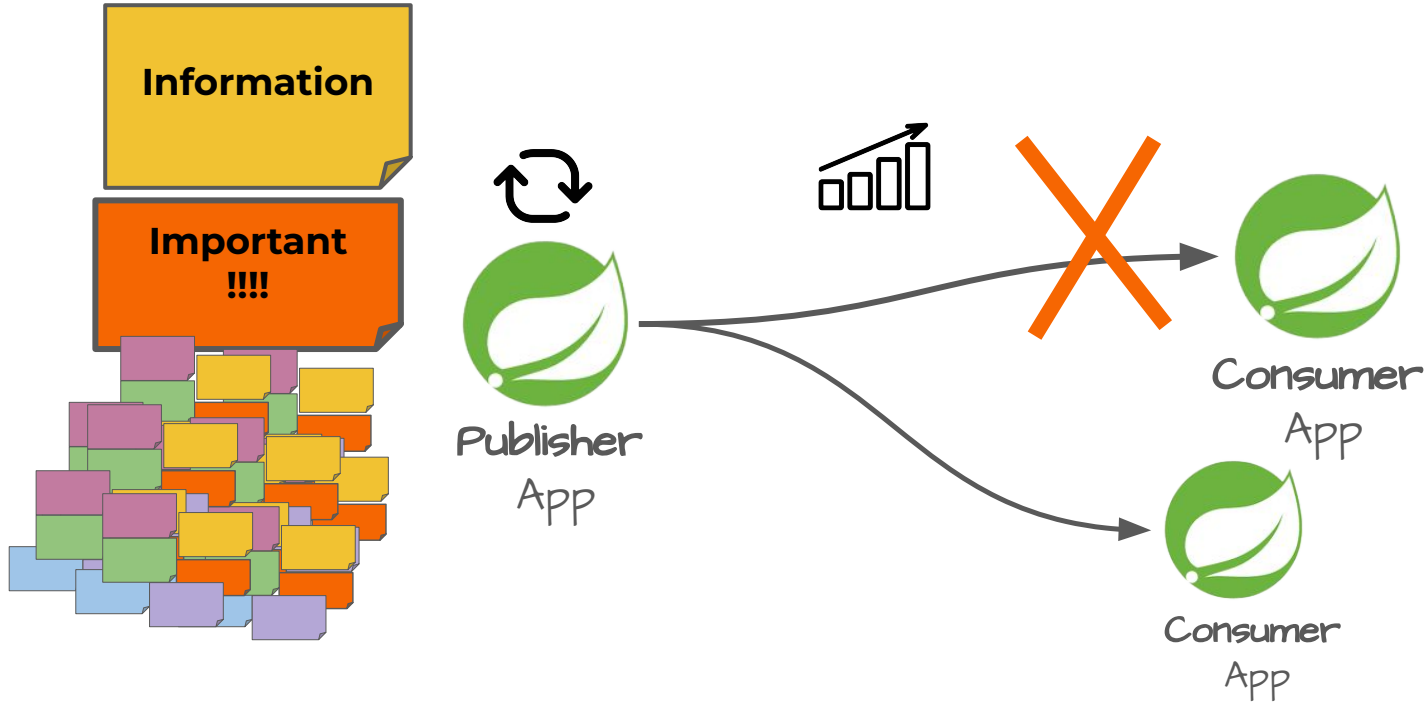
- Replay
- High throughput
- Scalability
- Filtering

Artificial Intelligence

Wrap-Up



Application Messaging



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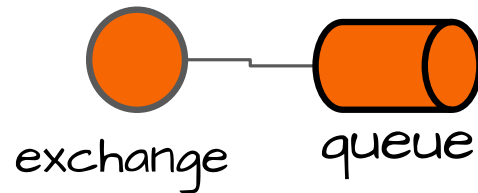
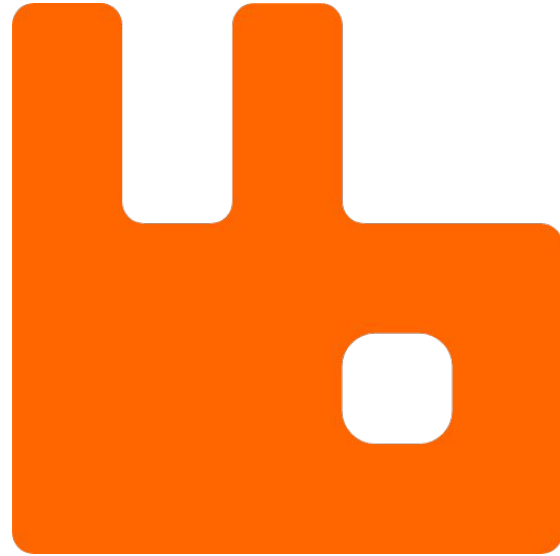


RabbitMQ

- Popular Messaging System
- Since 2007

Traditional Messaging

- Publish message to exchanges
- Reliable delivery to queues
- Destructive consumption

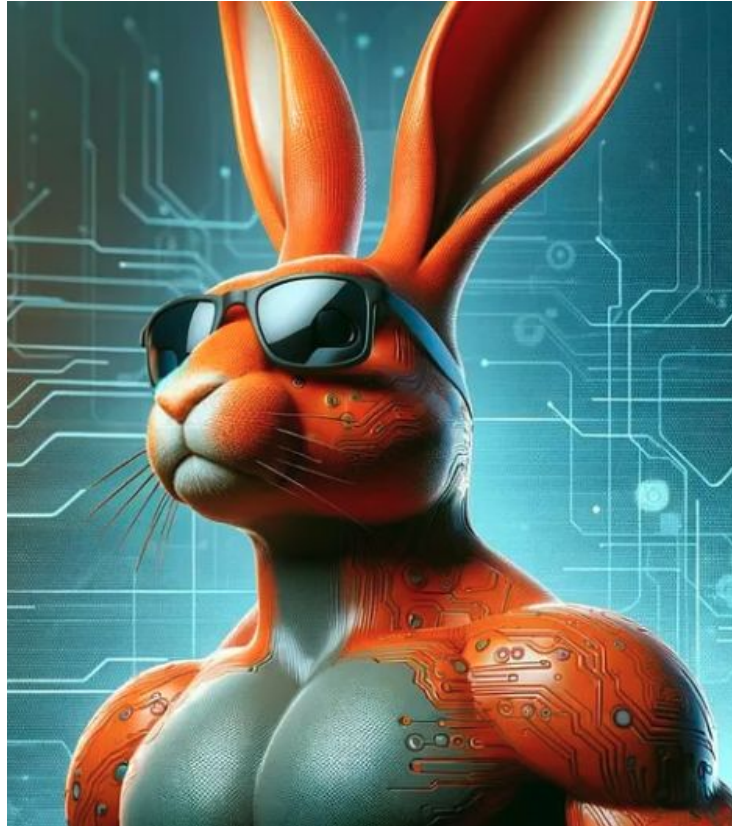


Messaging with RabbitMQ Streams

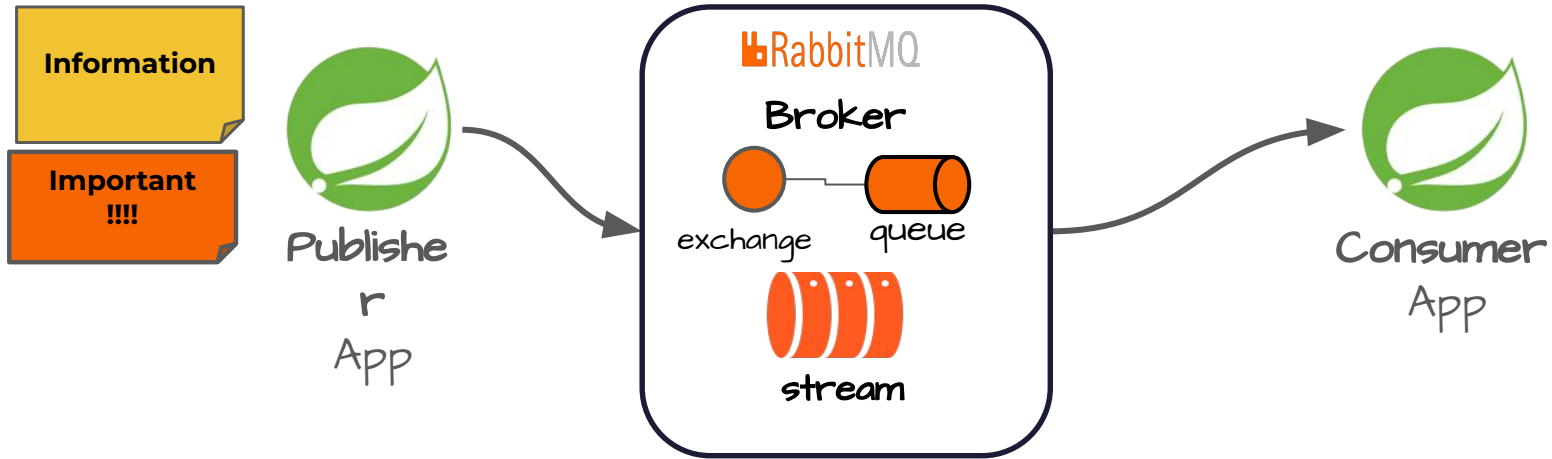
- Available since RabbitMQ 3.9
- Introduced in July 13, 2021
- Append-only log of messages to streams
- Higher throughput messaging with streams
- Supports repeated reads from streams
- Non-destructive stream consumption



streams



Messaging with RabbitMQ



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Messaging with RabbitMQ Streams

The screenshot shows the Spring Initializr web interface. On the left, there are sections for Project, Language, Spring Boot, Project Metadata, and Configuration. The Project section has radio buttons for Gradle - Groovy (selected), Gradle - Kotlin, and Maven. The Language section has radio buttons for Java (selected) and Kotlin. The Spring Boot section has radio buttons for 4.1.0 (SNAPSHOT), 4.1.0 (M4), 4.0.6 (SNAPSHOT), 4.0.5 (selected), 3.5.14 (SNAPSHOT), and 3.5.13. The Project Metadata section has input fields for Group (com.example), Artifact (demo), and Package name (com.example.demo). The Configuration section has radio buttons for Jar (selected) and War, and radio buttons for Properties (selected) and YAML. At the bottom, there are buttons for GENERATE (⌘ + ↵), EXPLORE (CTRL + SPACE), and a menu button (...).

Project

- Gradle - Groovy
- Gradle - Kotlin
- Maven

Language

- Java
- Kotlin
- Groovy

Spring Boot

- 4.1.0 (SNAPSHOT)
- 4.1.0 (M4)
- 4.0.6 (SNAPSHOT)
- 4.0.5
- 3.5.14 (SNAPSHOT)
- 3.5.13

Project Metadata

Group

Artifact

Package name

Packaging

- Jar
- War

Configuration

- Properties
- YAML

Java 26 25 21 17

Dependencies ADD DEPENDENCIES... ⌘ + B

Function SPRING CLOUD

Promotes the implementation of business logic via functions and supports a uniform programming model across serverless providers, as well as the ability to run standalone (locally or in a PaaS).

Cloud Stream SPRING CLOUD MESSAGING

Framework for building highly scalable event-driven microservices connected with shared messaging systems (requires a binder, e.g. Apache Kafka, Apache Pulsar, RabbitMQ, or Solace PubSub+).

Spring for RabbitMQ Streams MESSAGING

Building stream processing applications with RabbitMQ.

Spring for RabbitMQ MESSAGING

Gives your applications a common platform to send and receive messages, and your messages a safe place to live until received.

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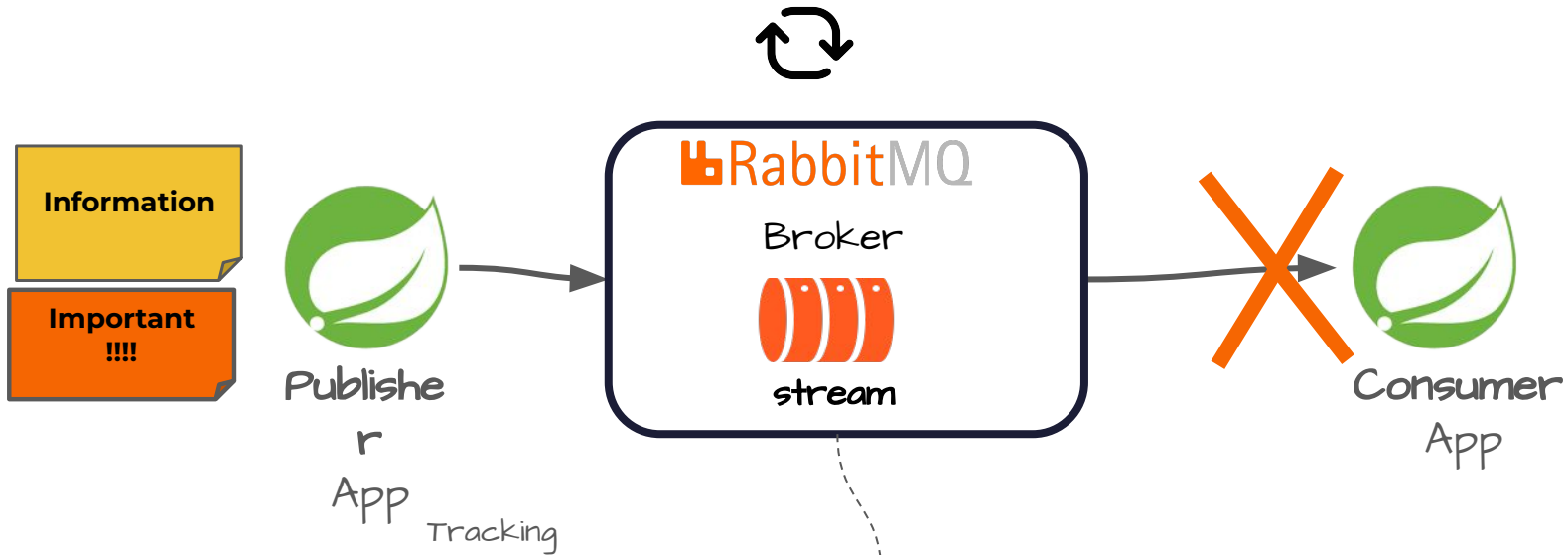
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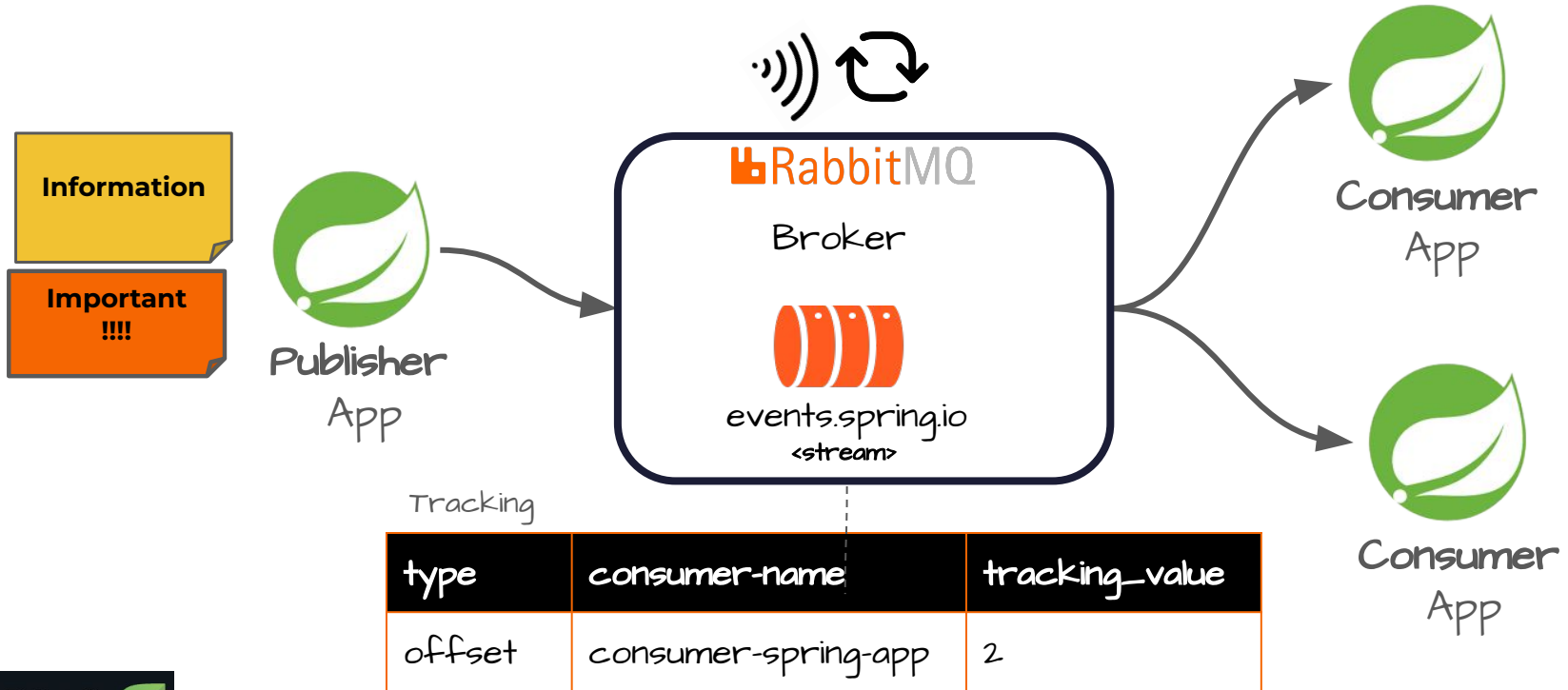


Replay with RabbitMQ streams



type	consumer-name	tracking_value
offset	consumer-spring-app	0

Replay with RabbitMQ streams



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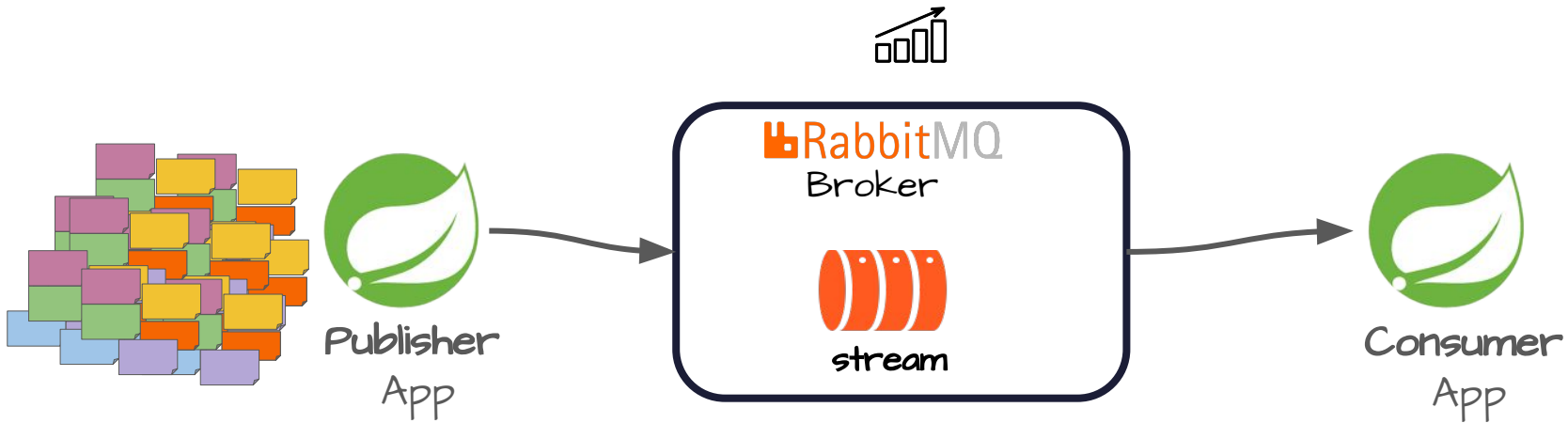
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High Throughput with RabbitMQ Streams



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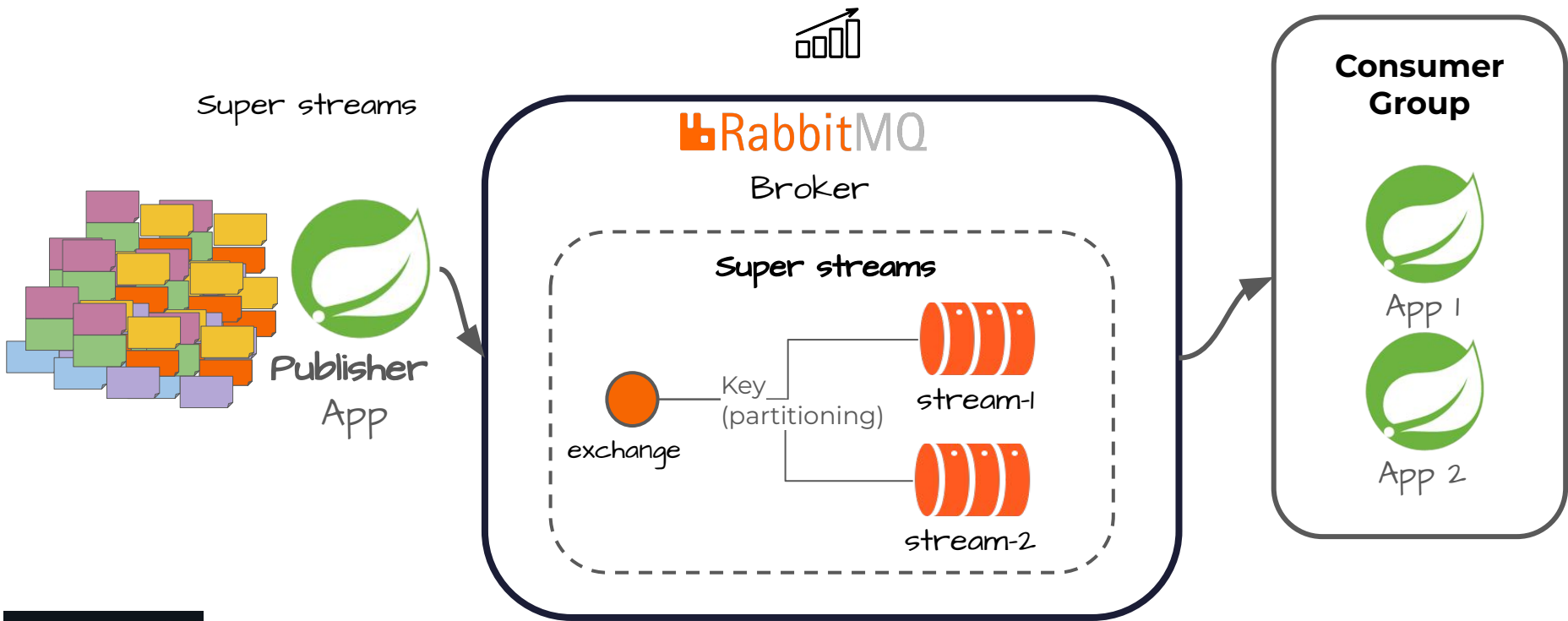
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Scalability with RabbitMQ Super Streams



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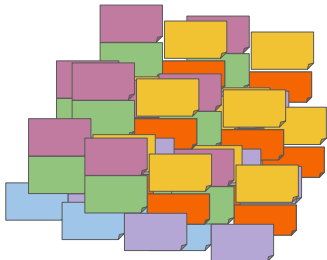
- Replay
- High throughput
- Scalability
- **Filtering**

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Messaging Filtering




<Zen>

Postgres, dataflow. 




<Arul>

GemFire, Modulith 



<Cora>

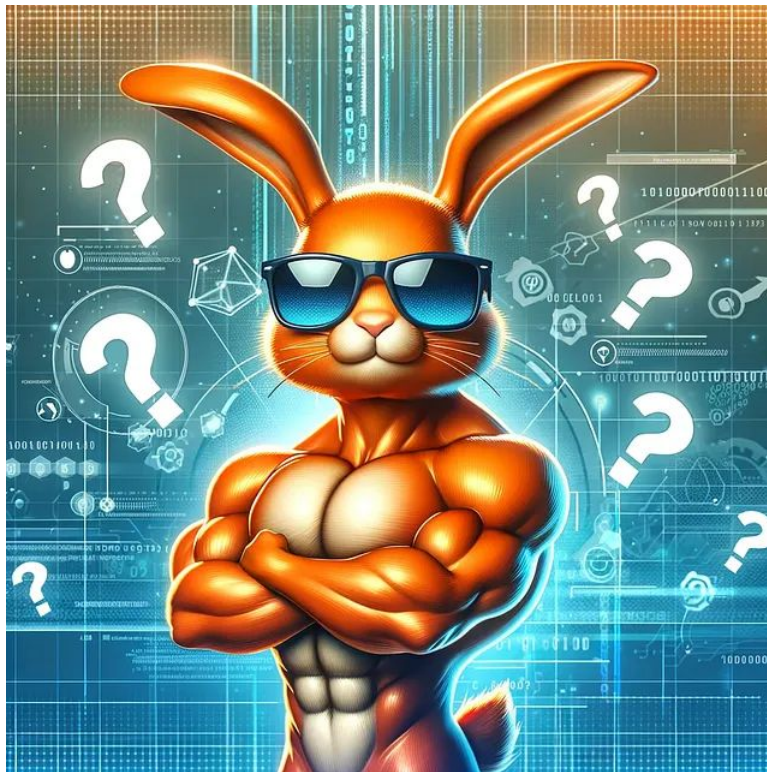
Valkey, Kafka 



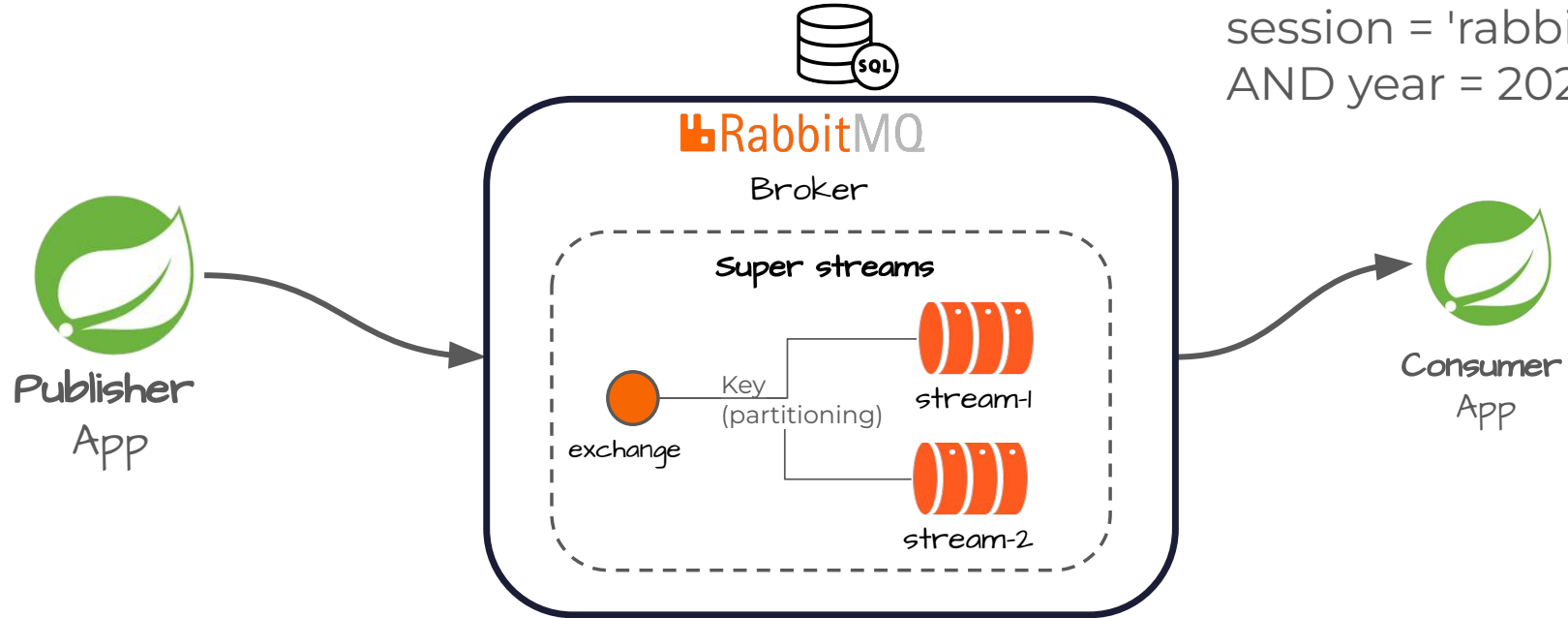
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SQL Filtering with RabbitMQ Streams

- Available since RabbitMQ 4.2
- Introduced in 2025
- SQL filter expressions for streams
- Broker-side message filtering



SQL Filtering with RabbitMQ Streams



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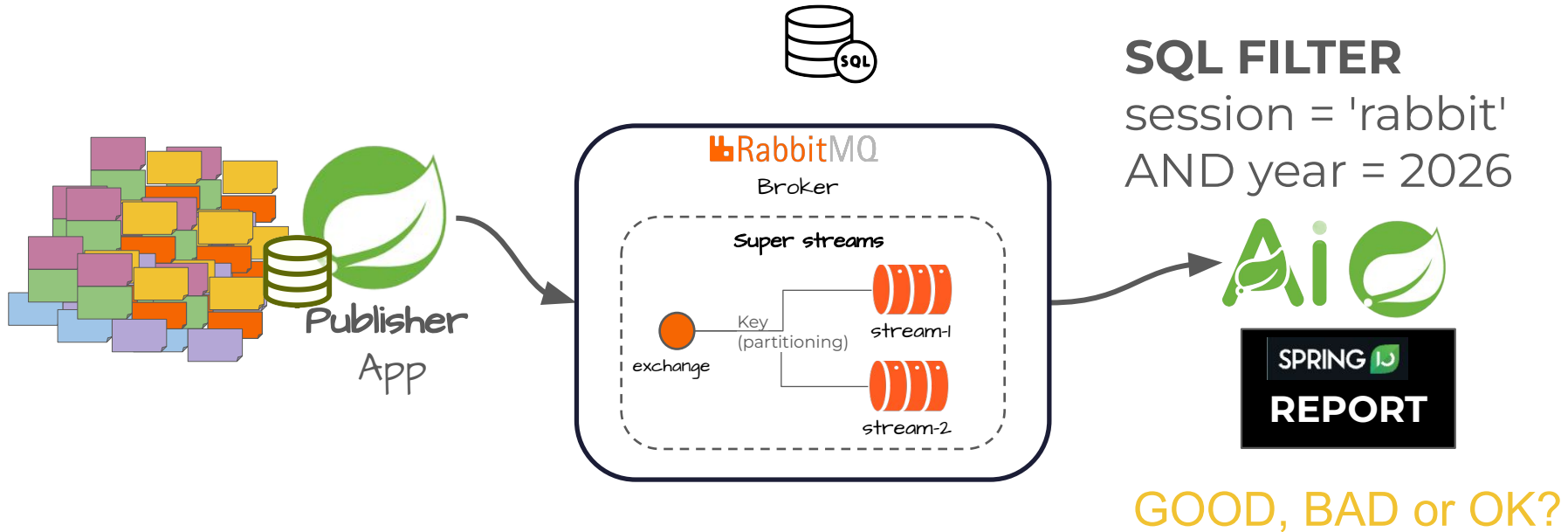
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AI with Rabbit Super Streams and SQL filters



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Let's Stay Connected

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Thank You