ONICLOUD

EventSource Distributed Systems w/NATS

Efren Gonzalez

Agenda

- Introduction to Event Driven Systems
- Introduction to NATS
- Demos

Communication between microservices is one such pothole that can wreak havoc if not considered ahead of time.

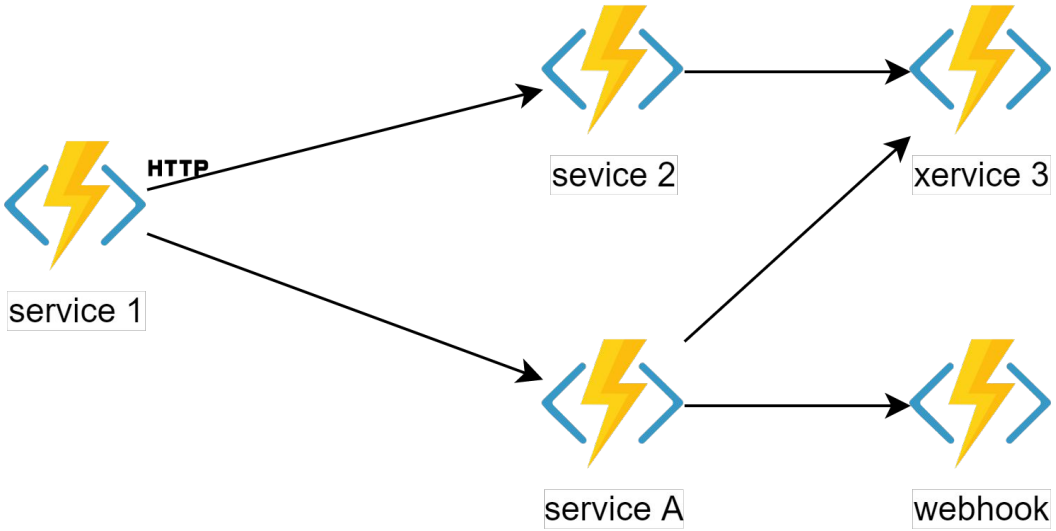
Synchronous Communications

Synchronous HTTP calls between one or more services.

This pattern creates coupling between services.

How data consistency across services is maintained.

Services cannot be deployed independently



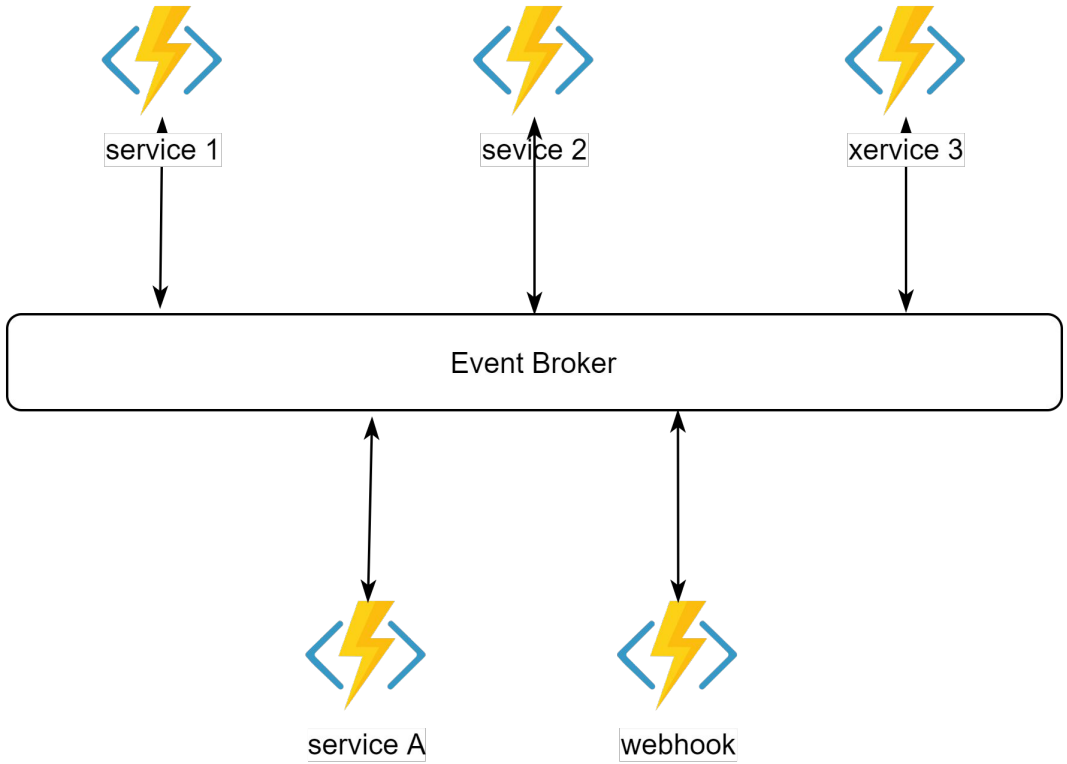
Event Driven

Is an asynchronous approach, to it looks to remove the coupling between services.

The services must know a common message structure.

A message broker is needed here since individual services will write their events to it.

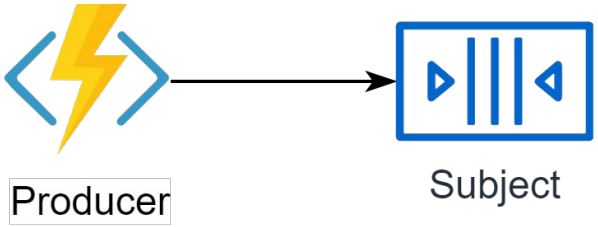
The consuming services don’t need to know the details of the event

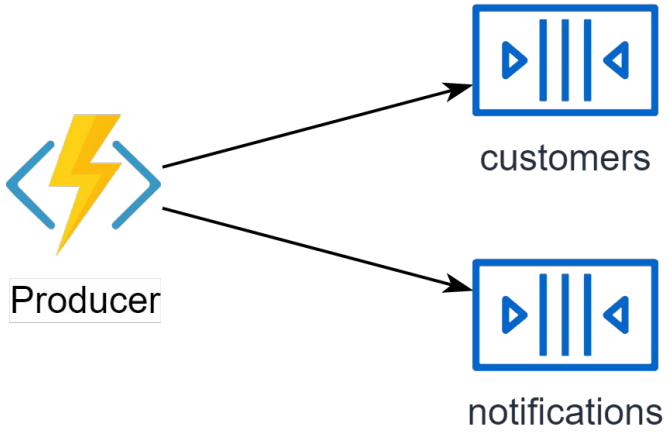


NATS is a connective technology built for the ever increasingly hyper-connected world. It is a single technology that enables applications to securely communicate across any combination of cloud vendors, on-premise, edge, web and mobile, and devices.

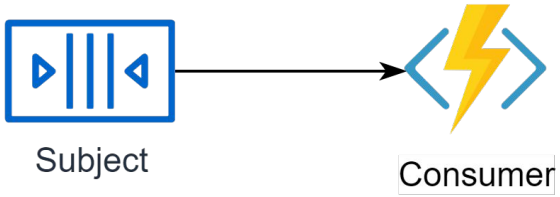
https://nats.io

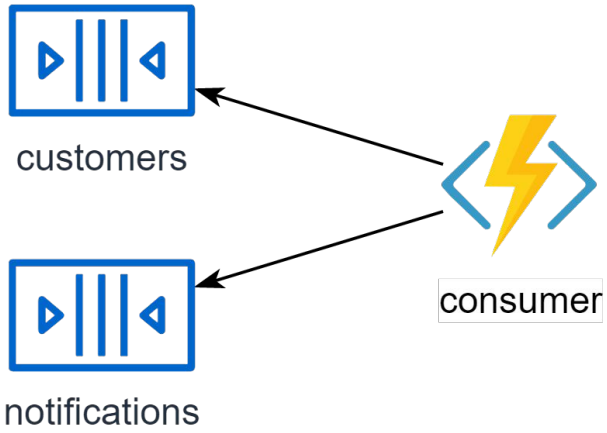
Producer





Consumer/Subscriber

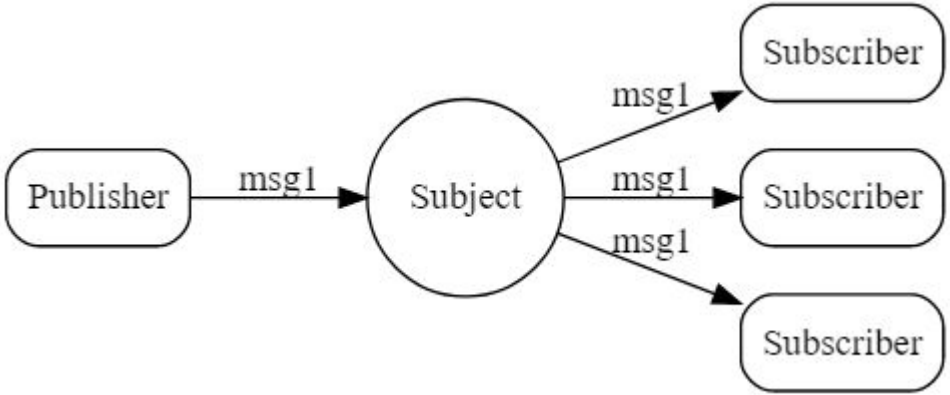




ONICLOUD

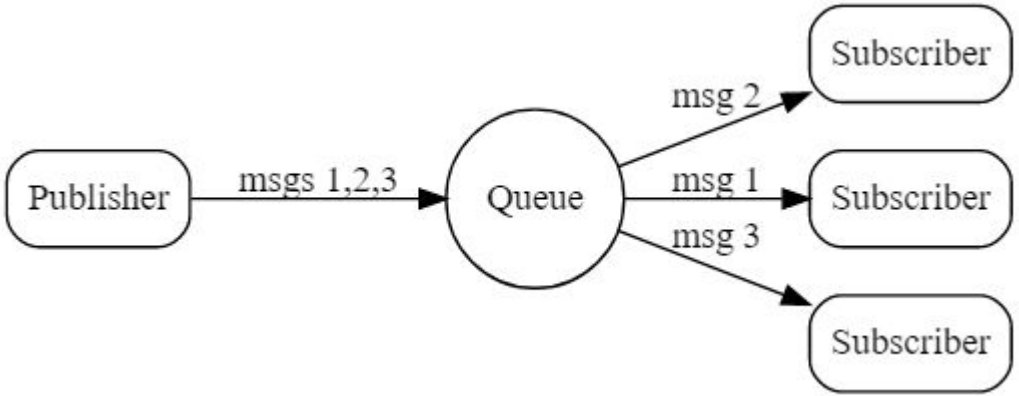
NATS Comunication Patterns

Publish-Subscribe



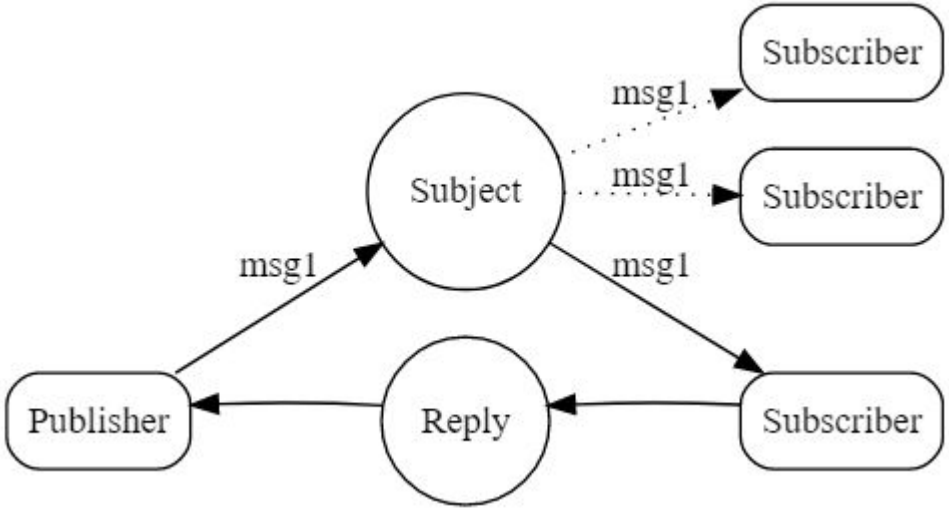
Source https://nats.io

Load Balancer



Source https://nats.io

Request Reply

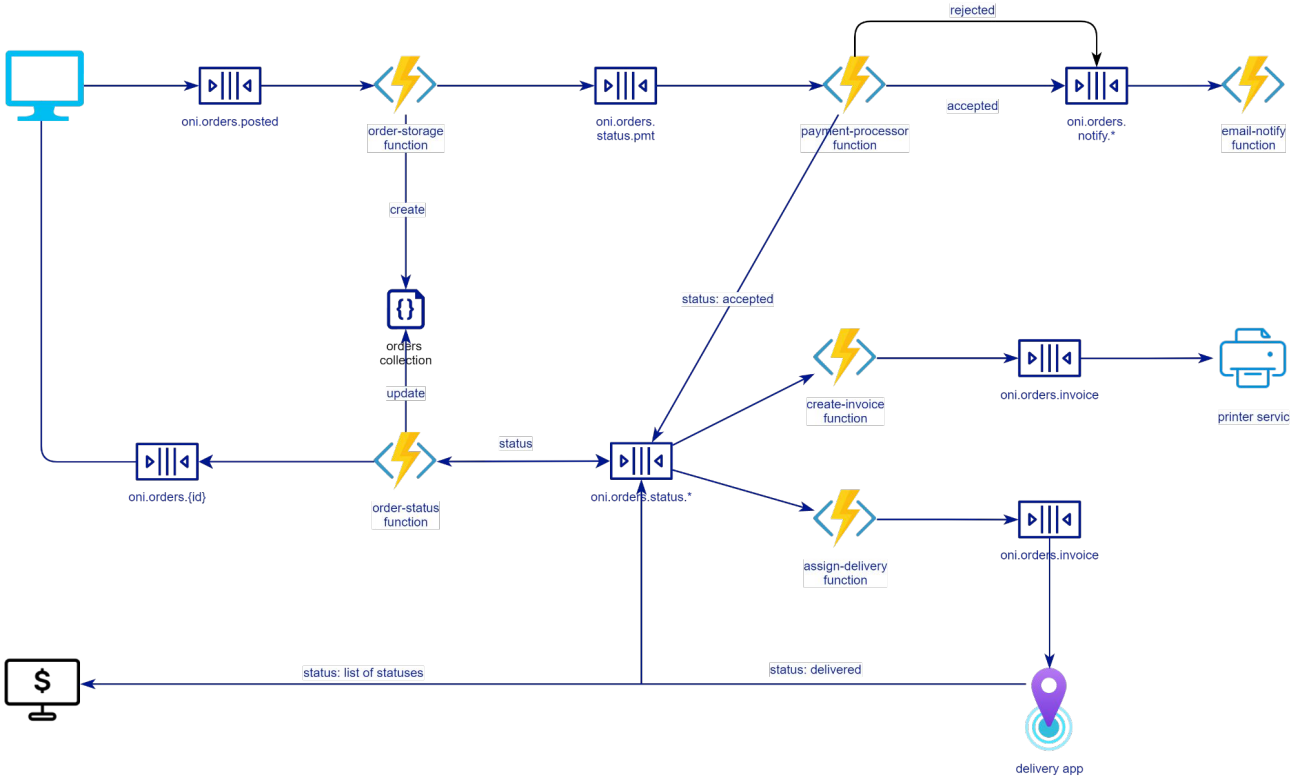


Source https://nats.io

Demo Time

Sample Implementation

Ordering System



Ordering System (cont.)`

NATS

order-status function

create-invoice function

payment-processor function

order-storage function

assign-delivery function

email-notify function

Questions???