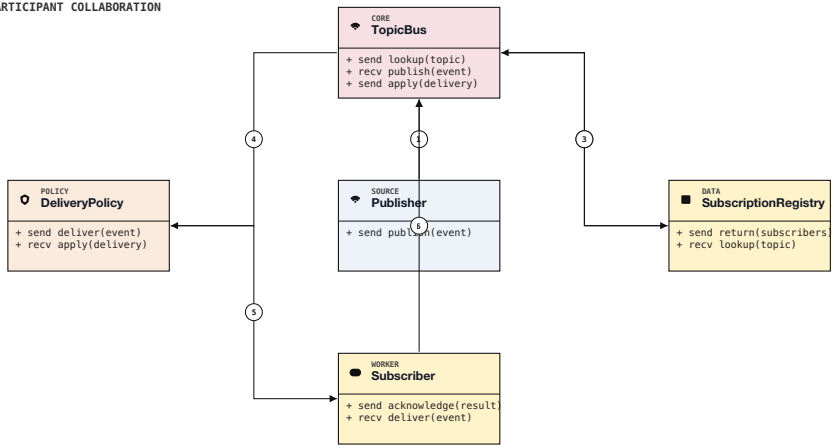
C03 Publish–subscribe

Communication · A² A1/A3 · broadcast role collaboration

Decouple producers from consumers.

STRUCTURE · PARTICIPANT COLLABORATION



PATTERN INTERFACE

context

Producers and consumers are decoupled through topics.

trigger

A message is published to a topic.

structure

Topic schema, broker or bus, subscribers, and delivery policy.

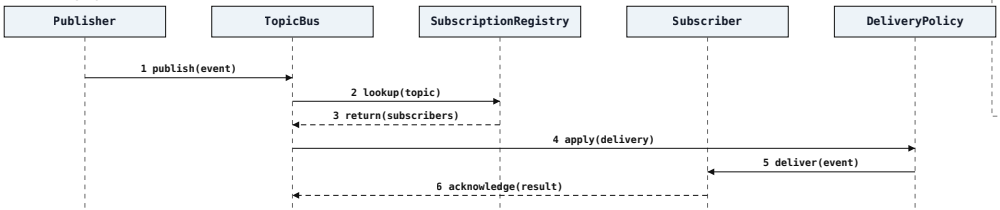
effect

Matching subscribers receive the message under declared ordering and durability rules.

CONTRACT ANNOTATIONS

requires	Topic identity and event compatibility are defined.
ensures	Delivery or drop is observable and subscriber selection is attributable.
invariant	A subscriber cannot read a topic outside its authorization.
violation	Duplicate, late, or lost delivery follows an explicit semantic contract.

INTERACTION



MESSAGE TRACE 1 publish(event) → 2 lookup(topic) → 3 return(subscribers) → 4 apply(delivery) → 5 deliver(event) → 6 acknowledge(result)

Evidence: 26/41 repositories, 24/36 families; 26 trajectories (11 multi-checkpoint); exact audit: not sampled.

Variation: In-process bus, OS socket pubsub, cloud queue, and durable stream.

Negative control: Directly invoking known listeners is C02 rather than C03.