Technologies for Advanced Programming
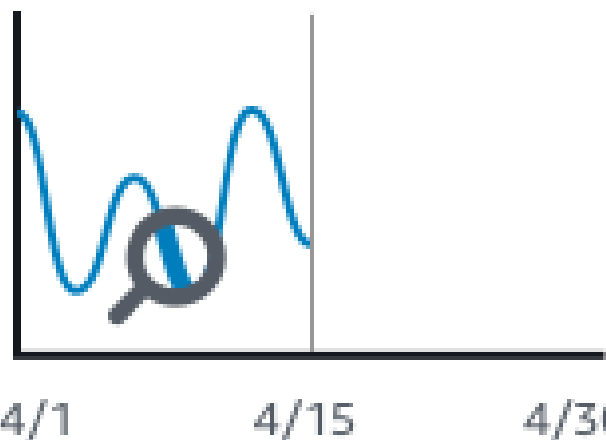
Project by **Matteo Galletta** – A.Y. 2024/2025

FastID Report
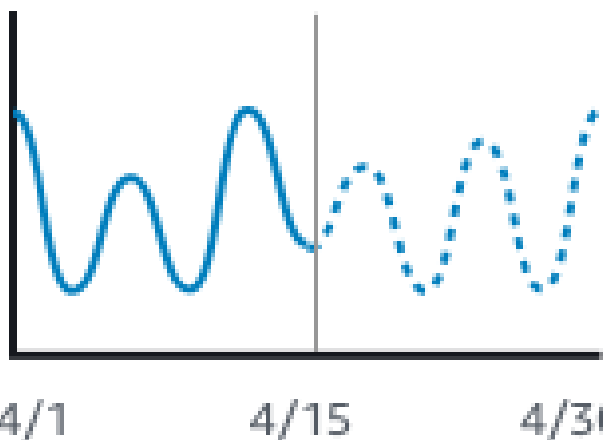
A real time pipeline with an online learning model allowing predictive scaling

Prof: Salvatore Nicotra
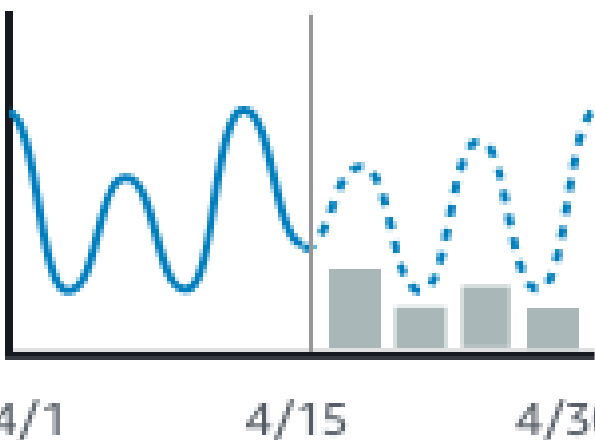
What's predictive scaling?

Analyze historical load

Generate forecast

Schedule scaling actions

Legend: ── Load   ▮ Capacity

What's an online learning model?

Online Machine Learning

Continuous Data Stream

0110101

Up-to-date Predictions
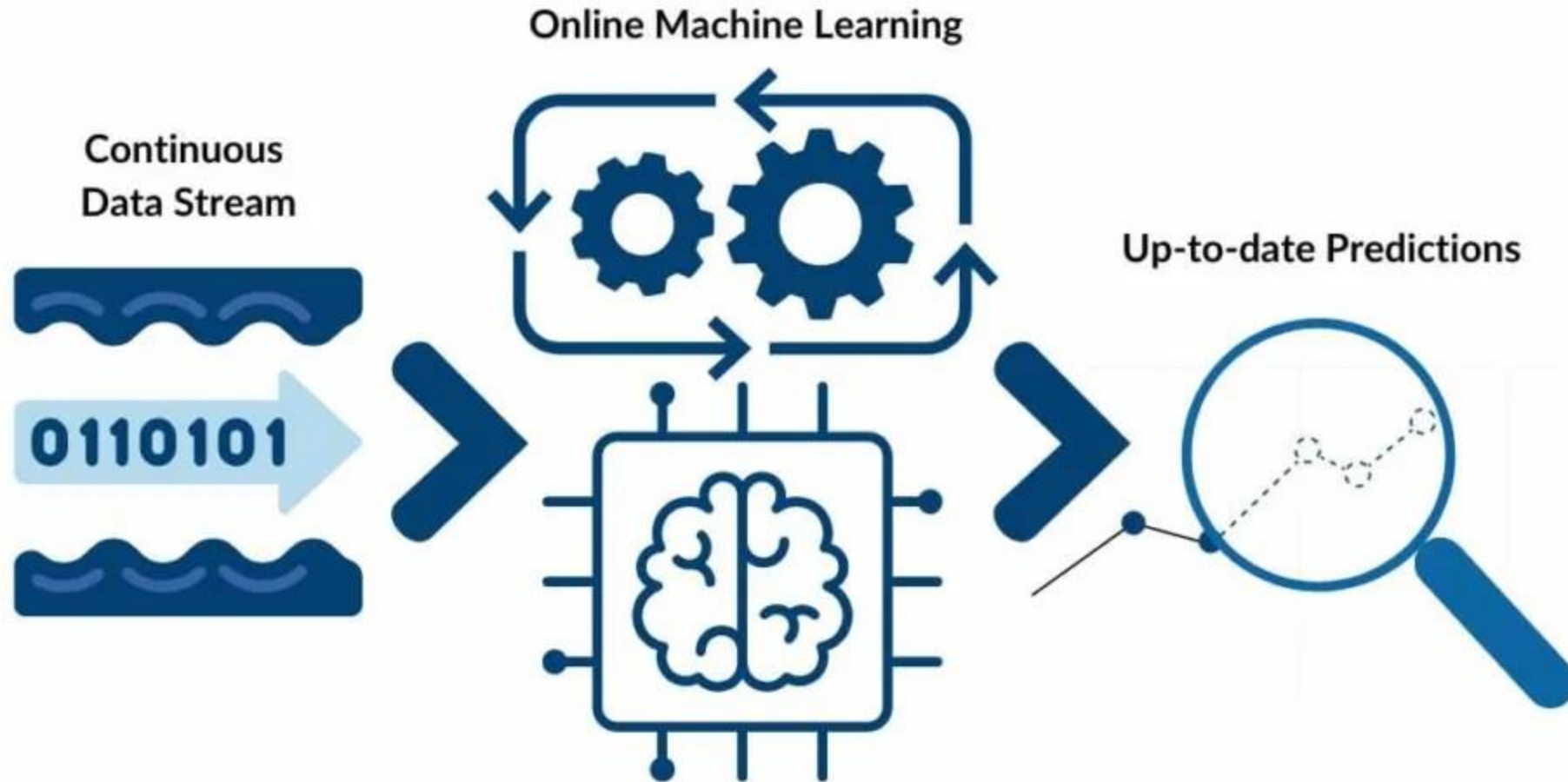
I swear it's not how it looks...
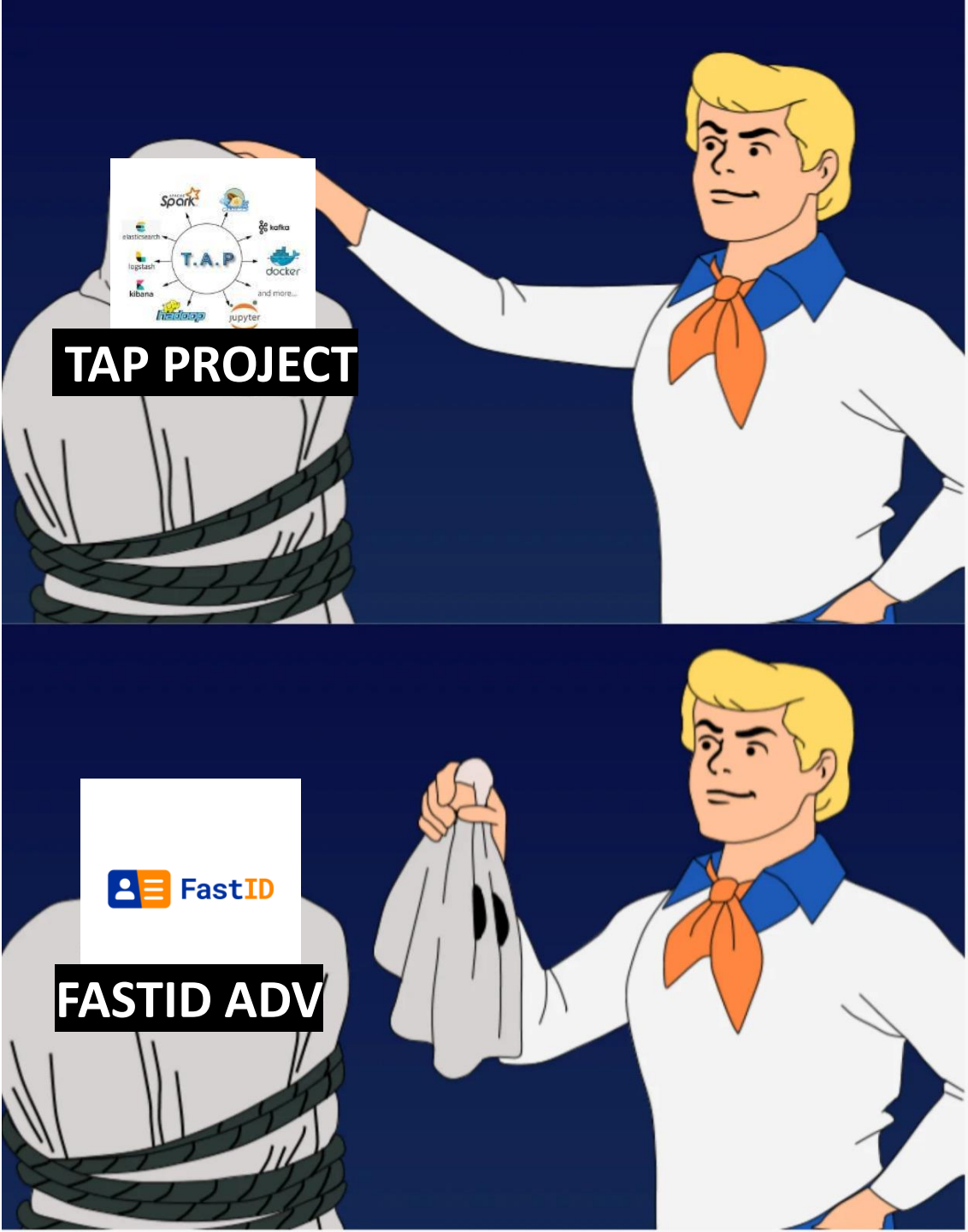

TAP PROJECT

FASTID ADV

What's FastID?

- **FastID is a SaaS allowing to implement easily SPID and CIE integrations in your websites. It handles every user authentication and redirects them in the respective website.**

- As it handles the authentication, it **logs them in a database.**

- FastID must guarantee access to all the customers' websites without downtimes, even in high traffic situations.

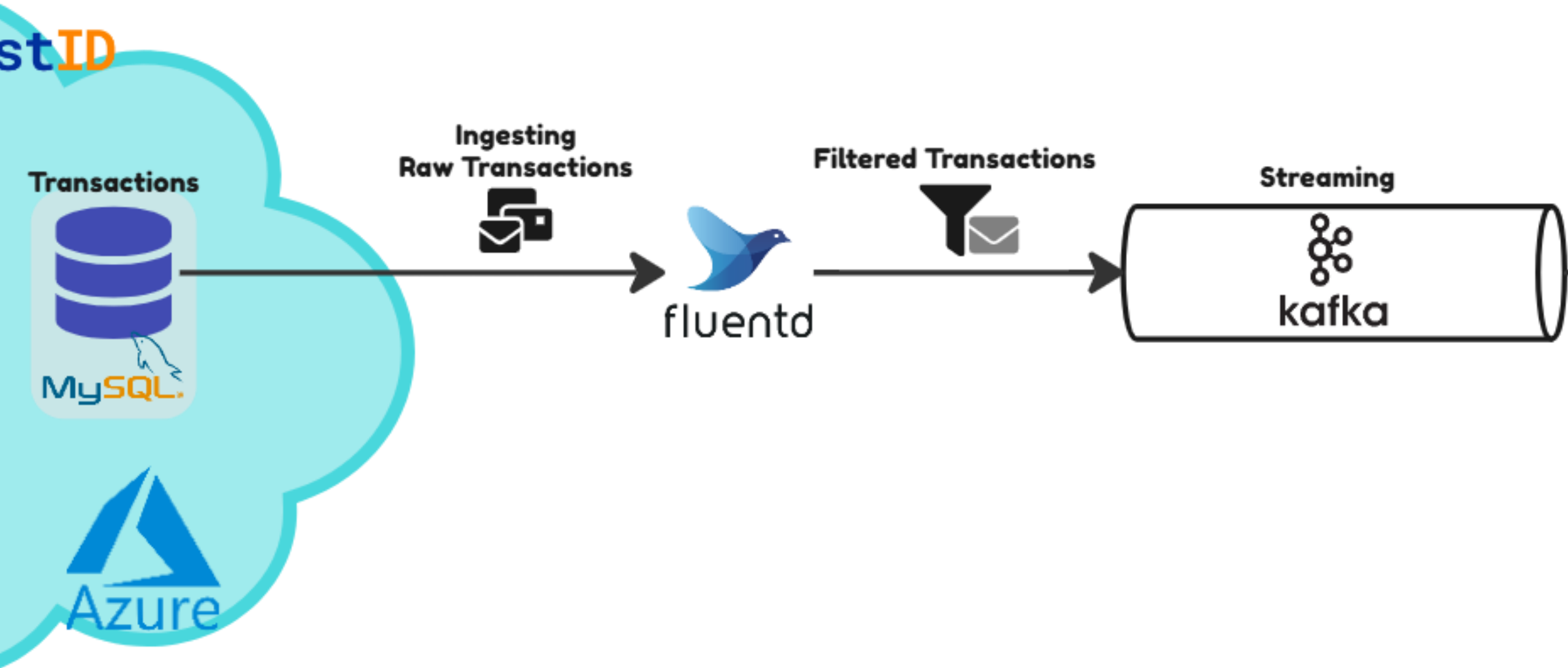- Its infrastructure should be able to **scale according to current traffic**, allowing to scale in case of high load.
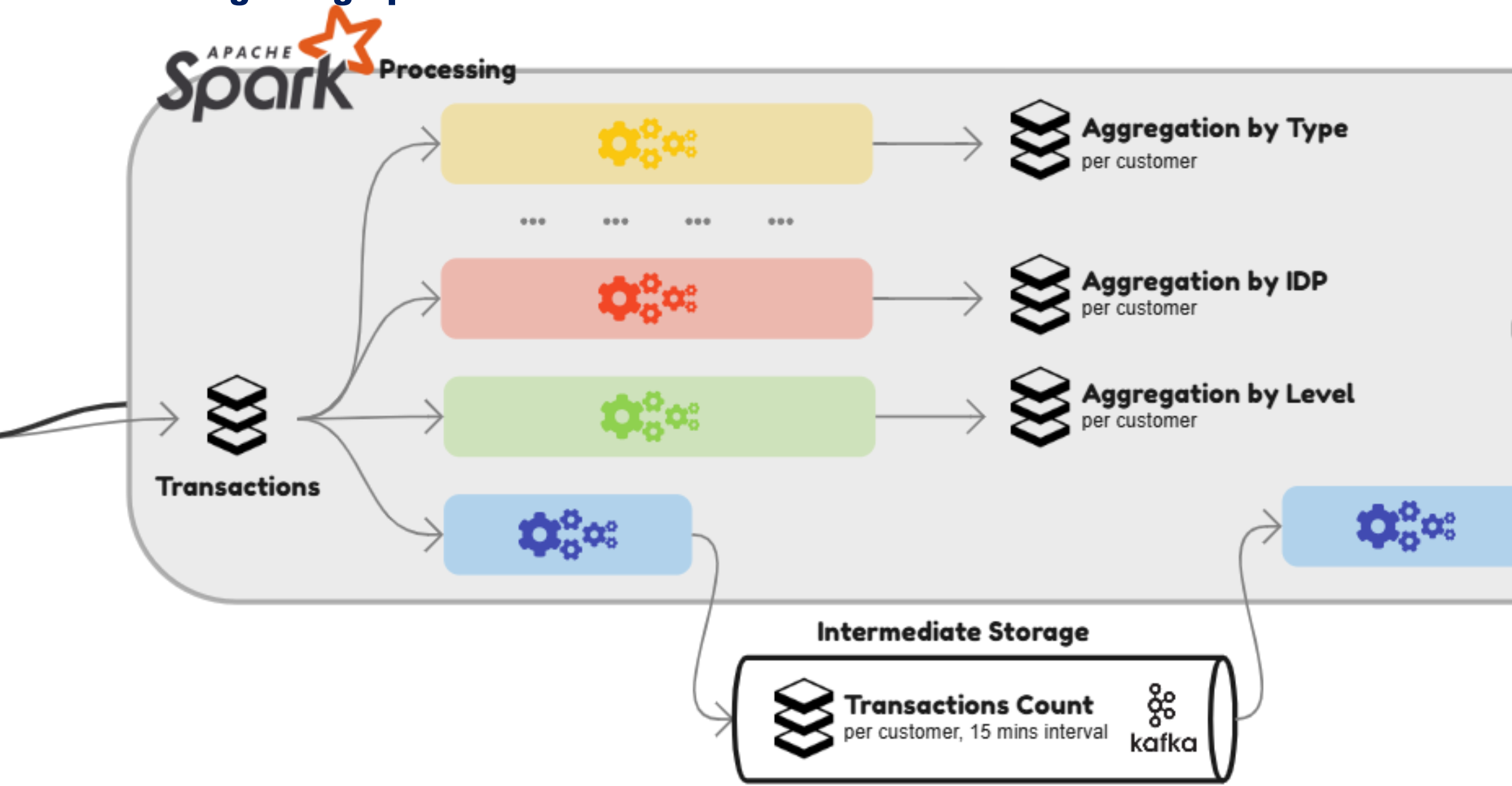
How does FastID look like?
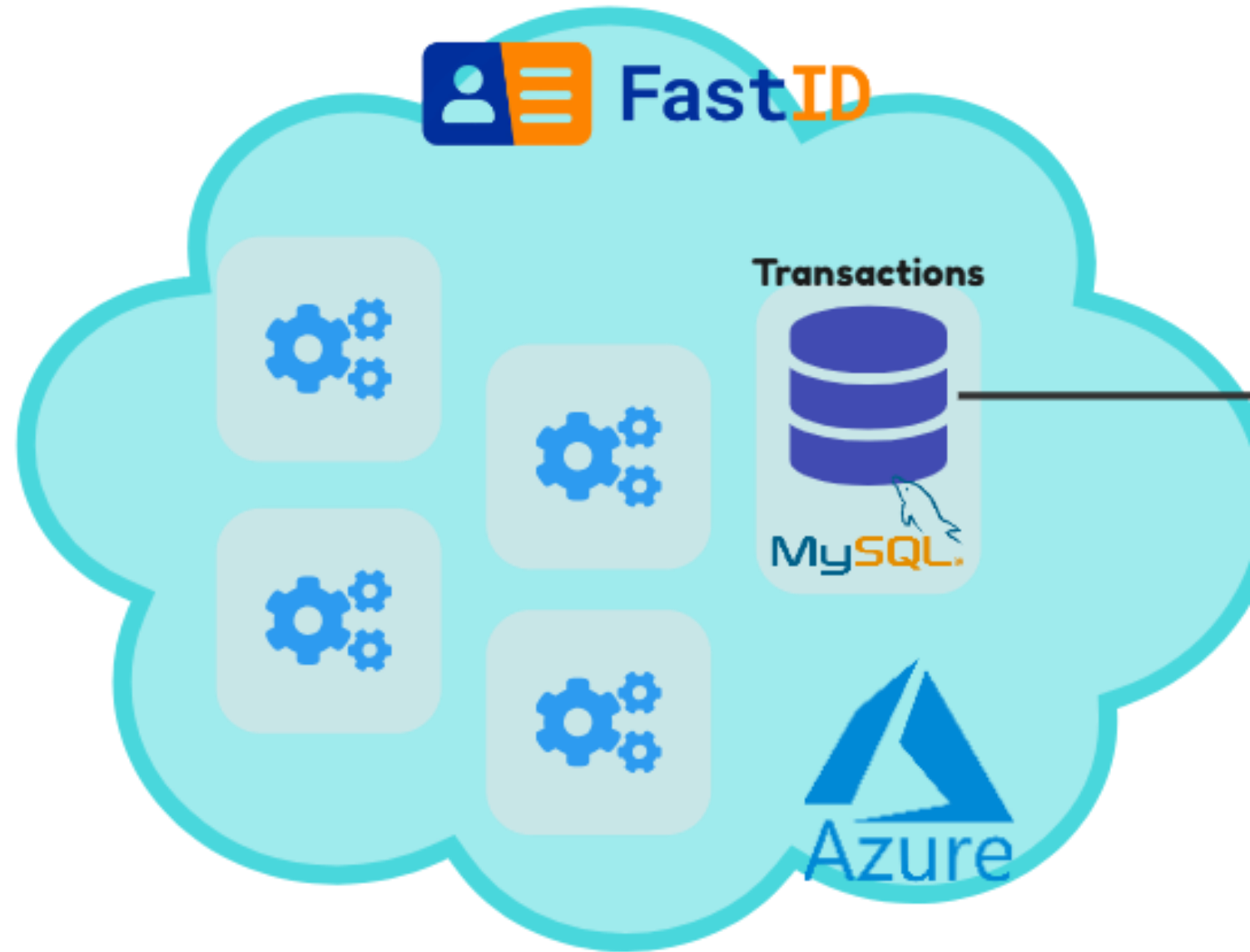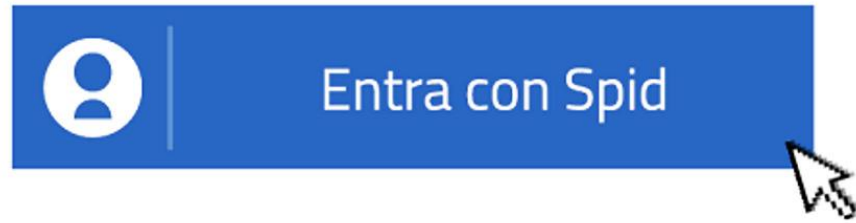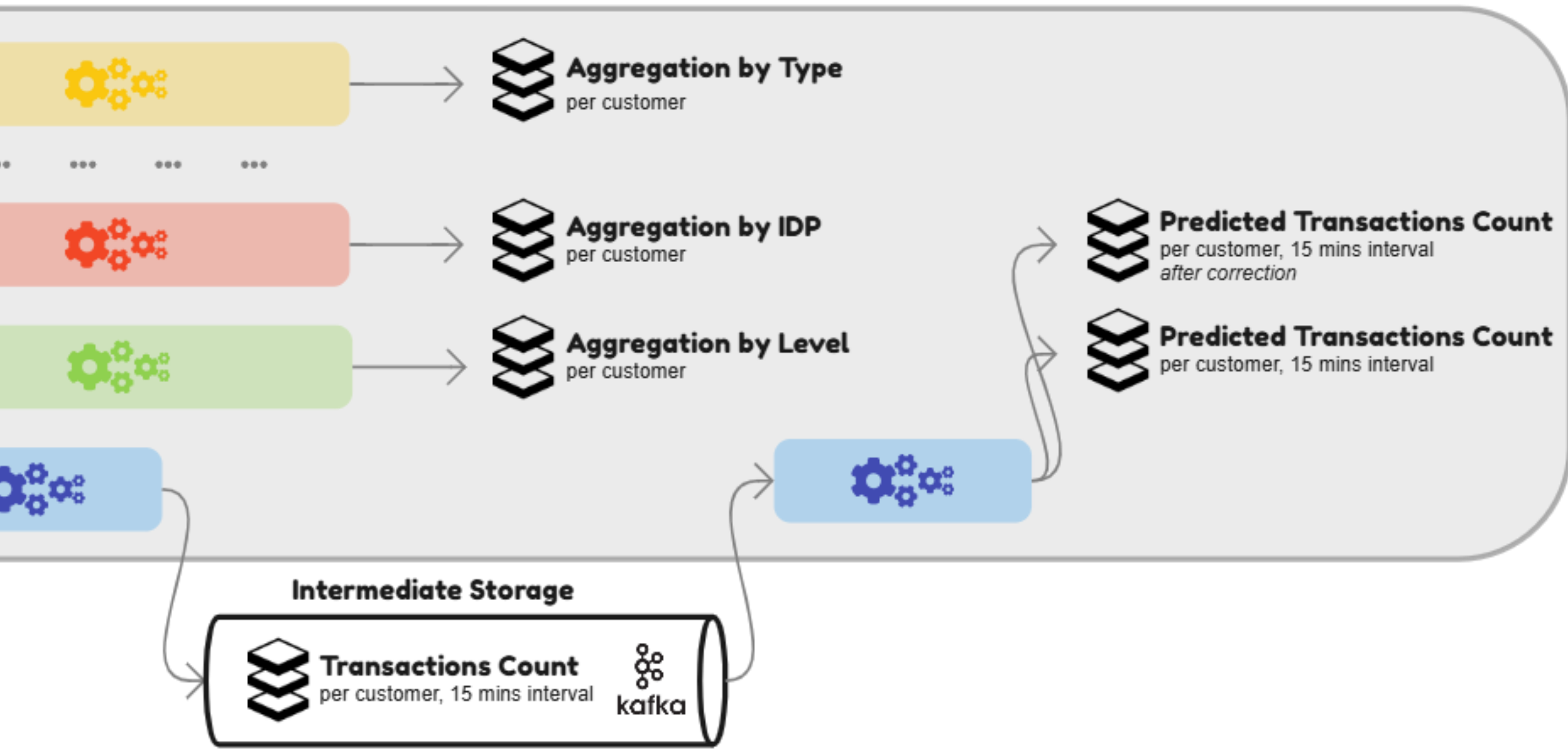
Ingestion using Fluentd
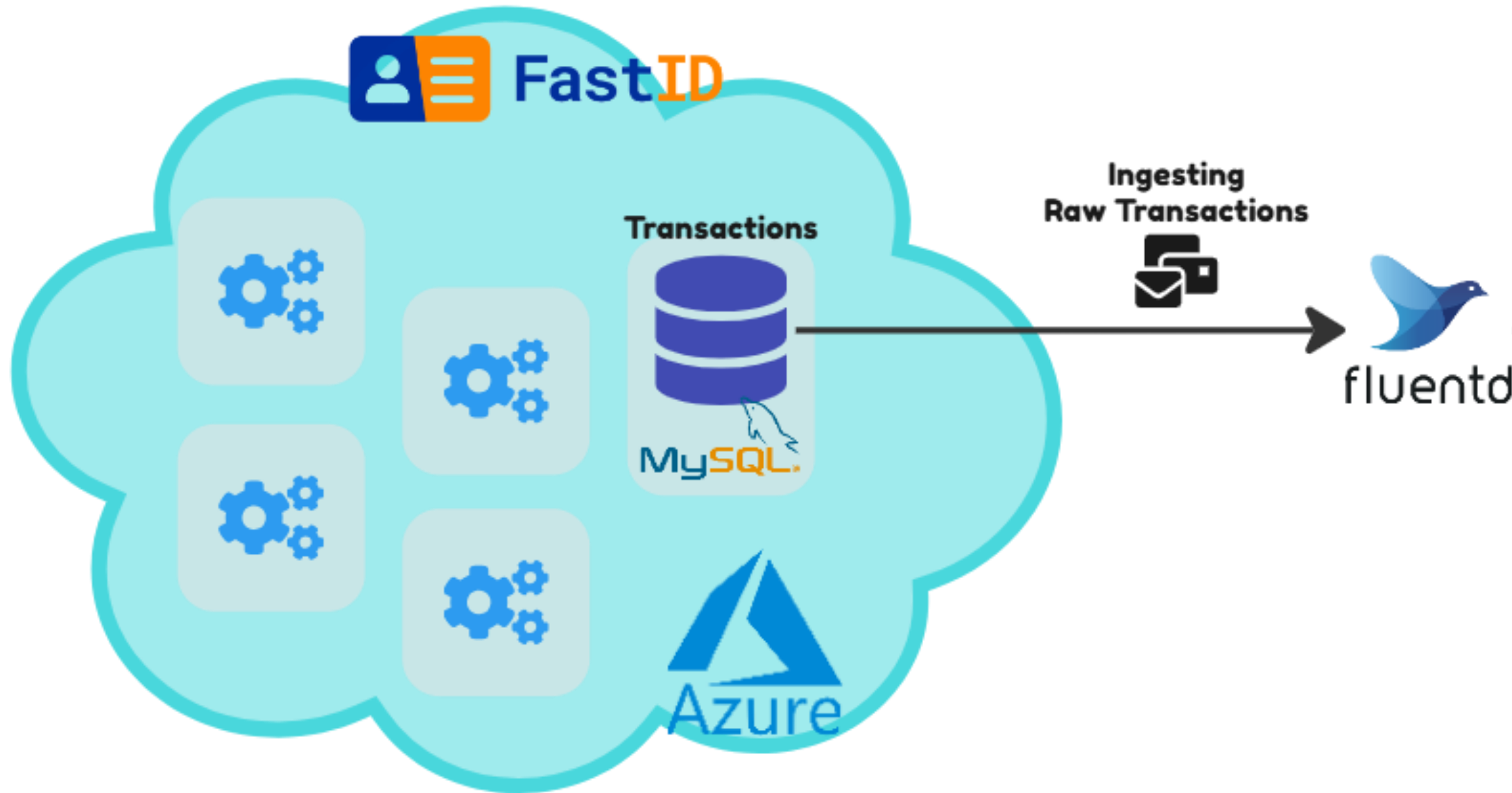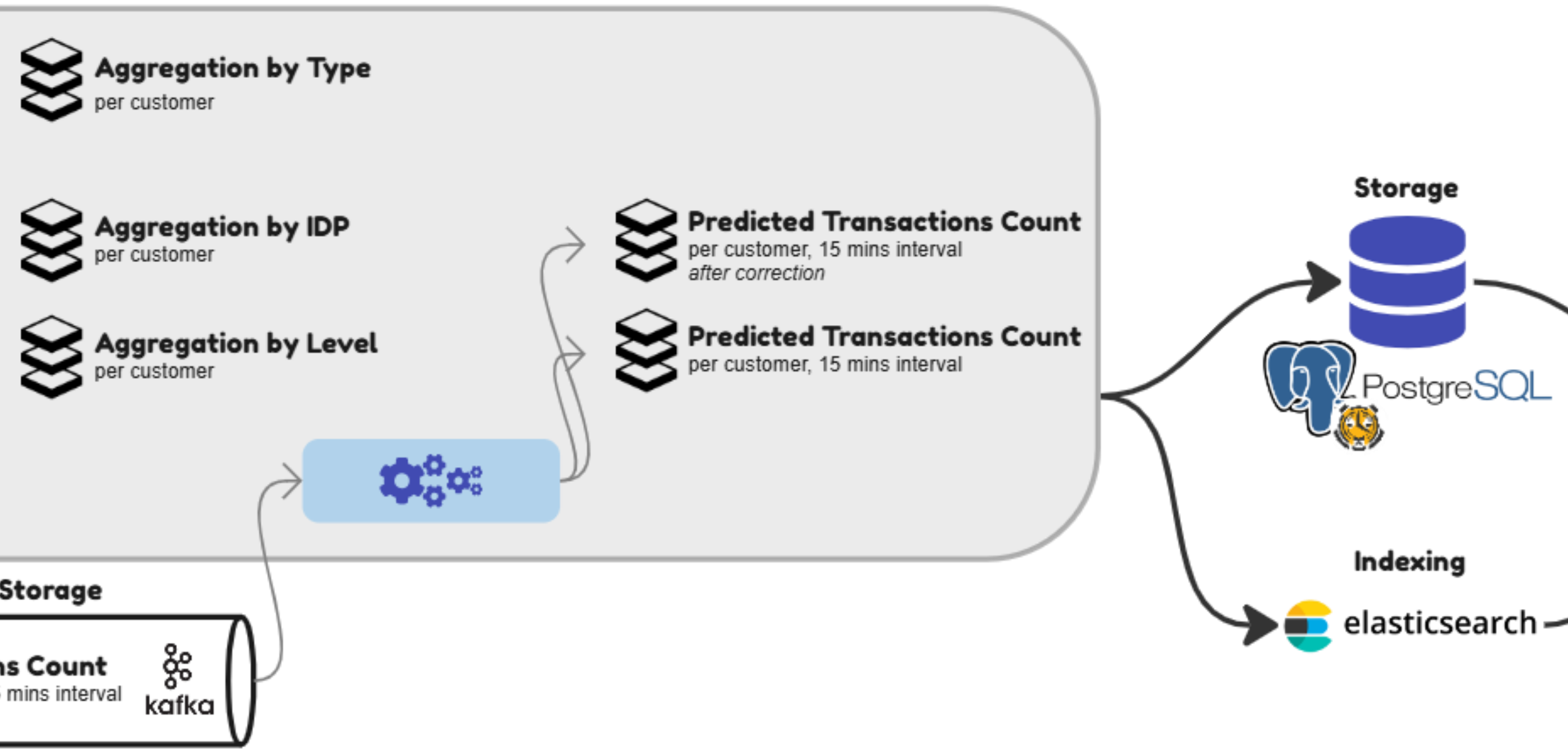
Streaming using Kafka

Processing using Spark

Processing using Spark

Storing using Postgres and Indexing using Elasticsearch

Visualizing using Grafana