

LA POSTE BSCC API Management : Enhancing Observability, Security, and Quality of IS

WSO2CON 2025

March 25 | Barcelona, EU

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La Poste Group Identity



Our purpose :

To be the first European platform for links and exchanges, human and digital, green and civic, at the service of our customers in their projects and of the society as a whole in its changes.

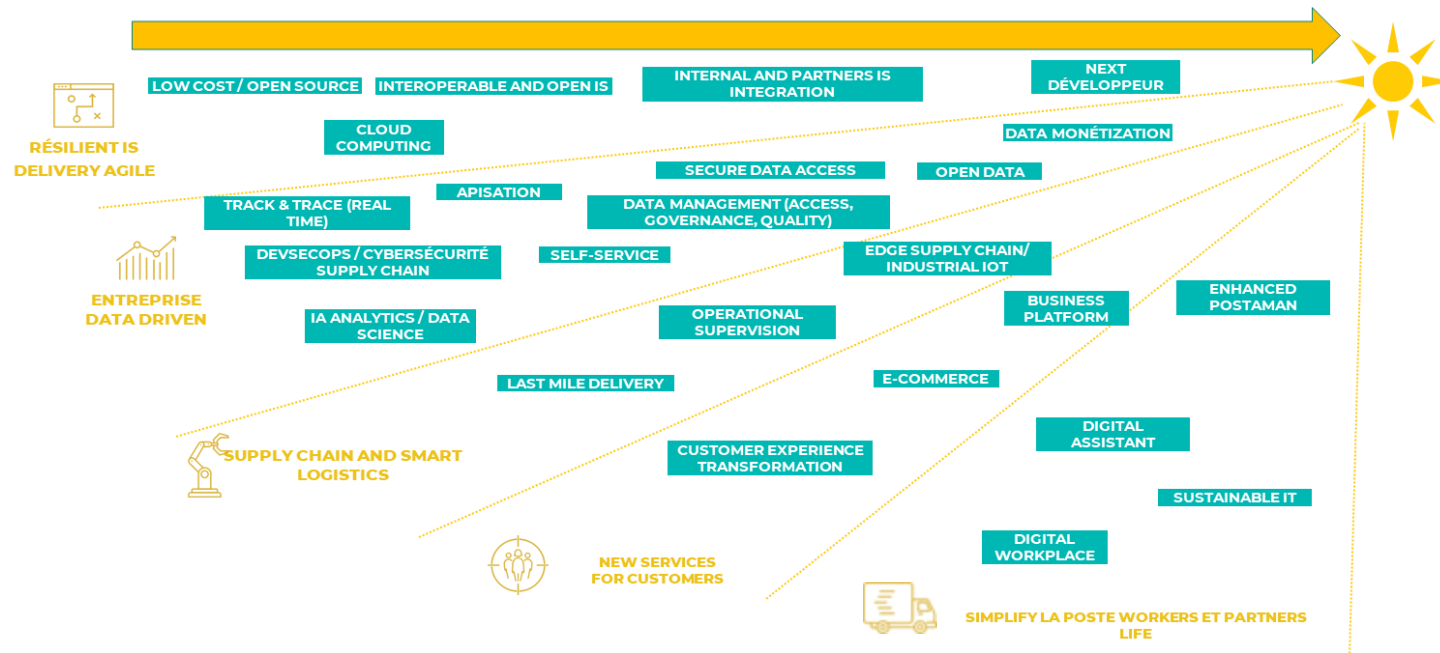
- **A company with 100% public capital with public missions**
 - 232 700 postal workers
 - 34 Billion revenue in 2023
 - 17 000 outlets nationwide
- **A multi-business model, structured in four branches**
 - Services-Mail-Parcels (BSCC)
 - Geopost (International)
 - La Banque Postale
 - Consumers and Digital.
- **A challenging business situation**
 - Traditionnal mail drop to 15% income
 - Strong competition in delivery like with Amazon shipping
- **A committed group with a growing international ambition**



La Poste BSCC Information System « WANT TO BE »

A new Information System enhance :

- Agile integration to fasten deployment of new services
- Observability to drive easily the IS
- Quality to ensure the right usage of the platform and QS
- Security to ensure resilience



API-led Integration Architecture

- A project started 6 years ago to open the IS and remove the siloes
- A governance and integration teams to adress the lifecycle of APIs
- API teams are decentralized
- 4 channels to adress and separate differents business processes

Main channel

with internal and corporate APIs



Delivery channel

for postman mobile usage



Preparaing channel

with industrial sorting and flashing



Sale and partners channel

for retail and online business

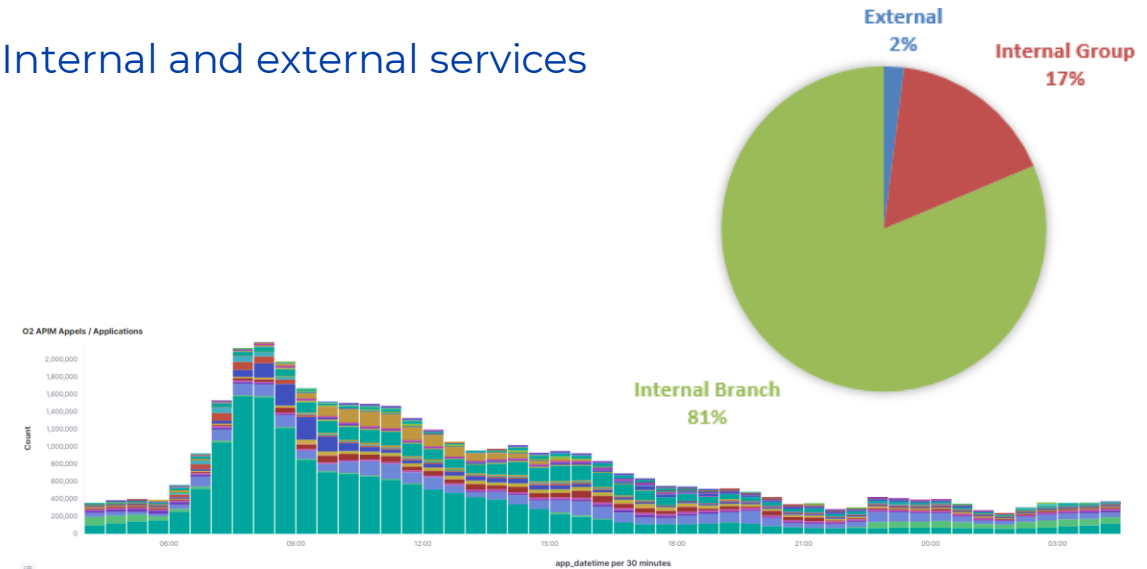


leboncoin

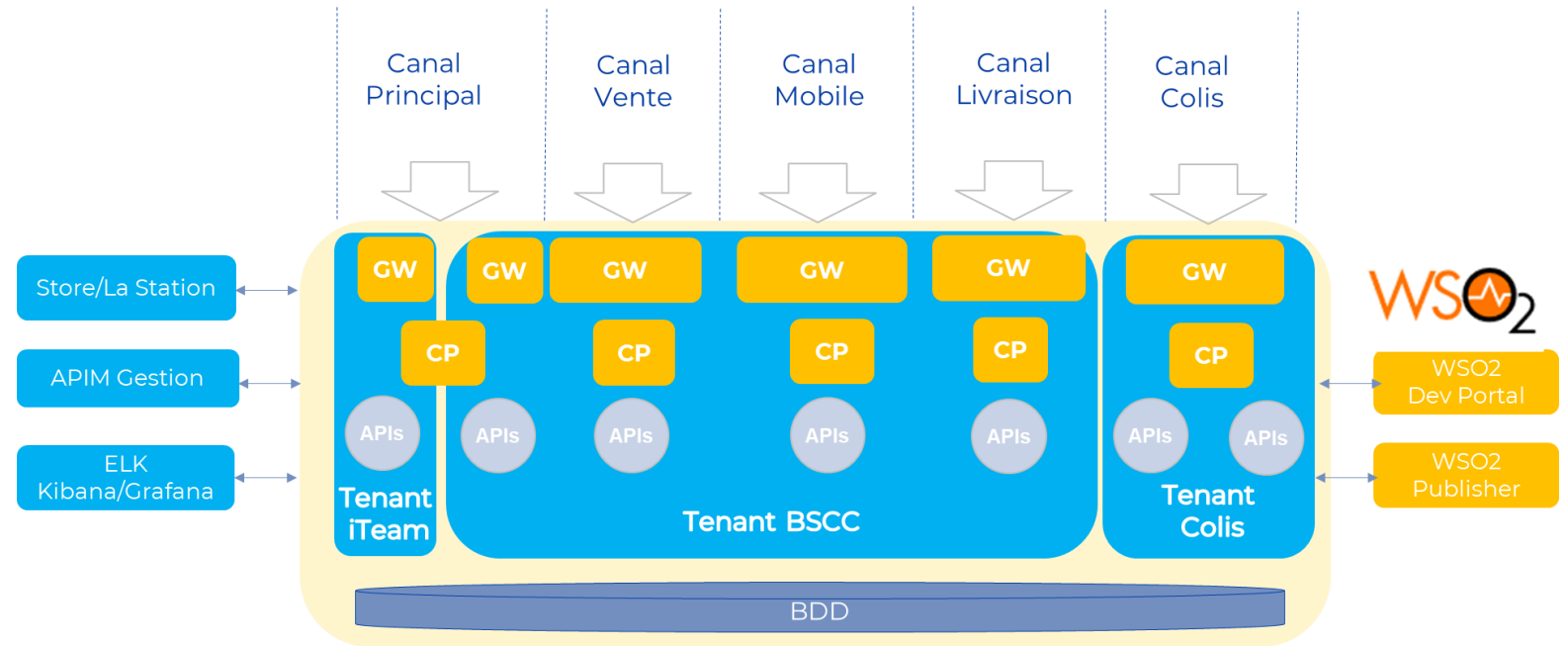
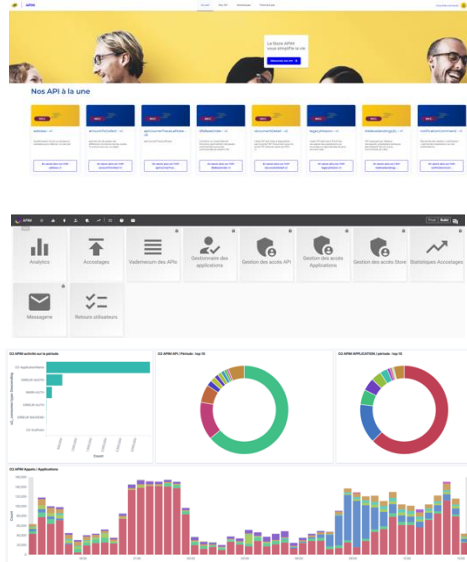
Vinted

La Poste BSCC IS APIsation : KPI

- **A resilient, scalable, reactive, microservice and API First architecture with :**
 - 600 APIs / 600 Applications / 2500 Subscriptions
 - Web app, mobile device, server connection patterns for Internal and external services
 - Identity Federation with internal IDPs
 - 3 tenants (Mail, Parcel and Corporate)
- **50 Millions requests a day**
- **1 Billion requests a month**
- **A peak each morning (up to 2000 TPS) due to 65000 postmen delivery activity especially during Christmas period**
- **A traffic increase due to delivery services digitalization and tracking**
- **QoS 24/7 99,9 % : mandatory for a centralized asset**



LA POSTE BSCC APIM Platform solution

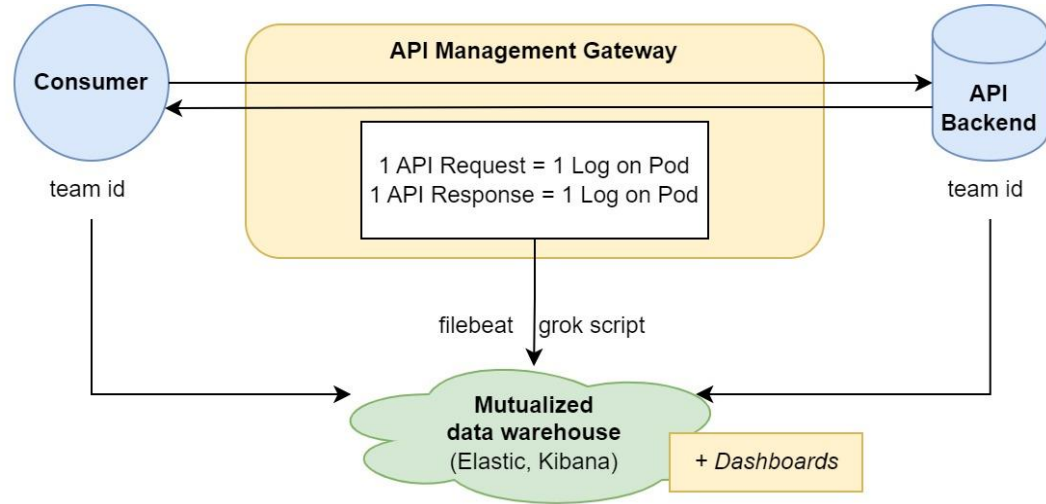


- Multitenant deployment to adress different company organisations
- Deployment on a PAAS Openshift in 2 Data Centers (Actif/Actif)
- Custom Store and Integration center interface
- Observability with ELK/Kibana/Grafana (Log, Analytics, system)
- Version WSO2 2.6 moved to V4 in 2024

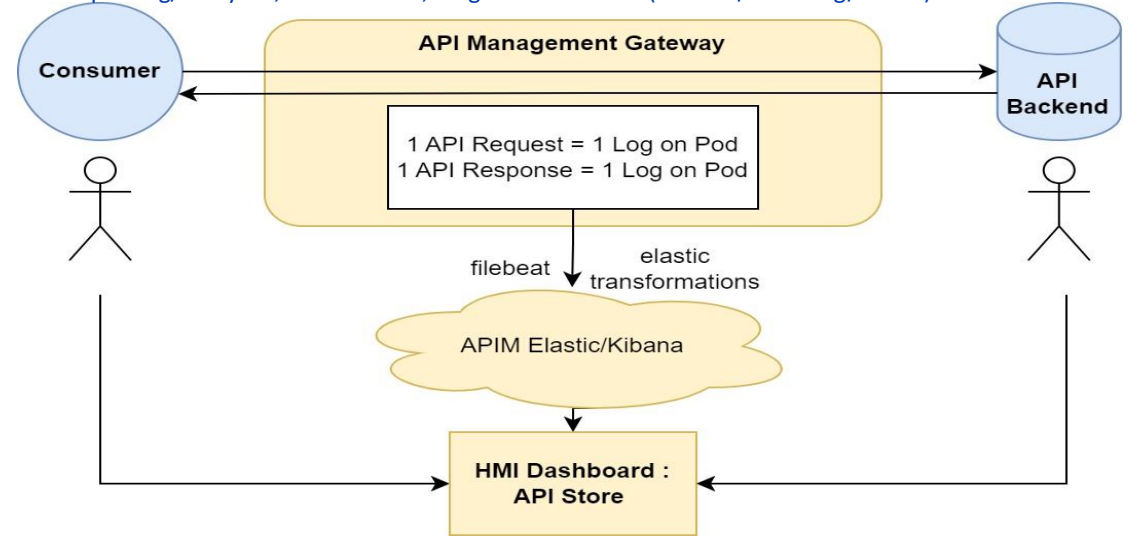


Two data sources available

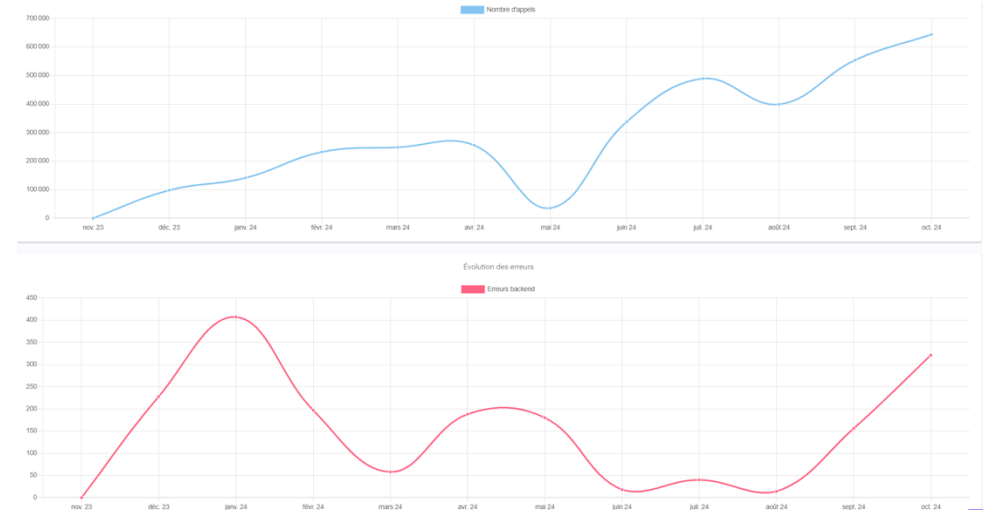
Short term data (2 weeks)
Precise, detailed, debug/incident resolution



Long term data
reporting/analytics, less detailed, long term behavior (success/throttling/errors)



Log generation is using global mediation sequences, enriched with many properties



Shared data

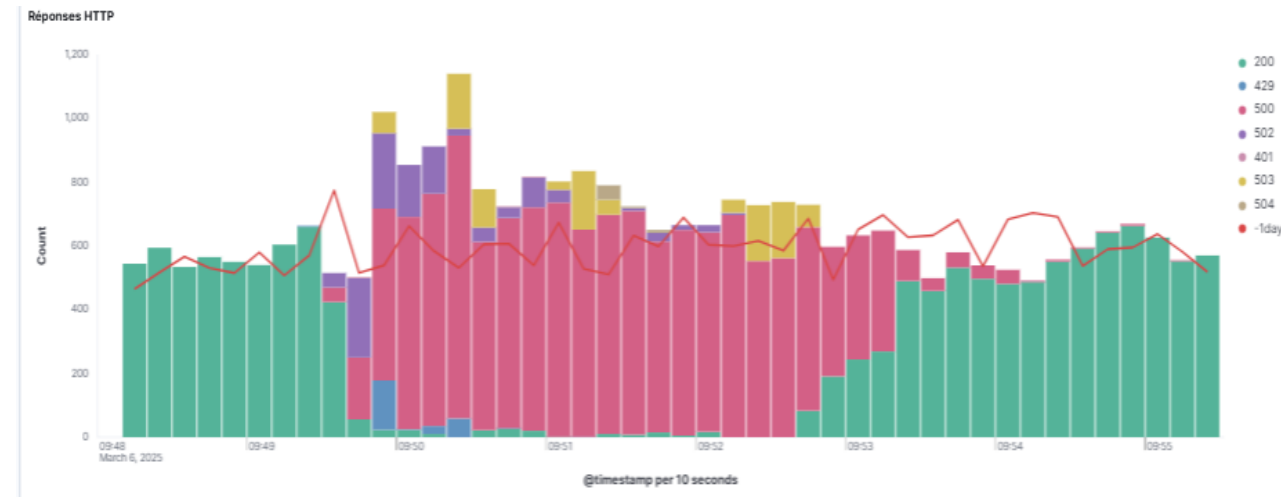
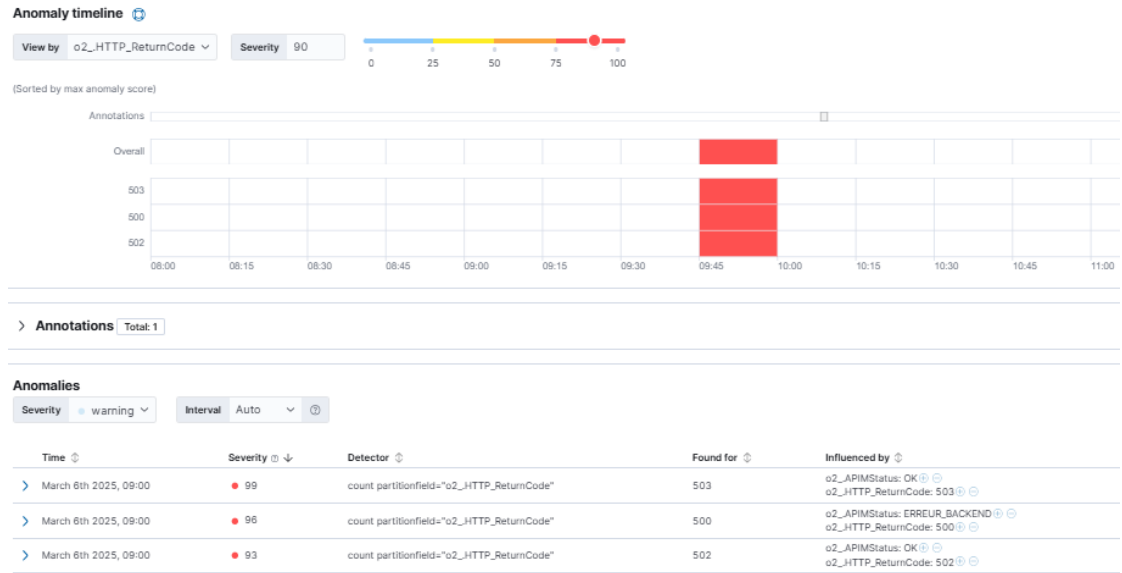
- Data shared with AppliOwner and ApiOwner (cio, s7_)
Both application and api owner have access to some of our logs
- Many fields to request, aggregate, classify data
- Some dashboards are available for owners, but they can build their own



Field	Value
labels.itaas.Application.code	o2_
labels.itaas.Application.environnement	acc
labels.itaas.Application.partner	courrier
labels.shared.Application.code	[cio, s7_]
message	{"app_datetime": "2025-03-03T11:4 plicationName = SACC_0000193_S7 wner = cio, SourceAppel = 10.155.1: = POST, ApiName = s2sPrediction, A redentials, AppliOwner = S7_", "app.
o2_APIM-O2-ApplicationName	SACC_0000193_S7_APIQA.S7_U1
o2_APIMStatus	OK
o2_ApiName	s2sPrediction
o2_ApiOwner	cio
o2_ApiVersion	v1
o2_AppliOwner	s7_
o2_CallsInternet	NO
o2_CORRELATION_ID	urn:uuid:e93288b1-99ba-477c-b7f2-1dadde01ec79
o2_destination.http.method	POST
o2_destination.name	s2sPrediction
o2_destination.url.path	v1/predict,
o2_HTTP_ReturnCode	200
o2_Origine	apim-gw-acc.net.extra.laposte.fr
o2_Pattern	client_credentials
o2_SourceAppel	10.155.12.146

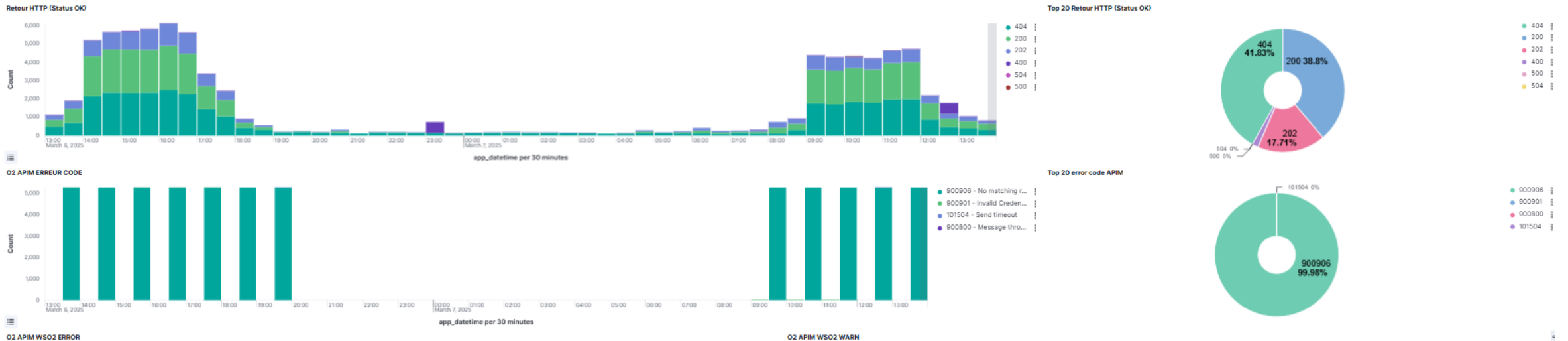
Data and observability

- Platform Health check
- Traffic management and life cycle
- Incident detection
- Unexpected behaviour : security or bad usage issue



Data and observability : main benefits

- Less support for APIM team
- Encourage client pro-active approach, sustainability...
- Valuable data is available for clients and IT actors to detect wrong usage/behavior, enforce good practice and security...
- Enrich Information System cartography



And Next : using AI

So far, using kibana machine learning hasn't been convincing

Difficult to generate valuable notification without pointing a specific api

So we're going AI

By starting a proof of concept using Dynatrace during Q2

And explore other solution based on AI data log analysis

Thanks
for your
attention

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