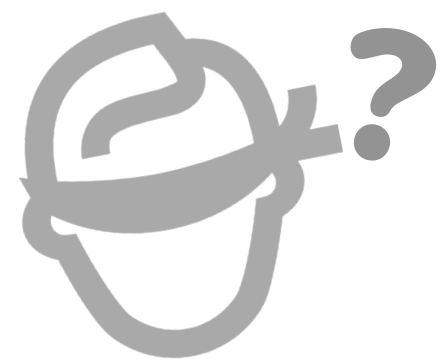# LENSES

ANY DATA • ANY FLOW

DATA OPERATIONS FOR ALL

# Data logistics is hard

TIME TO VALUE IS SLOW, EVEN WITH STREAMING!

Presentation

Infrastructure

Constant effort for DIY solutions

# Business challenges

ADOPT A WHOLE NEW ECOSYSTEM & REDEFINE PRODUCTION READINESS

Invest in training & development

Build DevOps mindset & muscle

Keep up with compliance & new regulations

# Technical challenges

ENABLE DISCOVERABILITY, ACCESSIBILITY, SELF-SERVICE SECURE PLATFORM

Fine grained and secure access for all

Serverless repeatable real time pipelines

Easy data enrichment & performant apps

**Simple & secure data operations platform for data in-motion**

We help you build your data highway with confidence on powerful open source engines Kafka & Kubernetes

# Very happy users

OUR CUSTOMERS APPRECIATE

"Looks like we'll skip the PoC we go to purchasing directly"- Telco - Global

"Lenses greatly improves our visibility and control and enables us to move faster into production" Financial - UK

"Just wanna say you have an amazing product, well thought, good design and unique features"- Analytics - US

"I have just deployed Lenses in our QA environment but already our ~400 developers are beginning to rely on it, a credit to you and your team!!" Retail - US

"Your product is so damn great, keep up the good work!" - Community

"Just deployed the new release of Lenses, i.e. 2.0...and...it's amazing! Responsive, polished & with new amazing features!" FinTech - Italy

"Unsure how to thank you guys but this is a masterpiece. We are going into production with this now. Speaks volumes about the quality." - Community

# Our DataOps formula

MADE FOR CONNECTING DATA WITH PEOPLE IN REAL TIME

**Self service & SQL**
data access & preparation

······▶

**For all users**
devs, consumers, stewards

**Easily apply data flows**
Automated and scalable

······▶

**Free up time**
from building infrastructure
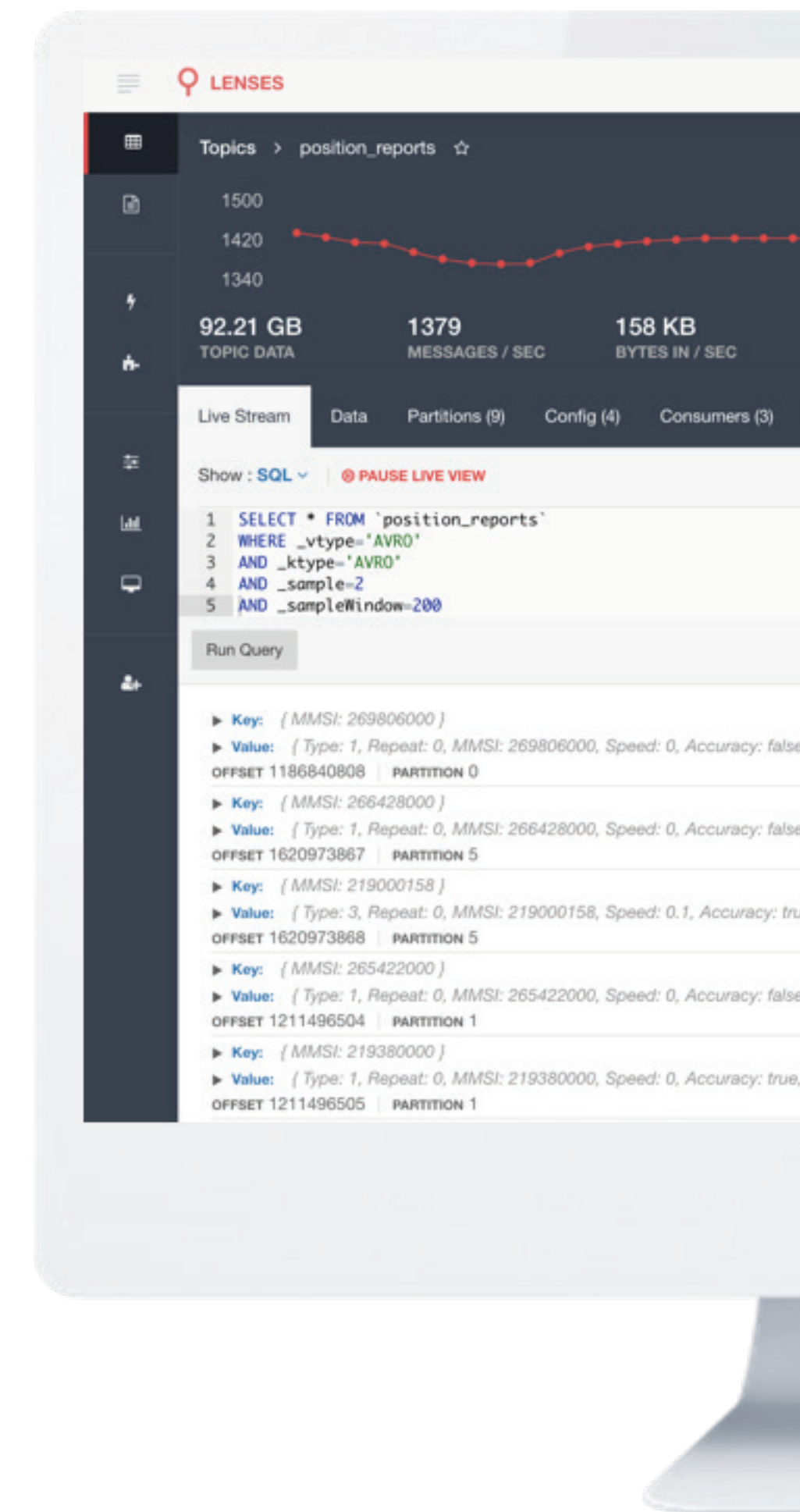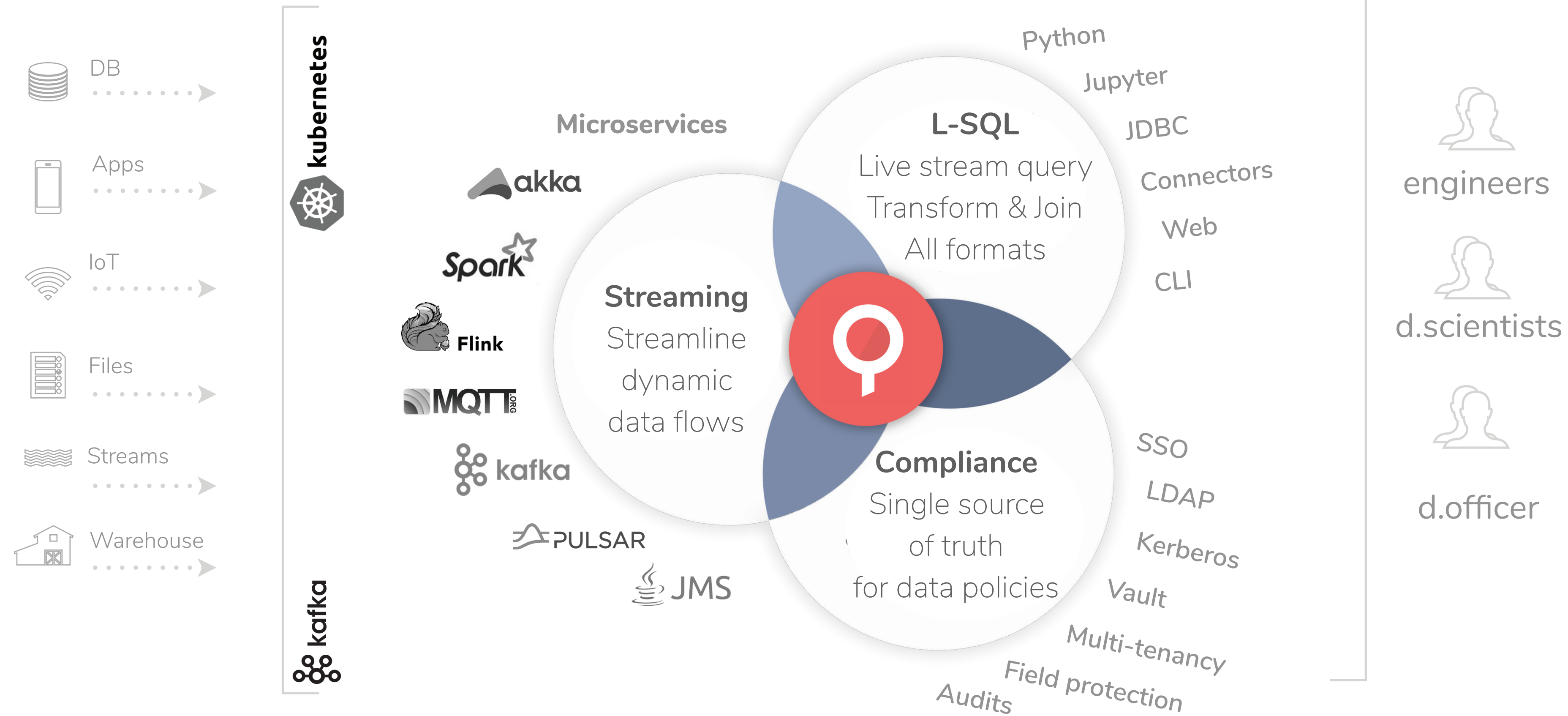
**Protection policies**
for anonymisation & compliance

······▶

**Data access**
and confident business integration

# LENSES = ƒ ( data )

## THE CATALYST FOR DATA-IN MOTION

DB

Apps

IoT

Files

Streams

Warehouse

kubernetes

kafka

Microservices

akka

Spark

Flink

MQTT ORG

kafka

PULSAR

JMS

Python

Jupyter

JDBC

Connectors

Web

CLI

**L-SQL**
Live stream query
Transform & Join
All formats

**Streaming**
Streamline
dynamic
data flows

**Compliance**
Single source
of truth
for data policies

SSO

LDAP

Kerberos

Vault

Multi-tenancy

Field protection

Audits

engineers

d.scientists

d.officer

LENSES

Topics > position_reports ☆

1500
1420
1340

92.21 GB
TOPIC DATA

1379
MESSAGES / SEC

158 KB
BYTES IN / SEC

Live Stream    Data    Partitions (9)    Config (4)    Consumers (3)

Show : SQL ∨    ⊘ PAUSE LIVE VIEW

```
1  SELECT * FROM `position_reports`
2  WHERE _vtype='AVRO'
3  AND _ktype='AVRO'
4  AND _sample=2
5  AND _sampleWindow=200
```

Run Query

▶ Key:   { MMSI: 269806000 }
▶ Value:   { Type: 1, Repeat: 0, MMSI: 269806000, Speed: 0, Accuracy: false
OFFSET 1186840808    PARTITION 0

▶ Key:   { MMSI: 266428000 }
▶ Value:   { Type: 1, Repeat: 0, MMSI: 266428000, Speed: 0, Accuracy: false
OFFSET 1620973867    PARTITION 5

▶ Key:   { MMSI: 219000158 }
▶ Value:   { Type: 3, Repeat: 0, MMSI: 219000158, Speed: 0.1, Accuracy: tru
OFFSET 1620973868    PARTITION 5

▶ Key:   { MMSI: 265422000 }
▶ Value:   { Type: 1, Repeat: 0, MMSI: 265422000, Speed: 0, Accuracy: false
OFFSET 1211496504    PARTITION 1

▶ Key:   { MMSI: 219380000 }
▶ Value:   { Type: 1, Repeat: 0, MMSI: 219380000, Speed: 0, Accuracy: tru
OFFSET 1211496505    PARTITION 1

# LENSES

THE REQUIREMENTS OF A MODERN DATA PLATFORM

Visibility

Manage Data Flows

SQL Enrichment

Fine grained data access

Data Movement

Governance & Lineage

Self Service Data Operations

Performance & Monitoring

# Lenses SQL for streams & ALL data formats

✓ Protected Browsing
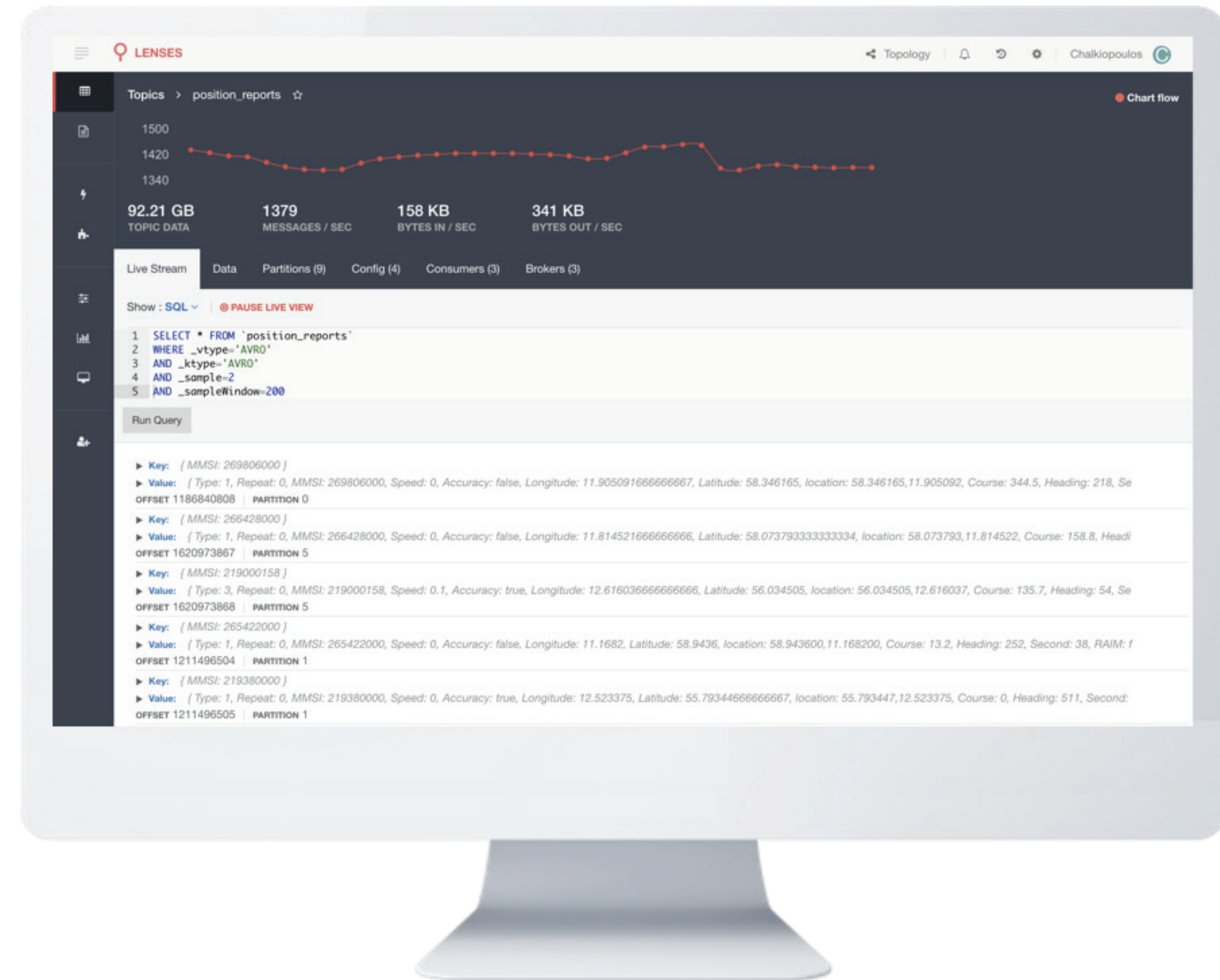
✓ Scalable Processing

✓ Easy Ingesting

JSON  AVRO  XML  CSV

PROTOBUF  ARRAYS  CUSTOM

# Self service, scalable & repeatable SQL queries for real time processing

✓ Continuously running queries
✓ Visual interactive SQL flows
✓ Scalable out-of-box
✓ Performance metrics

Processors (5) > join-example-fraud-detection ☆

● RUNNING | Runners: 1 | Uptime 19 hours | created by: christina

```
 1  SET `autocreate`=true;
 2  SET `auto.offset.reset`='earliest';
 3  SET `commit.interval.ms`='120000';
 4  SET `compression.type`='snappy';
 5
 6  INSERT INTO `cc_payments_fraud`
 7  WITH tableCards AS (
 8    SELECT *
 9    FROM `cc_data`
10    WHERE _ktype='STRING' AND _vtype='AVRO' )
11
12  SELECT STREAM
13    p.currency,
14    sum(p.amount) as total,
15    count(*) usage
16  FROM `cc_payments` AS p LEFT JOIN tableCards AS c ON p._key = c._key
17  WHERE p._ktype='STRING' AND p._vtype='AVRO' and c.blocked is true
18  GROUP BY tumble(1,m), p.currency
```
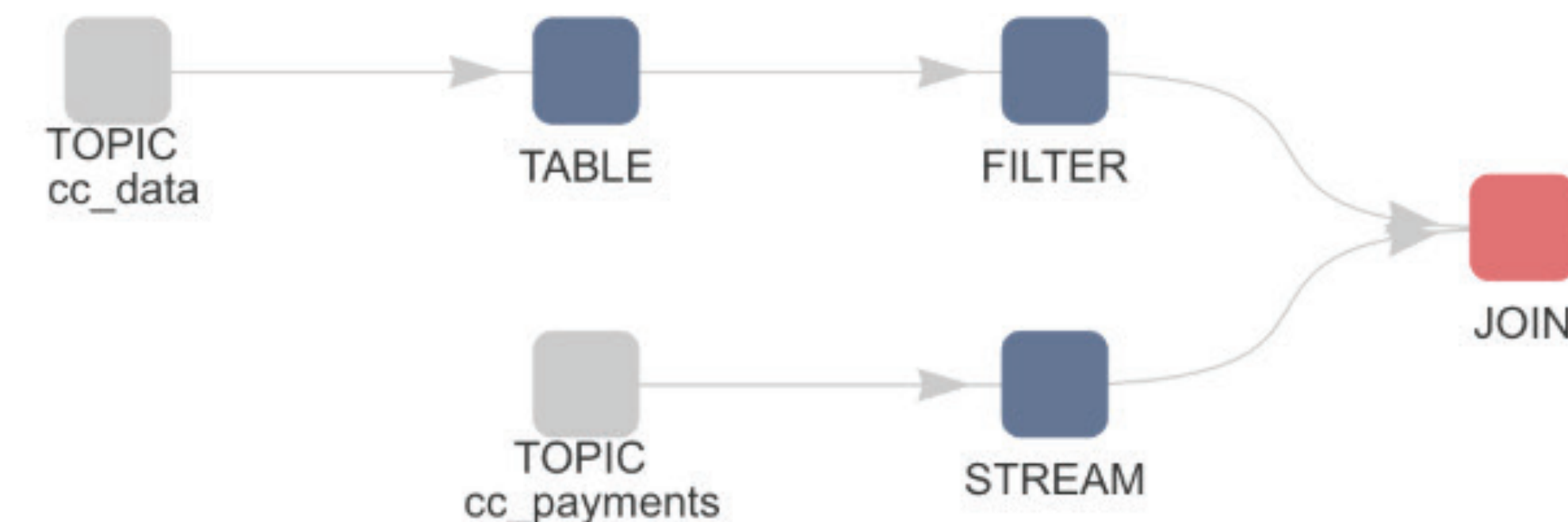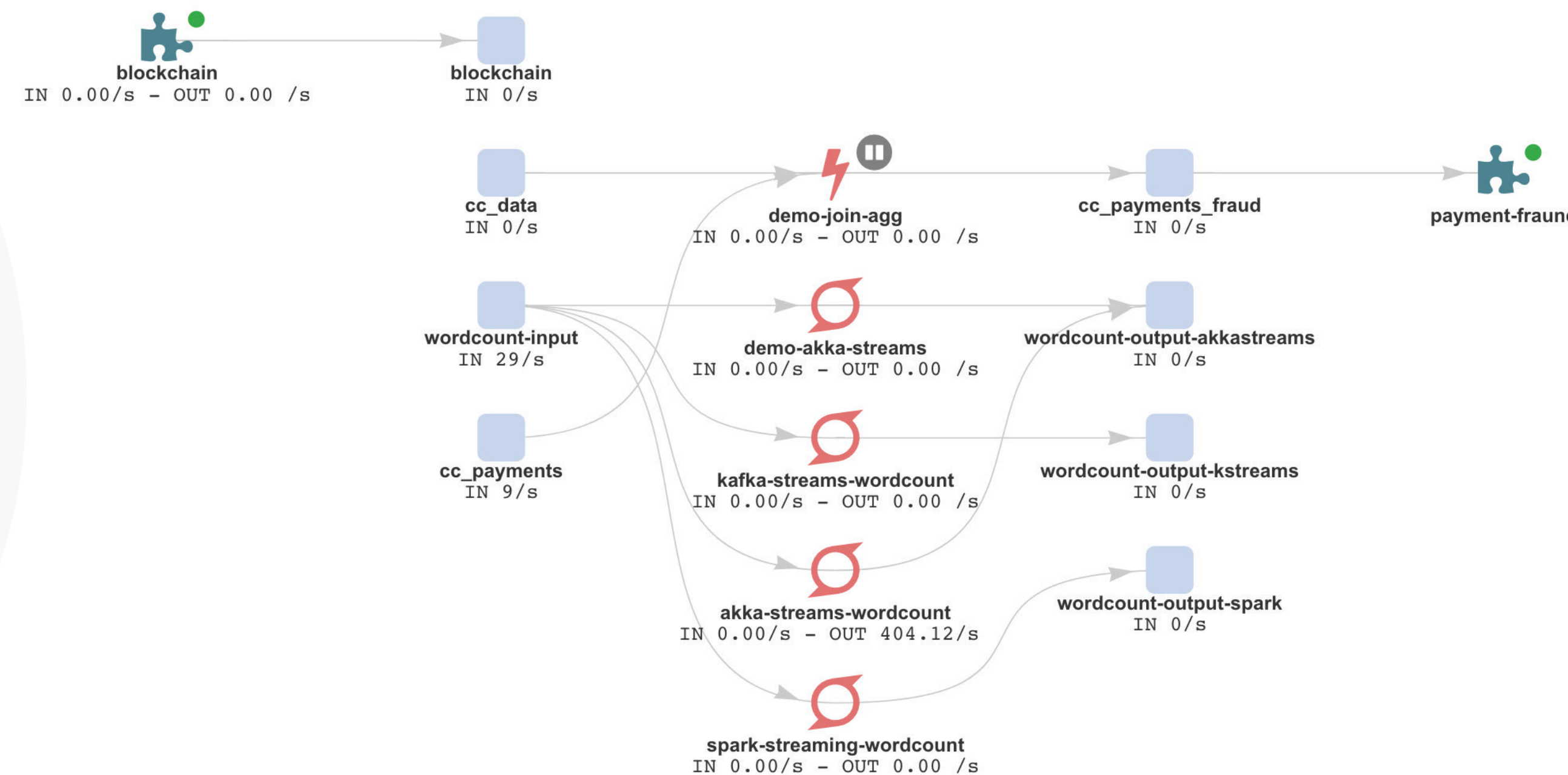
Topology    Monitor    Runners

⌄ Stream Topology

click on the nodes for details



TOPIC
cc_data

TABLE

FILTER

JOIN

TOPIC
cc_payments

STREAM

# Manage & Monitor streaming Topologies

✓ Promotable Flows

✓ Custom Apps

✓ Kafka Processors & Connectors

✓ SLA Alerts

blockchain
IN 0.00/s - OUT 0.00 /s

blockchain
IN 0/s

cc_data
IN 0/s

demo-join-agg
IN 0.00/s - OUT 0.00 /s

cc_payments_fraud
IN 0/s

payment-fraud

wordcount-input
IN 29/s

demo-akka-streams
IN 0.00/s - OUT 0.00 /s

wordcount-output-akkastreams
IN 0/s

cc_payments
IN 9/s

kafka-streams-wordcount
IN 0.00/s - OUT 0.00 /s

wordcount-output-kstreams
IN 0/s

akka-streams-wordcount
IN 0.00/s - OUT 404.12/s

wordcount-output-spark
IN 0/s

spark-streaming-wordcount
IN 0.00/s - OUT 0.00 /s

# Operational Monitoring & Custom Alerting

✓ Infrastructure metrics

✓ Consumer lags & replay messages

✓ Custom Alerts
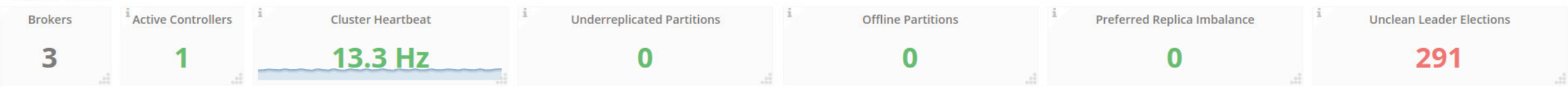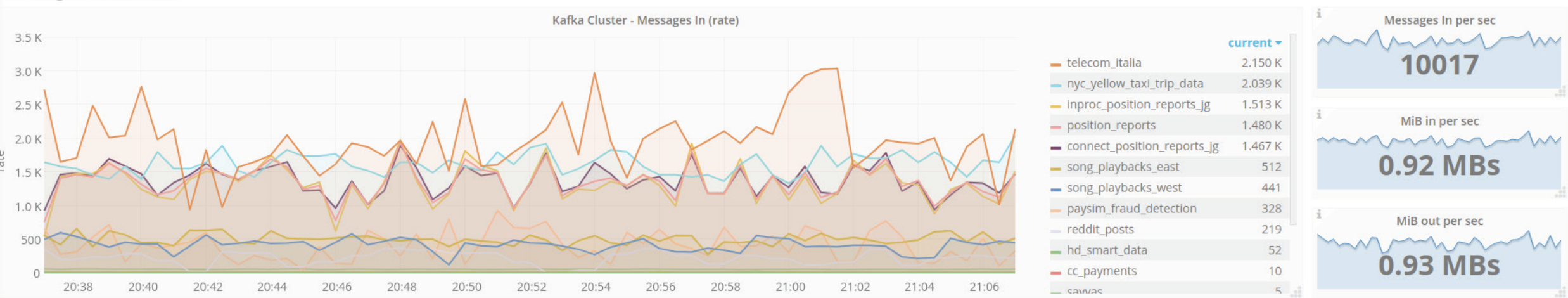
```
1
2  SELECT * FROM `cc_payments`
3  LIMIT 100
```

Run Query

Results (100)     Recent Queries (2)

ⓘ  **STATS**     Fetched: 100

| Key | value.creditCardId | value.amo |
|---|---|---|
| MDM4MTg3NjMzMw== | ************6333 | 104.31 |
| c1ODMxMTYxMg== | ************1612 | 2872.17 |
| c1ODMxMTYxMg== | ************1612 | 1094.71 |
| JDU0NjA2NTYxMA== | ************5610 | 2242.37 |
| c1ODMxMTYxMg== | ************1612 | 3264 |
| TY0Nzk5NDQ5Mg== | ************4492 | 3020.81 |
| MzQ5NDM0NzUzMg== | ************7532 | 2433.32 |
| Mjl0MTExMTUzOA== | ************1538 | 3120.78 |
| NjkxNzYwMDAwMg== | ************0002 | 4733.69 |
| c1ODMxMTYxMg== | ************1612 | 778.61 |
| )M2Mjl1MjM5NA== | ************2394 | 69.27 |
| MDM4MTg3NjMzMw== | ************6333 | 4291.92 |
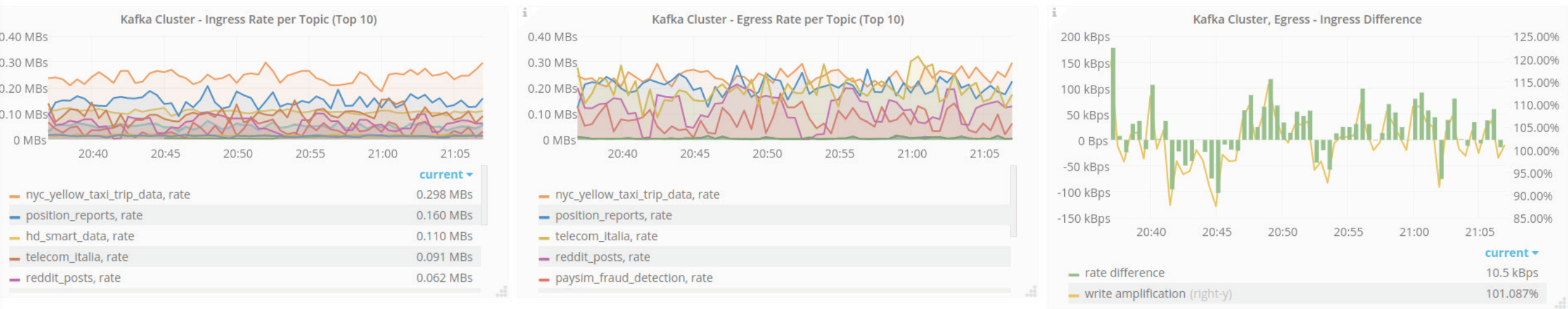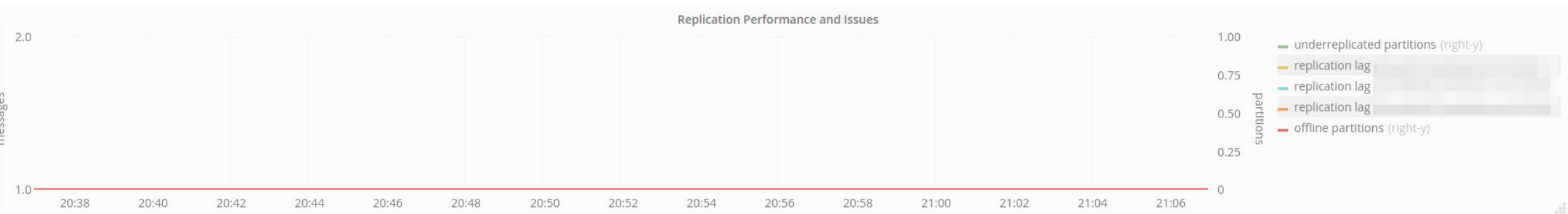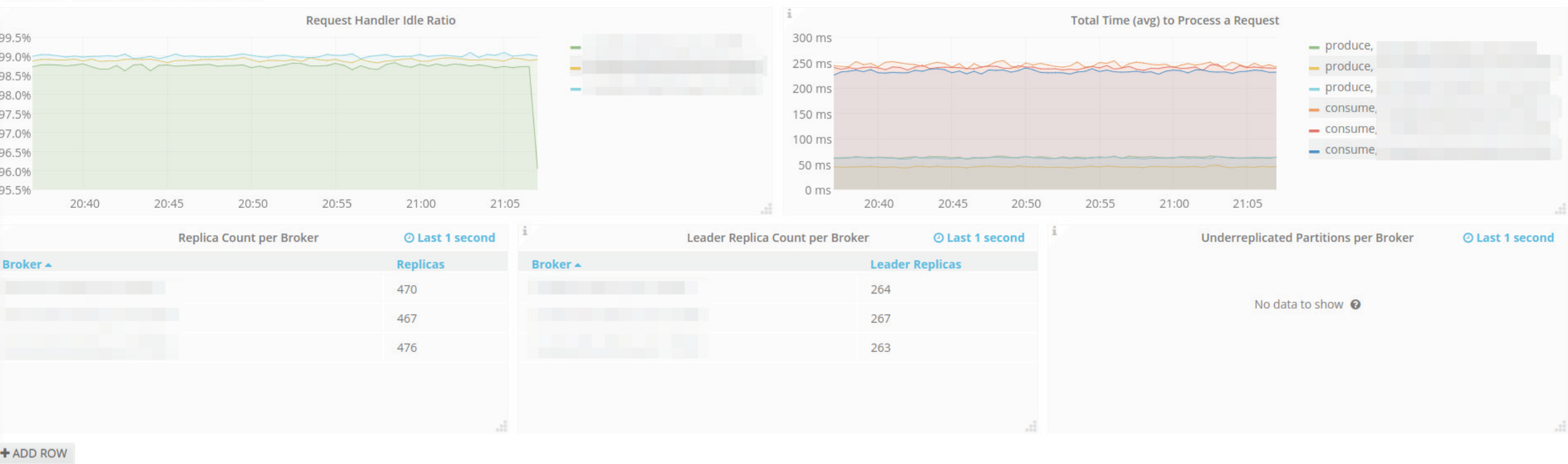
# Protection policies
# by default

✓   Field level redaction policies
✓   Immutable Audit logs
✓   Role based access
✓   Multi-tenancy (white/black listing)
✓   SSO, LDAP / AD, Kerberos

# A rich ecosystem

- ✓ APIs
- ✓ CLI
- ✓ JDBC Driver
- ✓ JS / Redux
- ✓ Python / Jupyter

Thank you!

https://lenses.io