

# Continuous SQL with Apache Streaming

WORLD  
FESTIVAL

**PRO TALK:**  
**Continuous  
SQL with Flink**



Timothy Spann  
StreamNative

Dev  
Innovation  
Summit @ WORLD  
FESTIVAL


August 17-19, 2021 | VIRTUAL

**Timothy Spann**  
**Developer Advocate**


# StreamNative Solution

APP Layer


Application Messaging



Micro Service




Payment



Notification

Data Pipelines



ETL

Real-time Contextual Analytics



Dashboard



Risk Control



Auditing

StreamNative Platform





Computing Layer




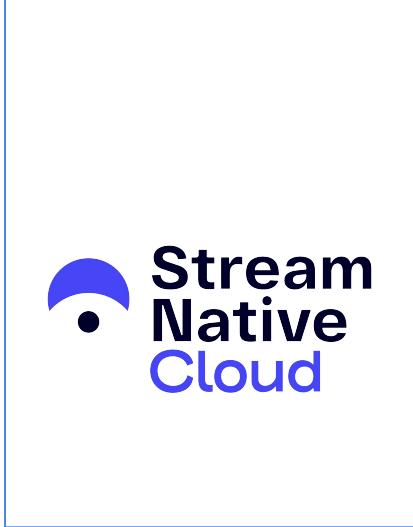
Storage Layer



Tiered Storage



IaaS Layer

# Speaker Bio

**Developer Advocate**

DZone Zone Leader and Big Data MVB;  
@PaasDev

<https://github.com/tspannhw> <https://www.datainmotion.dev/>

<https://github.com/tspannhw/SpeakerProfile>

<https://dev.to/tspannhw>

<https://sessionize.com/tspann/>

<https://www.slideshare.net/bunkertor>



# FLaNK and FLiP Stacks

- Apache **F**link
- Apache **N**iFi
- Apache **K**afka

- Apache **F**link
- Apache **P**ulsar
- StreamNative's Flink Connector for Pulsar
- Apache **+**++

Apache projects are the way for all streaming use cases.



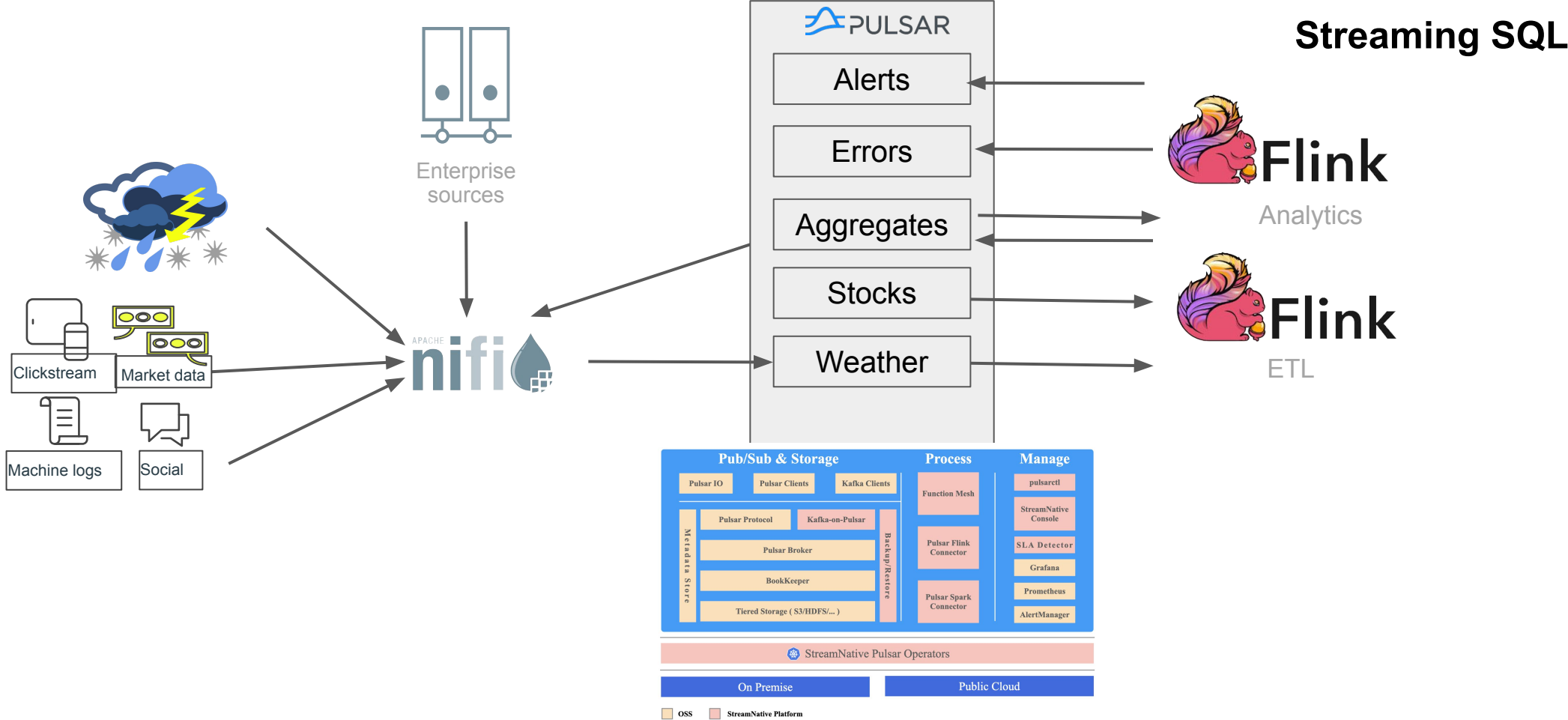
# Today's Data. REST and Websocket JSON



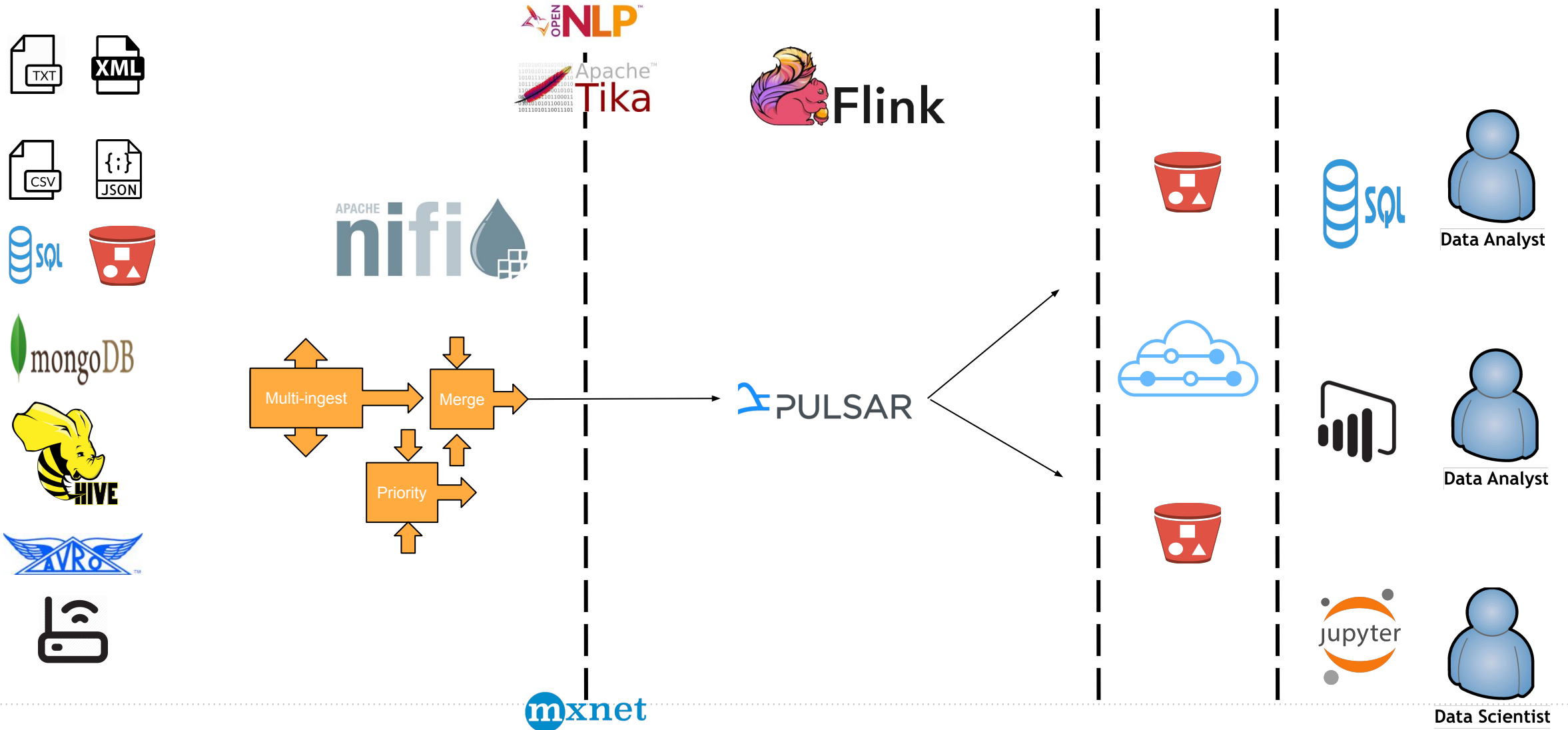
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{"symbol": "CLDR",  
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  "ts": 1618529574078,  
  "dt": 1612098900000,  
  "datetime": "2021/01/31 08:15:00",  
  "open": "12.24500",  
  "close": "12.25500",  
  "high": "12.25500",  
  "volume": "12353",  
  "low": "12.24500"}
```



# End to End Streaming Demo Pipeline



# All Data - Anytime - Anywhere - Multi-Cloud - Multi-Protocol





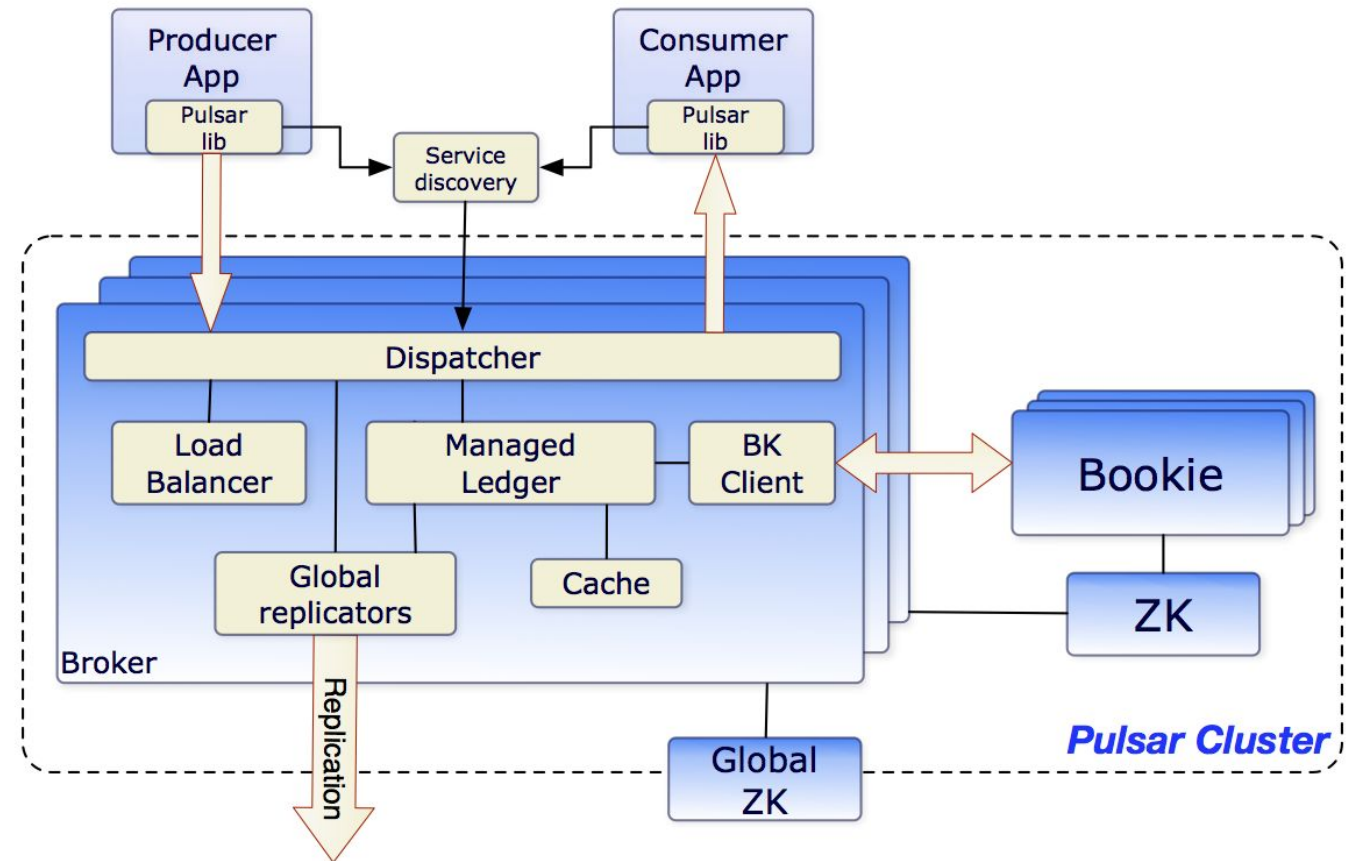
# Apache Pulsar is Cloud-Native Messaging and Event-Streaming Platform



# Apache Pulsar Overview

## Enable Geo-Replicated Messaging

- Pub-Sub
- Geo-Replication
- Pulsar Functions
- Horizontal Scalability
- Multi-tenancy
- Tiered Persistent Storage
- Pulsar Connectors
- REST API
- CLI
- Many clients available
- Four Different Subscription Types
- Multi-Protocol Support
  - MQTT
  - AMQP
  - JMS
  - Kafka
  - ...



# What are the Benefits of Pulsar?



Multi-Tenancy

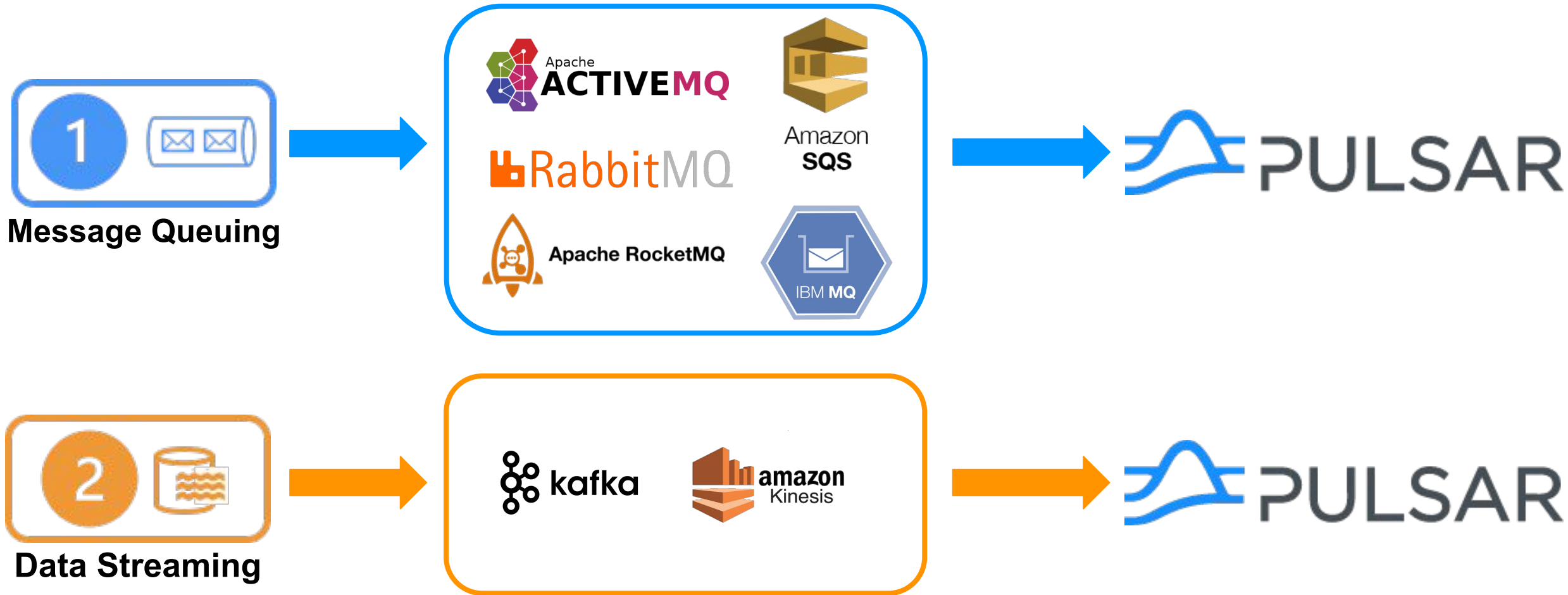
Scalability

Geo-Replication

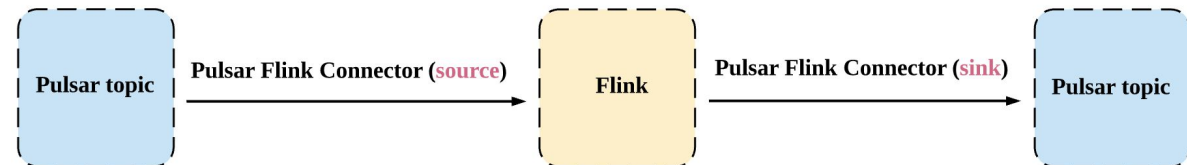
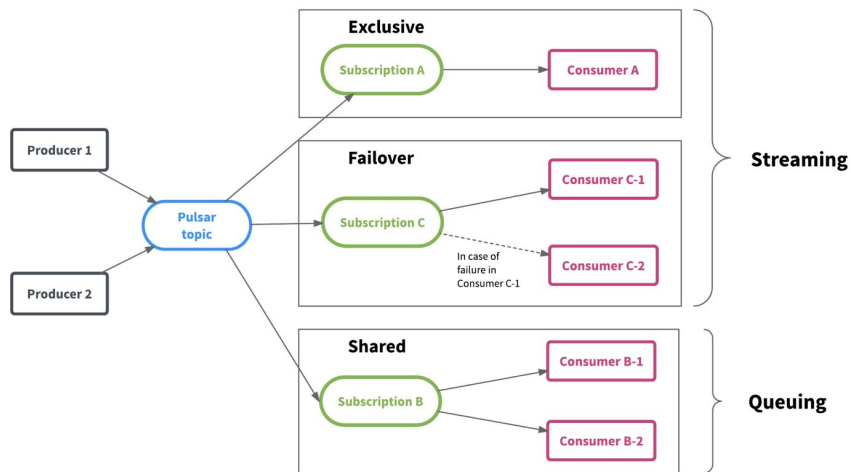
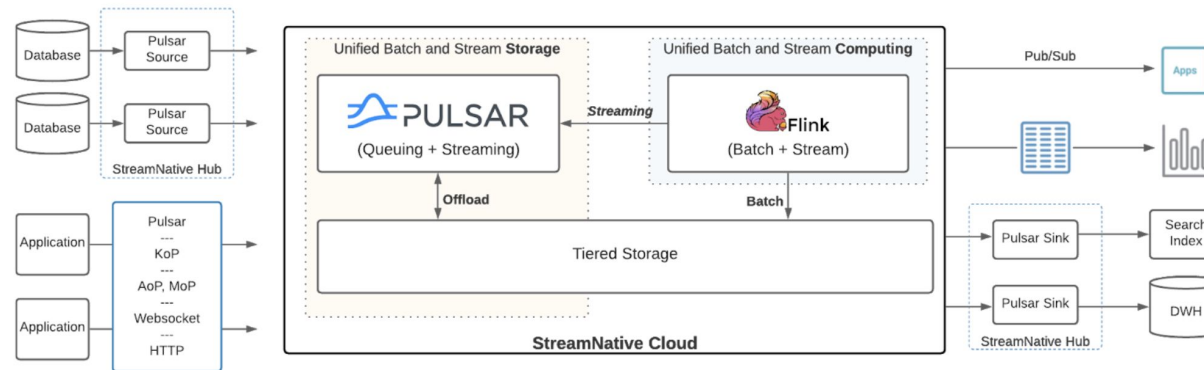
Unified Messaging  
Model

Data Durability

# A Unified Messaging Platform



# Upcoming - Flink + Pulsar (FLiP)



<https://flink.apache.org/2019/05/03/pulsar-flink.html>

<https://github.com/streamnative/pulsar-flink>

<https://streamnative.io/en/blog/release/2021-04-20-flink-sql-on-streamnative-cloud>

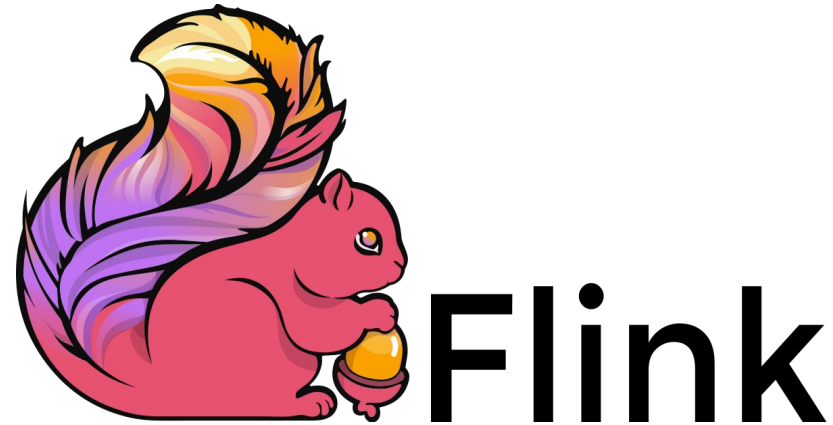
# Apache Flink

Apache Flink is a distributed stream processing system.

It is capable of providing high throughput, near real-time processing of streams from Pulsar.

It is ideal for *ambitious* Stream Processing compared to Pulsar's model of lightweight Stream Processing.

End-to-end exactly-once stream processing



<https://streamnative.io/en/blog/release/2021-06-14-exactly-once-semantics-with-transactions-in-pulsar>

# Connect with the Community & Stay Up-To-Date

- Join the Pulsar Slack channel - [Apache-Pulsar.slack.com](https://apache-pulsar.slack.com)
- Follow [@streamnativeio](https://twitter.com/streamnativeio) and [@apache\\_pulsar](https://twitter.com/apache_pulsar) on Twitter
- [Subscribe](#) to Monthly Pulsar Newsletter for major news, events, project updates, and resources in the Pulsar community

# Deeper Content

- <https://github.com/tspannhw/StreamingSQLExamples>
- <https://github.com/streamnative/pulsar-flink>
- <https://www.linkedin.com/pulse/2021-schedule-tim-spann/>
- [https://github.com/tspannhw/SpeakerProfile/blob/main/2021/talks/20210729\\_HailHydrate!FromStreamtoLake\\_TimSpann.pdf](https://github.com/tspannhw/SpeakerProfile/blob/main/2021/talks/20210729_HailHydrate!FromStreamtoLake_TimSpann.pdf)
- <https://streamnative.io/en/blog/release/2021-04-20-flink-sql-on-streamnative-cloud>
- <https://docs.streamnative.io/cloud/stable/compute/flink-sql>



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**<https://www.pulsardeveloper.com/>**

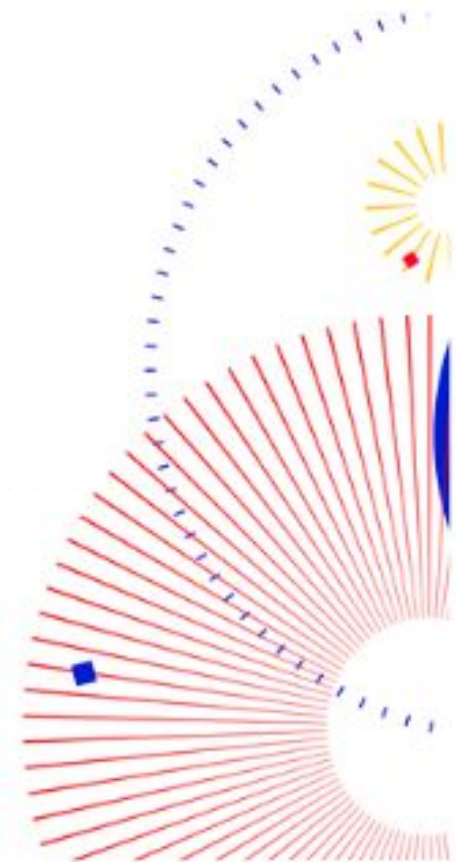


# Pulsar Summit Europe

October 6, 2021

# Pulsar Summit Asia

November 20-21, 2021



Contact us at [partners@pulsar-summit.org](mailto:partners@pulsar-summit.org) to become a sponsor or partner



Announcing

# **Flink SQL on StreamNative Cloud**



**Stream  
Native  
Cloud**

