

Veracity Technology Spearhead

Enabling end-to-end veracity within value exchange ecosystems

OMAR Notification System

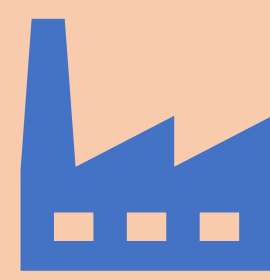
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OMAR: Overseas Market Access Requirements

Provided by MPI

<https://www.mpi.govt.nz/export/export-requirements/omars/>



Primary producers and exporters need to know about importing countries' regulations

And *changes* to them!
But only what's *relevant*



Our system

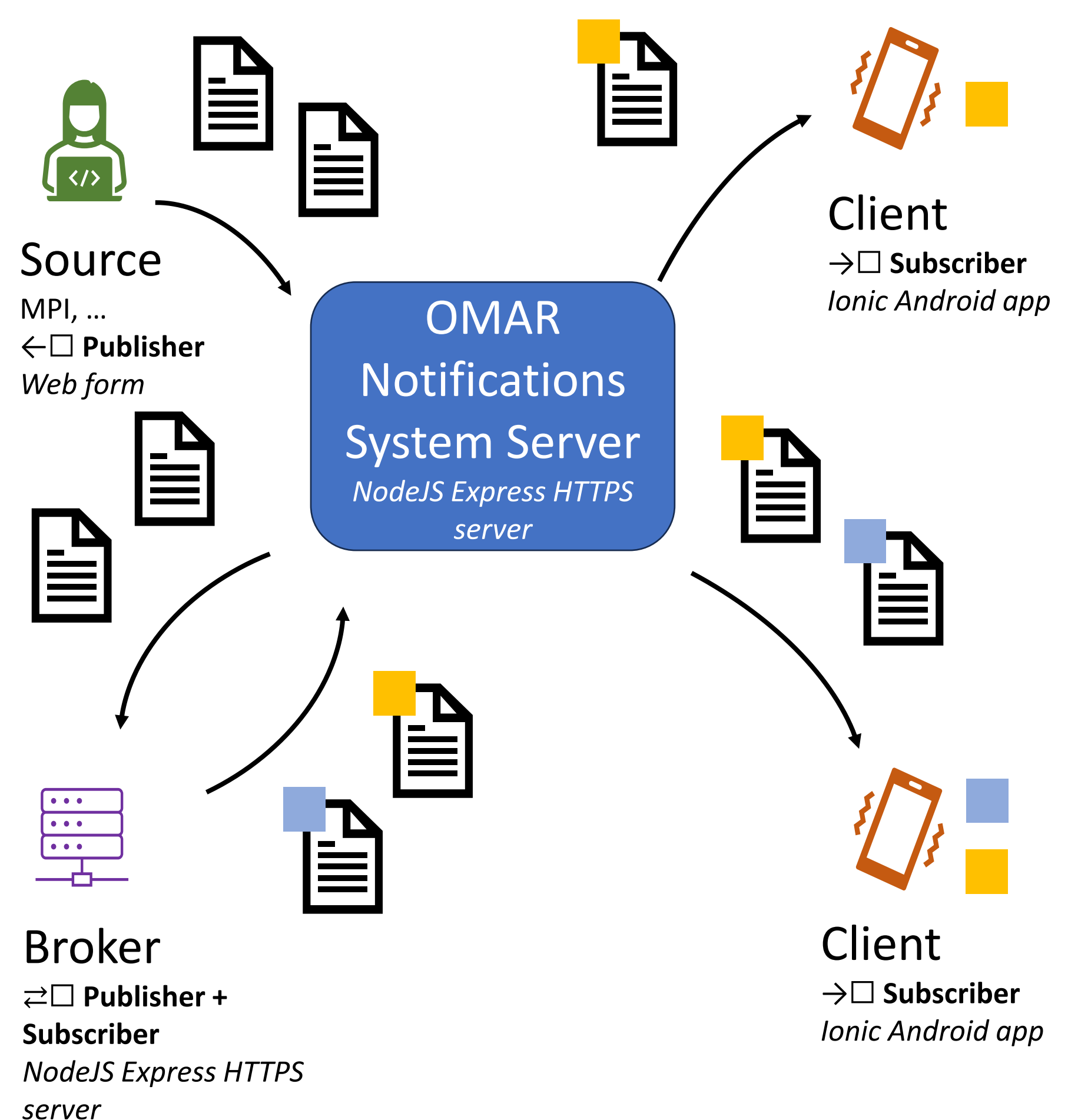
A small, concrete PoC of what will be possible with a National Data Infrastructure
Android-only app for now; iOS and web app coming
Can be generalised

OMAR Notification System Architecture

- **Sources:** Publish notifications
 - MPI
- **Brokers:** Annotate, enrich
 - Humans
 - Computers
- **Clients:** Receive notifications on phones
 - For **tags** they have subscribed to

Tech Details

- System server:
 - NodeJS Express HTTPS server running on 1GB, 1vCPU Linux VPS
- Labeller server:
 - NodeJS Express HTTP server running on the same box
- Android phone app:
 - Ionic + Capacitor
- Phone notifications:
 - Firebase Cloud Messaging for wake-up only – **no data goes via Google** (even Signal does this)
- Queueing infra:
 - Currently custom logic in the system server
 - Wakes clients with either FCM or HTTP request, client then pulls updates
 - Plan: Move to RabbitMQ topics
- All communication is HTTP
 - Brokers can use any language that speaks HTTP
- **No emphasis on performance yet** – but tags (pub/sub topics) allow for future scalable solutions



Decentralised By Design

The OMAR Notification System is designed to enable an **ecosystem of cooperating participants**, including commercial third parties. Anyone can operate an OMAR Notification System server that will interoperate seamlessly with any other such server – including the ability to record metadata against documents stored on other servers.