

Case study:

State Government Department Kafka streaming Cadastral Data PoC

Sida⁴

The Opportunity

A state government department needed to speed up their five-hour geospatial data processing, which supports planning for government and private sectors like real estate and infrastructure. Occasional failures cause multi-day delays, financial losses, and flawed planning outcomes.

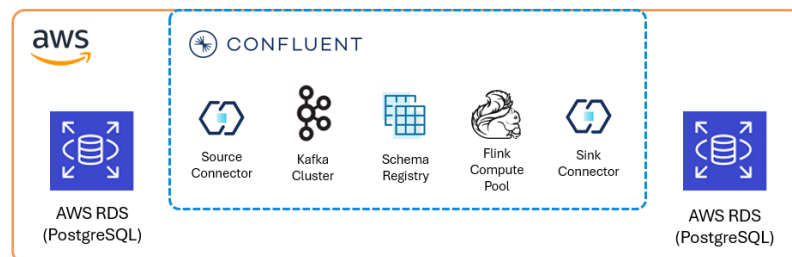
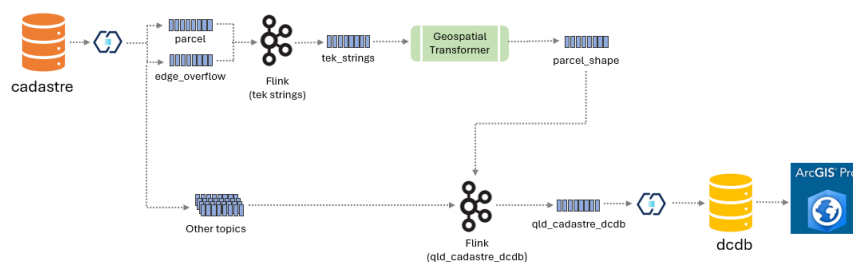
The Department engaged Sida4 (as 4impact) to deliver a proof of concept to accelerate processing and reduce costs.

Our Approach

Building on our success with Virgin Australia, Kafka data streaming was selected for the solution.

A cadastral data proof of concept (PoC) demonstrated a near real-time data exchange, eliminating lengthy outdated data gaps.

This ensured live, current data availability 24/7, removing the reliance on nightly syncs.



Key Services utilised

- Software Development
- DevOps
- Project Management
- Business Analysis

Key Technologies utilised

- Kafka event data streaming
- Spring Framework
- Confluent.io
- Relational database <=> Event streaming bridging

Key Toolkit

- Confluent Cloud-hosted Kafka connectors
- Java microservices
- Deployed into AWS ECS Fargate
- Confluent Cloud topics
- Terraform for DevOps

NOTE: NOTE: This project was originally delivered under the 4impact brand and is now represented by their *data enablement and integration* focused sister company, Sida4.



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Key Outcomes and deliverables:

The PoC successfully demonstrated a dramatic reduction in time, compute resources, and cost required to migrate data, and have it accessible for use within minutes, compared to current state overnight syncs.

Deploying this proof of concept as a solution would mean that at scale (now and future), not only would the nightly syncs be redundant, but also the ready-to-use data would be available across all relevant systems in near real-time, all the time.

- Potential to dramatically reduce time, compute resources, and cost required to migrate data.
- Data migrates in near real-time opposed to overnight.
- Clear roadmap identified to deploy the Proof of Concept at scale for real-world application.

Key project statistics and success insights.



REDUCED

SUGNIFICANT COST
REDUCTIONS COMPARED
TO CURRENT STATE



SCALABLE

EASILY SCALES AS
DATASETS INCREASE



ACCELERATED

SPEED TO DATA
CHANGED FROM HRS TO
MINS



RELIABLE

ROBUST AND RESILIENT
ARCHITECTURE



FUTURE PROOFED

NOT RELIANT ON LEGACY CODE
BASE



Sida4 and 4impact

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Sida4 Head Office
Brisbane QLD 4000 Australia

P: 1300 112 100 Int: +617 3177 1400
connect@sida4.io



Sida4.io

Sida4
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