

Catch the Fraud

with Observability & Analytics

Philipp Krenn

@xeraa



Developer 🥑

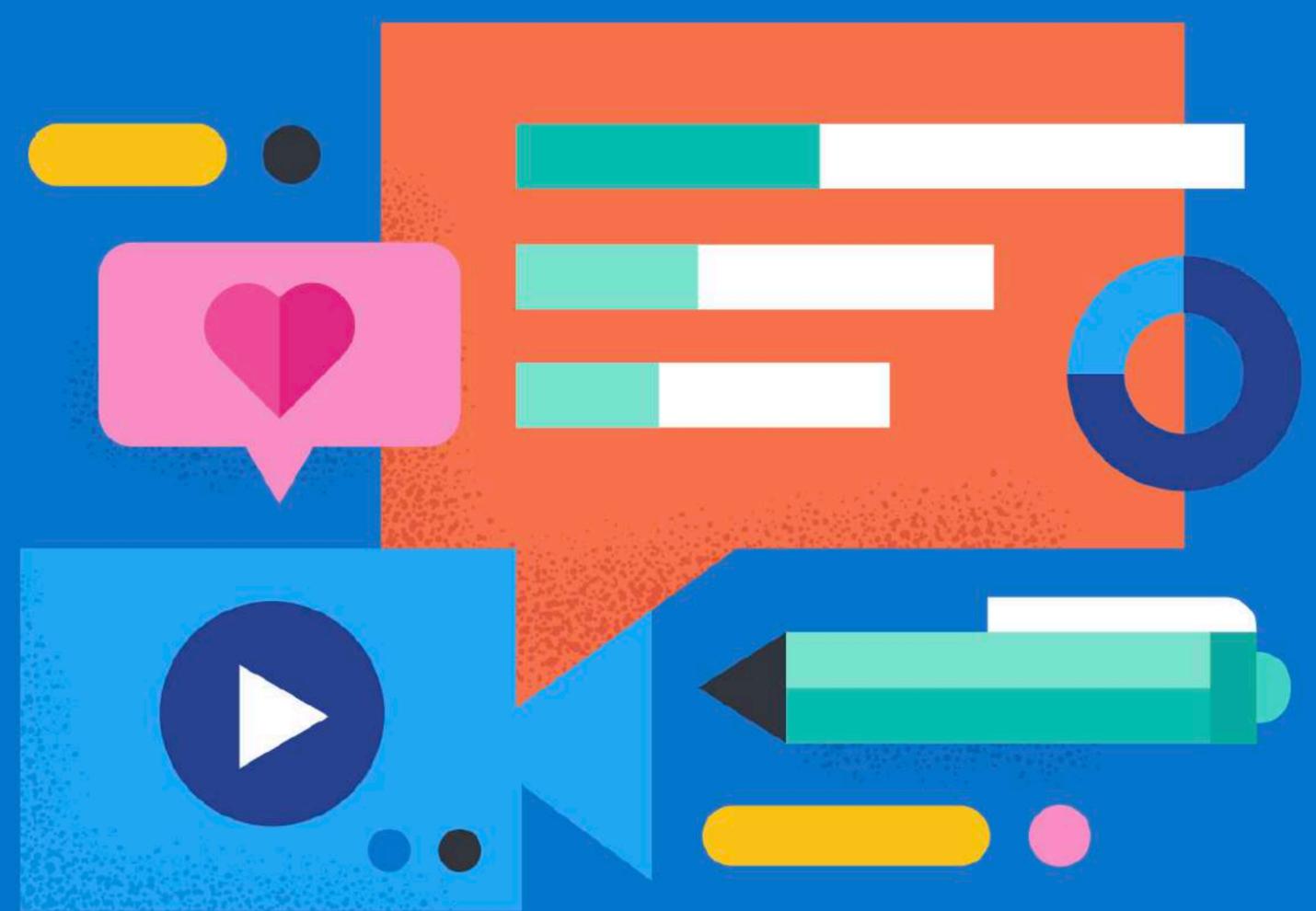
Community Contributors

<https://www.elastic.co/community/contributor>

Elastic Contributor Program

We created the Elastic Contributor Program to recognize and reward the hard work of our awesome contributors, encourage knowledge sharing within the Elastic community, and build friendly competition around contributions.

[Start contributing](#)



How it works

Earn points by organizing events, presenting at events, writing content, recording videos, translating content, contributing code, answering technical questions, or validating others' contributions. At the end of the cycle top contributors will be rewarded with awesome Elastic prizes.

Contribution Type	Points awarded	Examples of contributions
Event organization	6 points	Meetup, hackathon, virtual event, or workshop
Presentation	6 points	Lecture, workshop, conference or meetup talks
Presentation slide deck	1 extra point	PDF, Powerpoint, or Google Slides
Written content	6 points	Article, blog post, or research paper
Share written content	1 extra point	Share the written content on your social media network
Code	2 or 6 points	Elastic GitHub repo: Bug reports (2 points), pull requests (6 points) Non-Elastic repos: demo (6 points) and projects using Elastic (6 points)
Video	4 points	Tutorial, podcasts, or use case overview
Translation	2 points	Translated Elastic blog posts

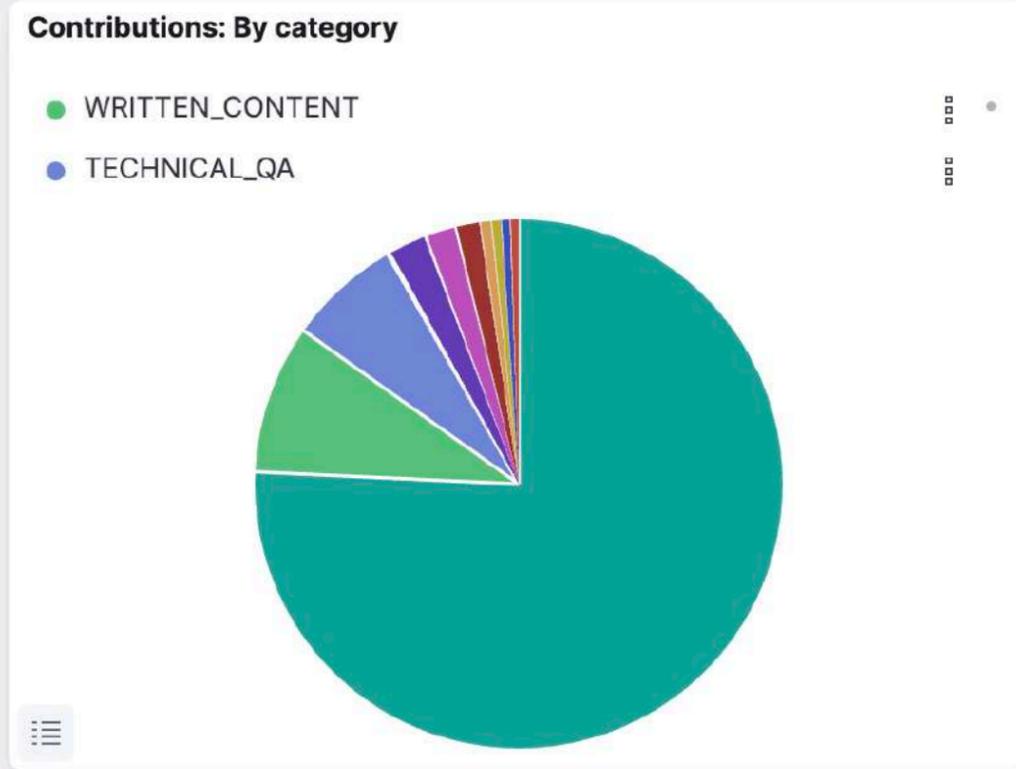
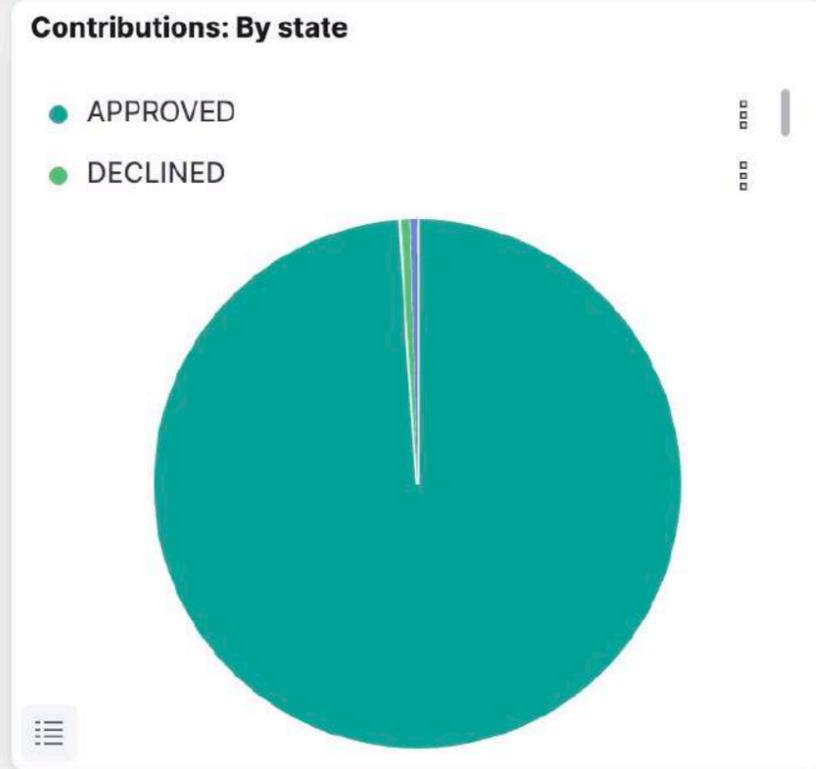
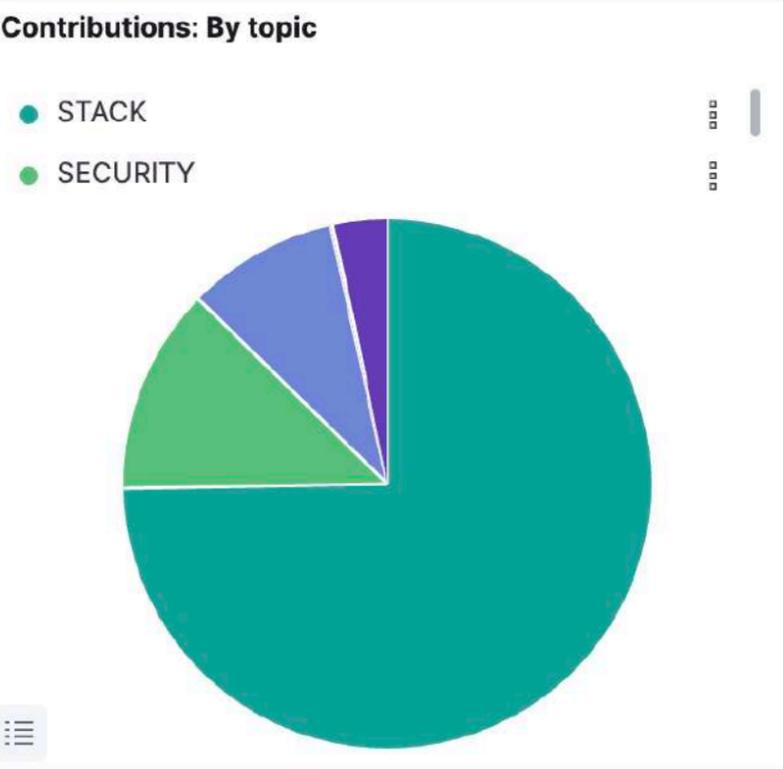
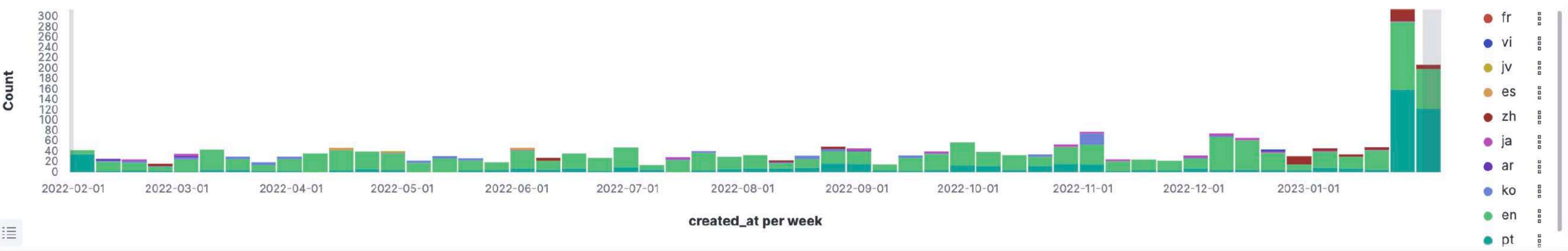
Demo

Kubernetes + Spring Boot / Data + Elasticsearch

Stats

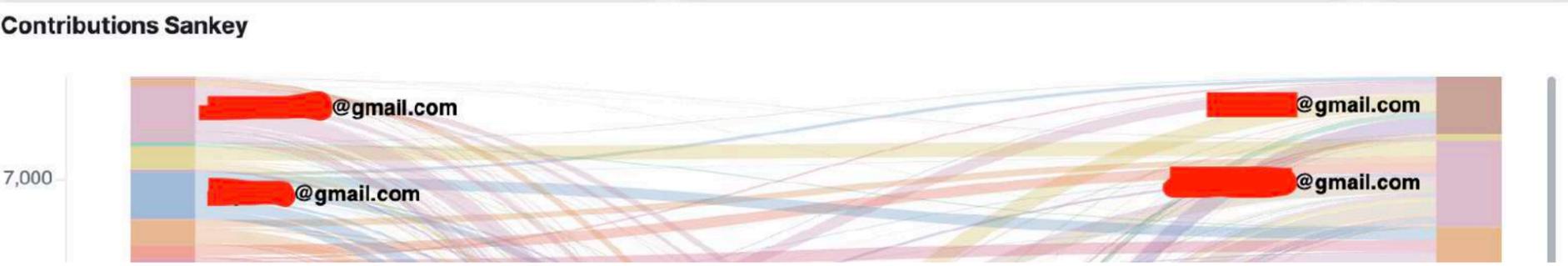
Application + RUM + Tracing

Contributions: By language over time (including declined and not yet rated)



2,388
Approved contributions

7,333
Community validations



You Can Win a





D

Observability

User Experience

Dashboard

Explore data

Add data



Observability

Overview

Alerts

Cases

Logs

Stream

Anomalies

Categories

Metrics

Inventory

Metrics Explorer

APM

Services

Traces

Dependencies

Service Map

Uptime

Monitors

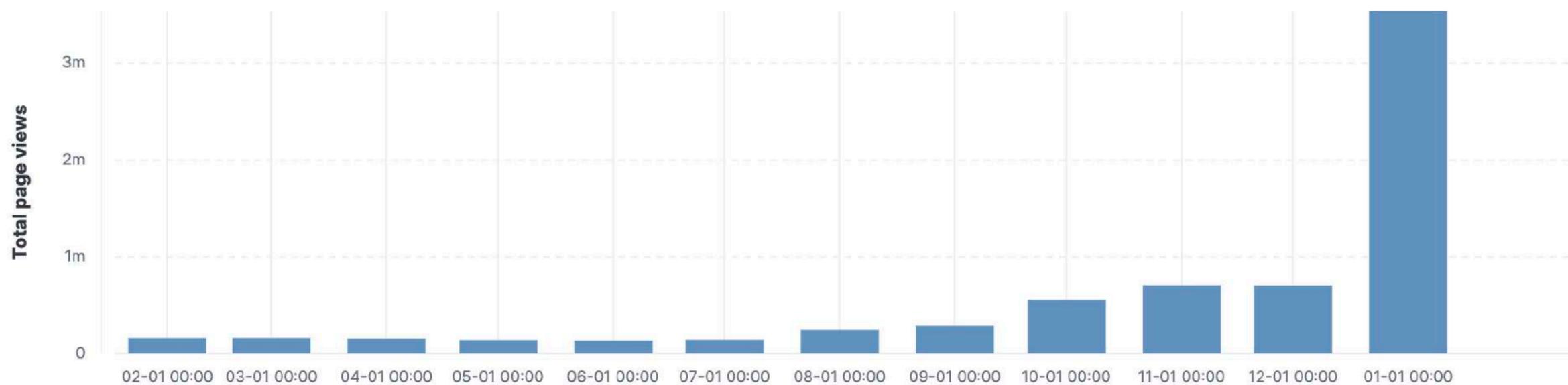
TLS Certificates

User Experience

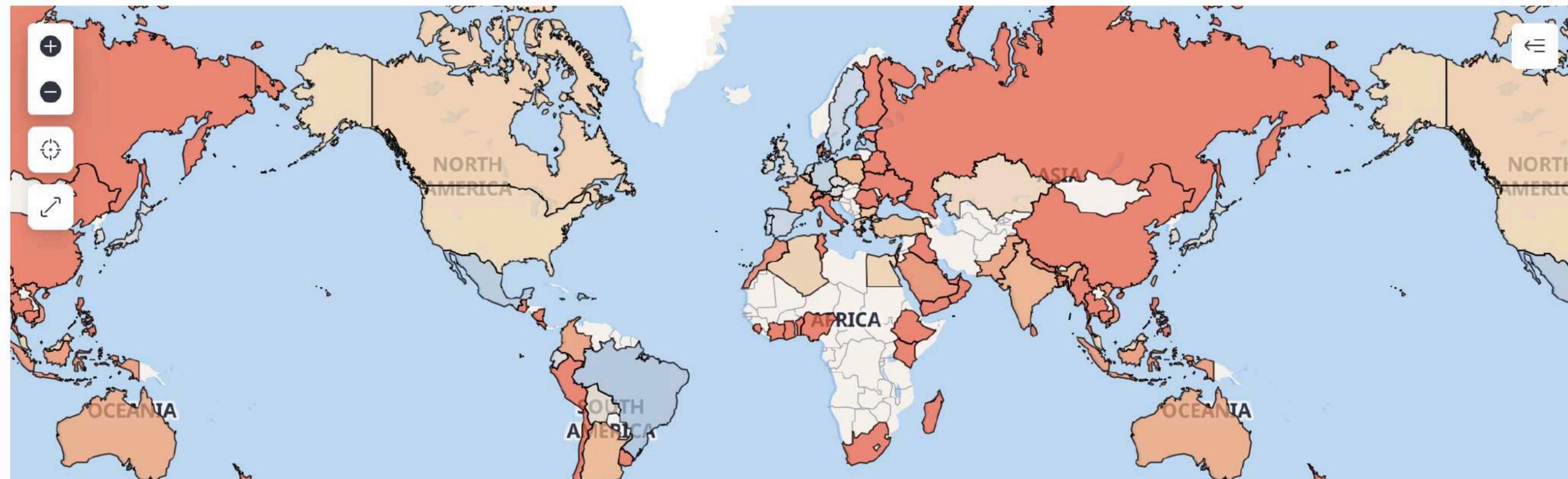
Total page views

No breakdown

Overall



Page load duration by region (avg.)



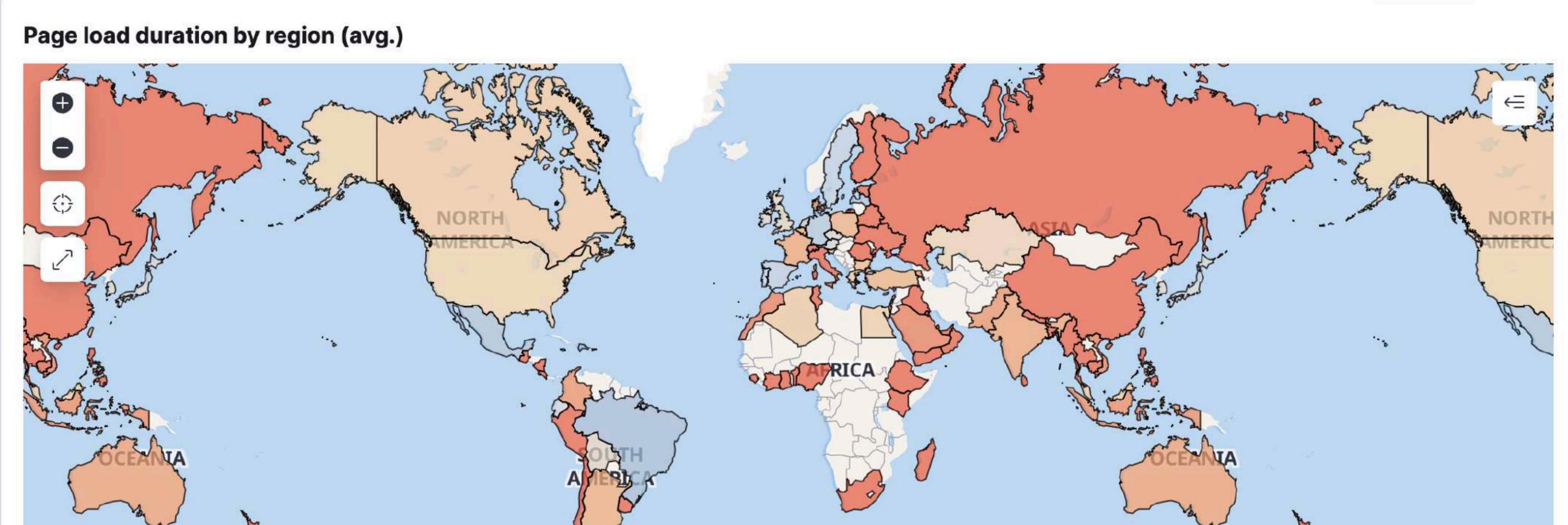
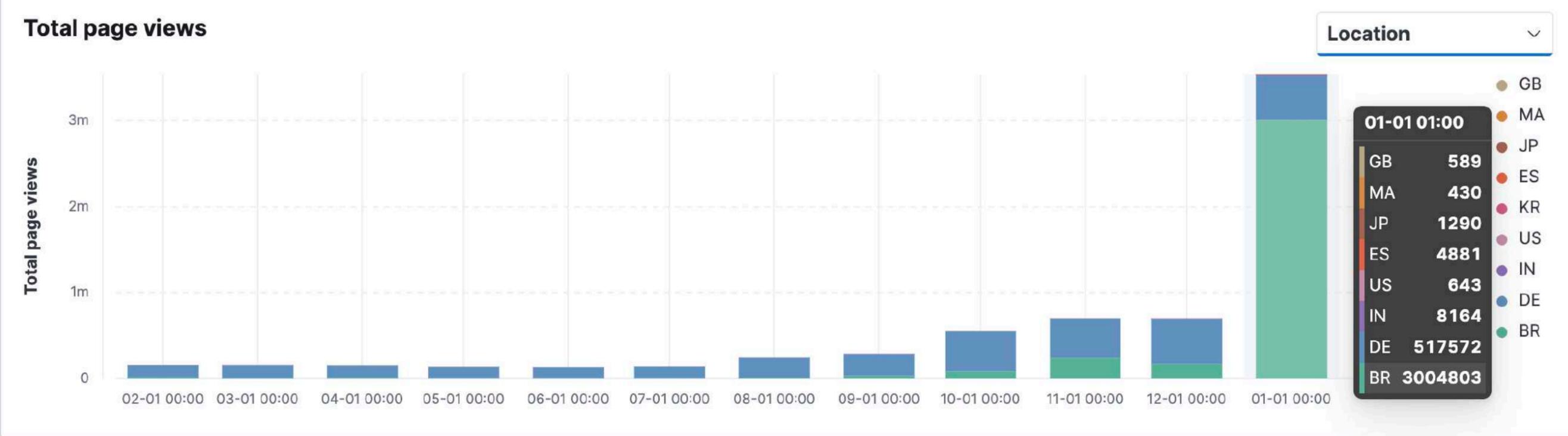


How to Cheat?



Observability

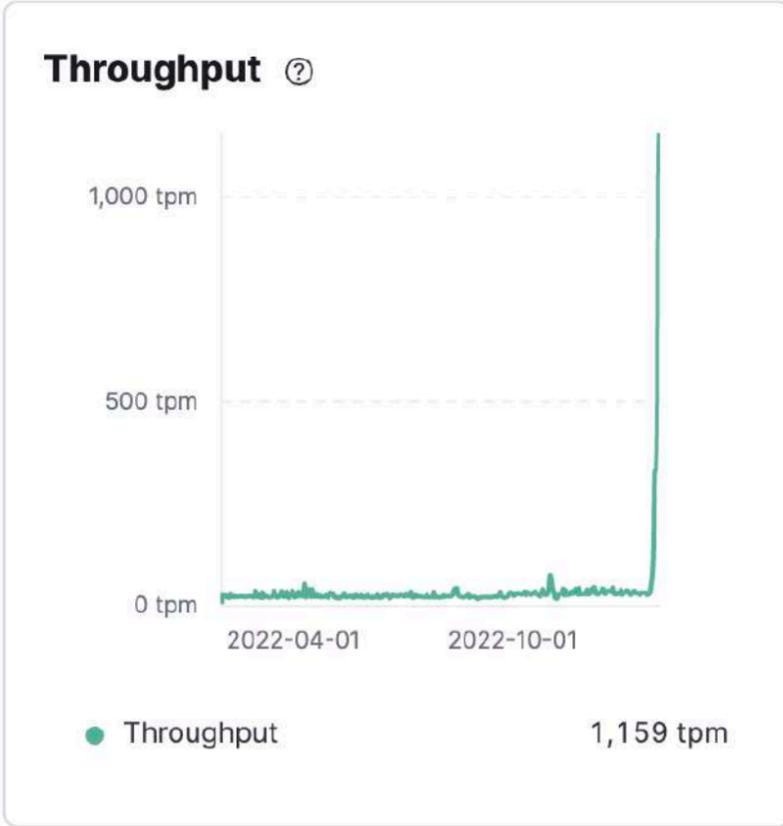
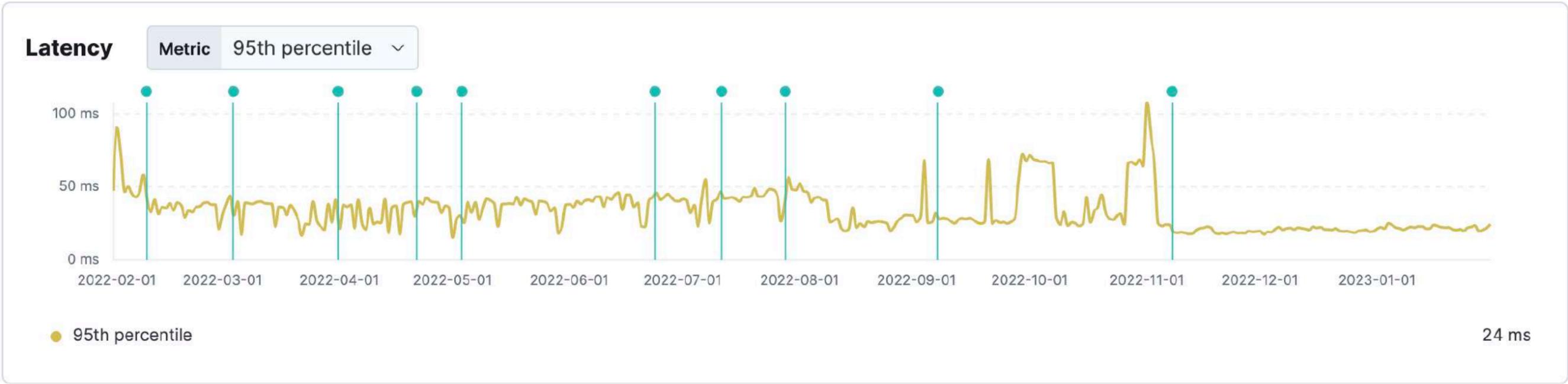
- Overview
- Alerts
- Cases
- Logs
- Stream
- Anomalies
- Categories
- Metrics
- Inventory
- Metrics Explorer
- APM
- Services
- Traces
- Dependencies
- Service Map
- Uptime
- Monitors
- TLS Certificates
- User Experience



Observability

- Overview
- Alerts
- Cases
- Logs
- Stream
- Anomalies
- Categories
- Metrics
- Inventory
- Metrics Explorer
- APM
- Services**
- Traces
- Dependencies
- Service Map
- Uptime
- Monitors
- TLS Certificates
- User Experience

Comparison 01/02/21 00:30 - 01/02/22 00:01 Feb 1, 2022 @ 00:00:00.00 → Jan 31, 2023 @ 23:30:00.00 [Refresh](#)



Transactions

[View transactions](#)

Name	Latency (95th)	Throughput	Failed transaction rate	Impact ↓
MainController#v...	25 ms	12.5 tpm	0.1%	<div style="width: 20%;"></div>
OperationHandler...	20 ms	12.0 tpm	0.0%	<div style="width: 10%;"></div>
MainController#m...	30 ms	5.0 tpm	0.0%	<div style="width: 15%;"></div>
POST unknown ro...	82 ms	0.8 tpm	1.1%	<div style="width: 5%;"></div>
GET unknown route	1.4 ms	5.6 tpm	3.3%	<div style="width: 1%;"></div>

< [1](#) 2 3 4 5 ... 200 >

agent.name : "rum-js" KQL Feb 1, 2022 @ 00:00:00.00 → Jan 31, 2023 @ 23:30:00.00 Refresh

+ Add filter

traces-apm*,apm-*,logs-...

url

Filter by type 0

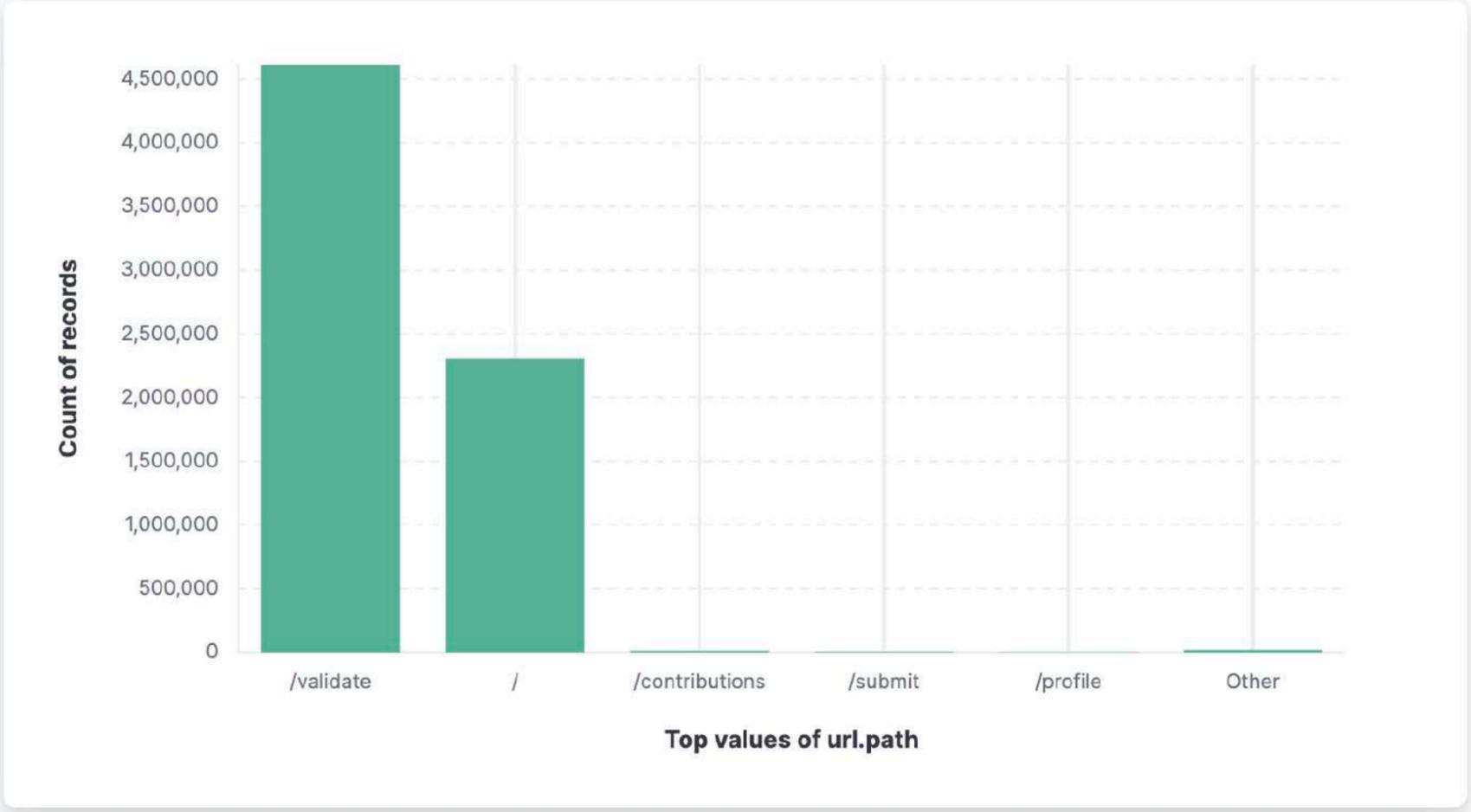
Available fields 5

- url.domain
- url.full
- url.original
- url.path
- url.scheme

Empty fields 25

Meta fields 0

Bar vertical stacked



Suggestions

Current visualization

- Bar chart (Current)
- Bar chart (Horizontal)
- Donut chart
- Stacked bar chart
- Table

Bar vertical stacked

traces-apm*,apm-*,logs-apm*,apm...

Horizontal axis: Top values of url.path

Vertical axis: Count of records

Break down by: Add or drag-and-drop a field

Add layer

url.path : "/validate" and agent.name: "java"

KQL

Last 90 days

Show dates

Refresh

+ Add filter

traces-apm*,apm-*,logs-...

user

Filter by type 0

Available fields 8

user_agent.device.name

user_agent.name

user_agent.original

user_agent.os.full

user_agent.os.name

user_agent.os.version

user_agent.version

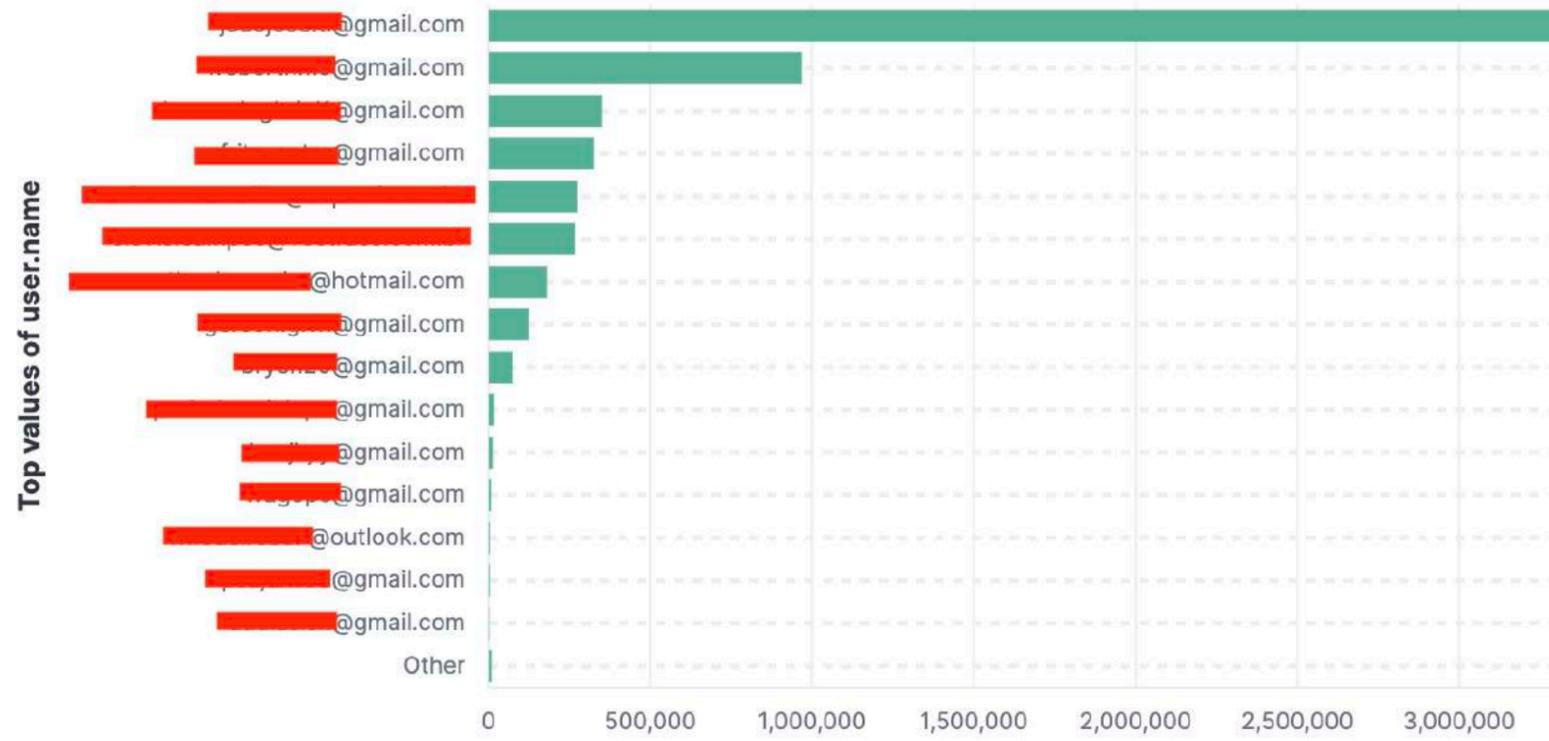
user.name

Empty fields 96

Meta fields 0

Bar horizontal

Top values of user.name



Count of records

Suggestions

Current visualization

5,953,720

Vertical axis

Select a function

Date histogram

Intervals

Filters

Top values

Select a field

user.name

Number of values

15

Rank by

Count of records

Rank direction

Descending

Advanced

Display name

Top values of user.name

Close

Timing

7 hits

 [Chart options](#)

Time ↓	submitted_by.email	category	parent_id	id
> Feb 1, 2023 @ 04:15:49.816	[REDACTED]@gmail.com	CONTRIBUTION_RATING	uAH5CoYBvKKLKFeYKPd0	uAH5CoYBvKKLKFeYKPd0--1738523408
> Feb 1, 2023 @ 04:15:49.367	[REDACTED]@hotmail.com	CONTRIBUTION_RATING	uAH5CoYBvKKLKFeYKPd0	uAH5CoYBvKKLKFeYKPd0--1832567102
> Feb 1, 2023 @ 04:15:49.012	[REDACTED]	CONTRIBUTION_RATING	uAH5CoYBvKKLKFeYKPd0	uAH5CoYBvKKLKFeYKPd0--1716634747
> Feb 1, 2023 @ 04:15:48.880	[REDACTED]@gmail.com	CONTRIBUTION_RATING	uAH5CoYBvKKLKFeYKPd0	uAH5CoYBvKKLKFeYKPd0--1593429878
> Feb 1, 2023 @ 04:15:48.259	[REDACTED]@gmail.com	CONTRIBUTION_RATING	uAH5CoYBvKKLKFeYKPd0	uAH5CoYBvKKLKFeYKPd0-405129977
> Feb 1, 2023 @ 04:15:48.151	[REDACTED]@gmail.com	CONTRIBUTION_RATING	uAH5CoYBvKKLKFeYKPd0	uAH5CoYBvKKLKFeYKPd0-1046907732
> Feb 1, 2023 @ 04:15:46.418	[REDACTED]@gmail.com	VIDEO	-	uAH5CoYBvKKLKFeYKPd0

Names

```
"key" : "S██████████P██████████",
"doc_count" : 7,
"email" : {
  "doc_count_error_upper_bound" : 0,
  "sum_other_doc_count" : 0,
  "buckets" : [
    {
      "key" : "p██████████1@gmail.com",
      "doc_count" : 1
    },
    {
      "key" : "p██████████2@gmail.com",
      "doc_count" : 1
    },
    {
      "key" : "p██████████3@gmail.com",
      "doc_count" : 1
    },
    {
      "key" : "p██████████4@gmail.com",
      "doc_count" : 1
    },
    {
      "key" : "p██████████5@gmail.com",
      "doc_count" : 1
    }
  ]
}
```

Multiple Accounts

Search: "b [redacted]@gmail.com" or [redacted] KQL Last 7 days Show dates Refresh

+ Add filter

traces-apm*,apm-*,logs-ap... 378 hits Chart options

Search field names

Filter by type 0

Selected fields 2

- user.name
- client.ip

Available fields 115

Popular

- agent name

>	Jan 31, 2023 @ 11:06:06.841	b [redacted]@gmail.com	1 [redacted] 3
>	Jan 31, 2023 @ 11:04:14.161	b [redacted]@gmail.com	1 [redacted] 3
>	Jan 31, 2023 @ 11:01:11.528	[redacted]	1 [redacted] 3
>	Jan 31, 2023 @ 11:01:04.626	[redacted]	1 [redacted] 3
>	Jan 31, 2023 @ 11:00:36.626	b [redacted]@gmail.com	1 [redacted] 3
>	Jan 31, 2023 @ 11:00:02.747	b [redacted]@gmail.com	1 [redacted] 3
>	Jan 31, 2023 @ 11:00:01.288	b [redacted]@gmail.com	1 [redacted] 3

+ Add filter

contributions 149 hits Chart options

Search field names

Filter by type 0

- Selected fields 4
- category
 - submitted_by.email
 - title
 - state

- Available fields 23
- Popular
- comments.submitted_by.full_name
 - description
 - submitted_by.full_name
 - _class
 - _id
 - _index
 - _score
 - _type
 - comments.created_at

Time ↓	category	submitted_by.email	title	state
> Jan 31, 2023 @ 18:32:53.456	REFERRAL	[REDACTED]	[REDACTED]m	APPROVED
> Jan 31, 2023 @ 17:45:59.719	REFERRAL	[REDACTED]	[REDACTED]com	APPROVED
> Jan 31, 2023 @ 17:20:47.940	REFERRAL	[REDACTED]	[REDACTED].com	APPROVED
> Jan 31, 2023 @ 17:06:51.452	REFERRAL	[REDACTED]m	[REDACTED]m	APPROVED
> Jan 31, 2023 @ 16:59:12.259	REFERRAL	[REDACTED]	[REDACTED]	APPROVED
0	REFERRAL	[REDACTED]	[REDACTED]com	APPROVED
3	REFERRAL	[REDACTED]m	[REDACTED]com	APPROVED
4	REFERRAL	[REDACTED]	[REDACTED]	APPROVED
3	REFERRAL	[REDACTED]com	[REDACTED]	APPROVED
0	REFERRAL	[REDACTED]com	[REDACTED]ac.in	APPROVED
3	REFERRAL	[REDACTED]com	[REDACTED]	APPROVED
7	REFERRAL	[REDACTED]	[REDACTED].com	APPROVED
0	REFERRAL	[REDACTED]	[REDACTED]com	APPROVED
7	REFERRAL	[REDACTED]	[REDACTED]tics.com	APPROVED

submitted_by.full_name edit

Top 5 values

[REDACTED]	49.0%	+	-
[REDACTED]	14.1%	+	-
[REDACTED]	9.4%	+	-
[REDACTED]	5.4%	+	-
[REDACTED]	4.0%	+	-

Exists in 149 / 149 records

Visualize

Reaction?

Conclusion

Work with the community

Be careful with incentives

Trust – but validate

Don ' t reveal your signals

Or change incentives

Catch the Fraud

with Observability & Analytics

Philipp Krenn

@xeraa