

# DevClub: MQ and PUB/SUB

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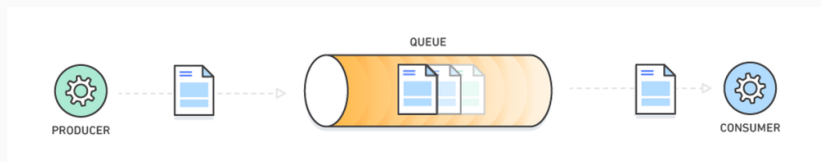
CNLHC

March 26, 2021

- Basic Pattern
- Guarantee of Message Passing
- NATS Introduction
- Real Case: Usage In PTM LeaderBoard

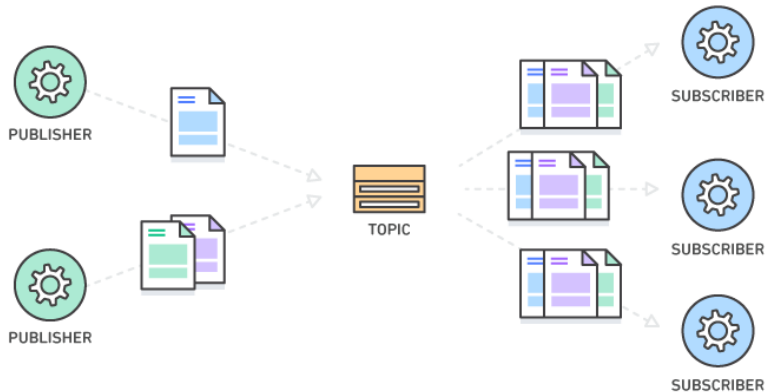
# Basic Pattern: Message Queue

Both **Message Queue** and **PUB/Sub Broker** are about passing **ephemeral** messages among endpoints.



A **message queue** is a form of asynchronous service-to-service communication used in serverless and microservices architectures.

## Basic Pattern: Pub/Sub Broker



A **Publish/Subscribe** broker is also a form of communication middleware, but with different message passing semantics.

## Common Problems: Guarantee of Delivery

In most cases, we should care about the order and reliability of message passing.

So, It is natural to ask these question when choosing middlewares.

- Does the Queue/Broker offer any guarantee of message ordering?
- Does Queue/Broker guarantee message delivery?

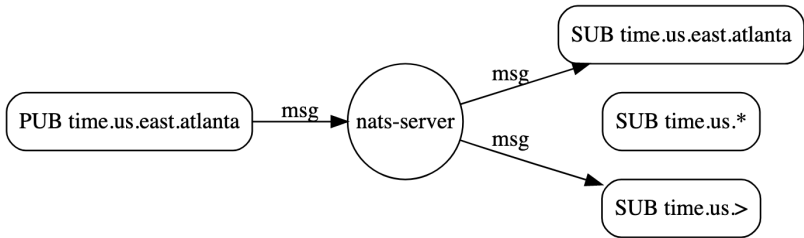


Find more information Here

Quick Facts:

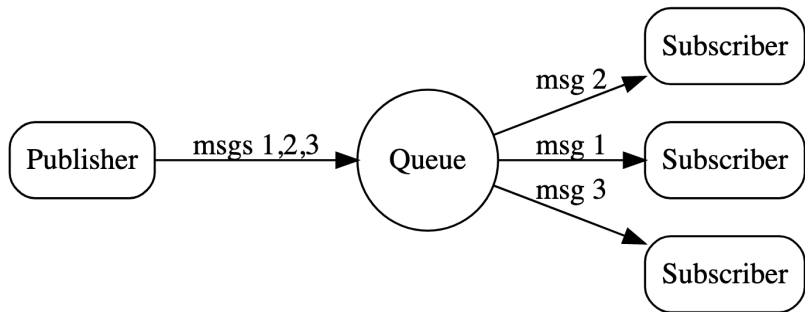
- CNCF Incubating Project.
- Various Delivery Guarantee: at least once, exactly once, at most once.
- Per-Publisher Order.
- Support Message replay/redelivery.
- Quick Deployment.

# NATS: Subject Based Message



- > and \*
- mixed wildcard is supported

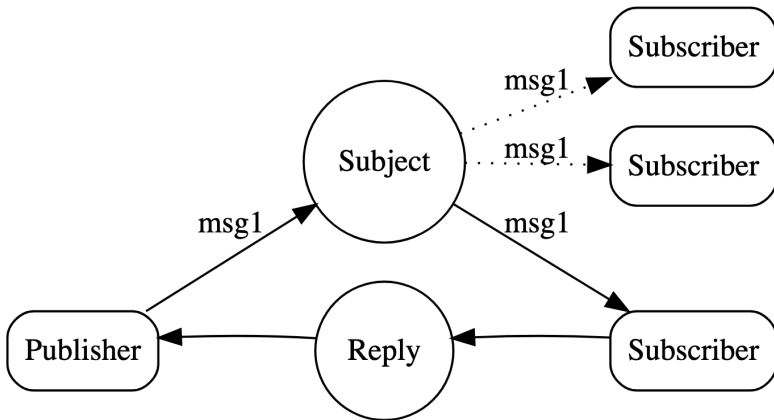
## NATS: Queue Group



- Besides The Subject Name, NATS also supports Queue name.
- Different Subscribers sharing the same Subject and Queue Name form a **Queue Group**.
- Mes.sage only passed to Queue Groups.



# NATS: Request and Reply



- The latest NATS support websocket.
- This feature is good for Long Running Task.

## Real Case: Usage In PTM LeaderBoard

PTM-Leaderboard