

Monitoring “à la carte” TimeMap Flexible Architecture

“you cannot deliver a service if you can’t monitor it”

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GN5-2 WP6

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Where we started from...



Where
does
It come
from?

Jitter:

- 150ms

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Road report: on HWY 101 there are 364 vehicles per minute



it may
Be nice

...

Road report: on HWY 101 there are 364 vehicles per minute

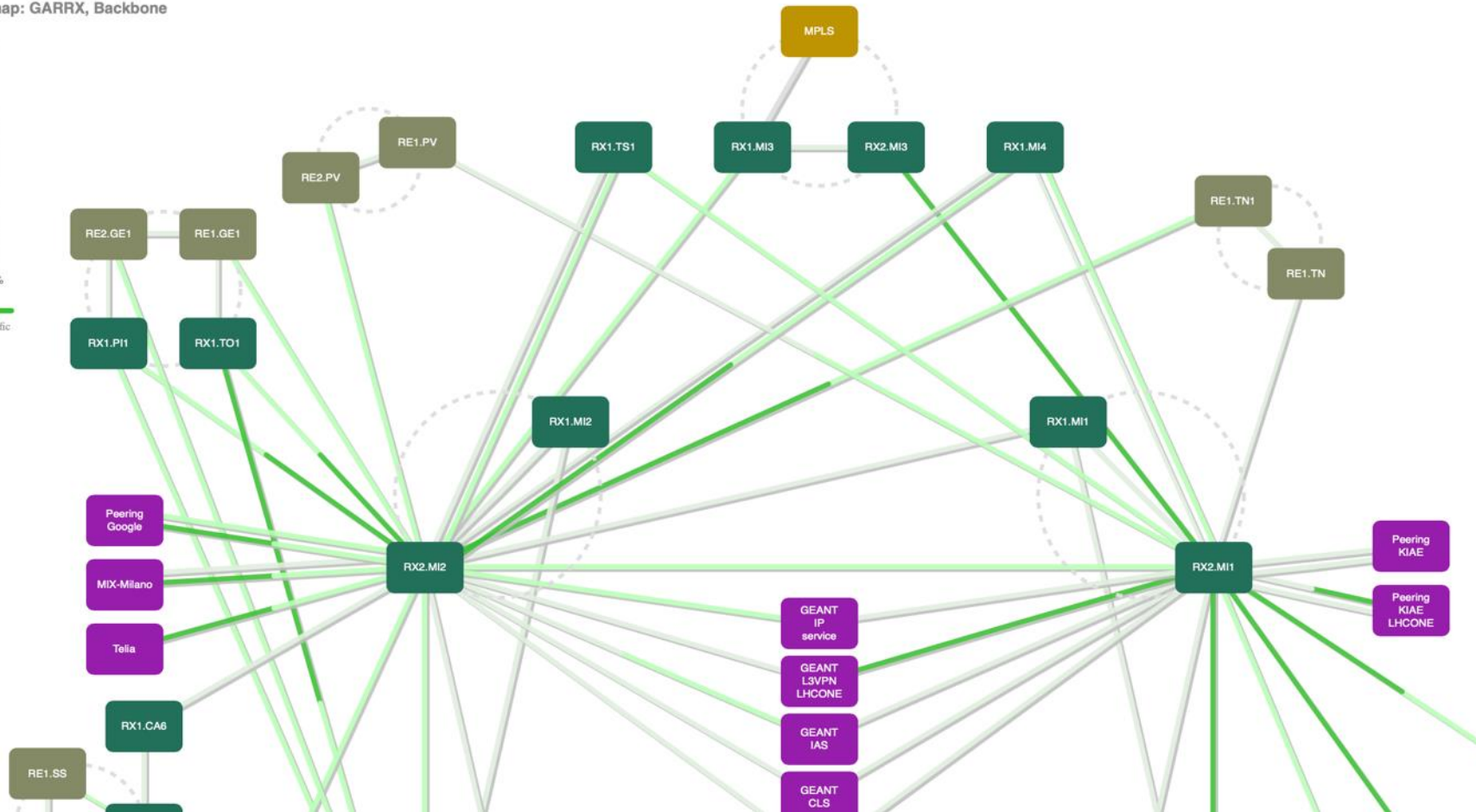
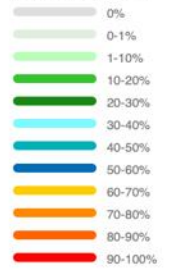


Or...
Lots of
Stop &
Go

Current network weather maps are useful for bulk data transfer!

GARR Weathermap: GARRX, Backbone

Load percentage



RT Applications which need “cruise control” ON are on fast rise!



- **LoLa**

And we have others:

**Ultragrid
MVTP**

...

What do we need to check?



Bandwidth:
3 x 450Mbps

Latency (RTT):

- 15ms
- 25ms
- 37ms

Jitter:

- 1.01ms
- 0.97ms
- 1.10ms

But also clocks' time drift, and other parameters...

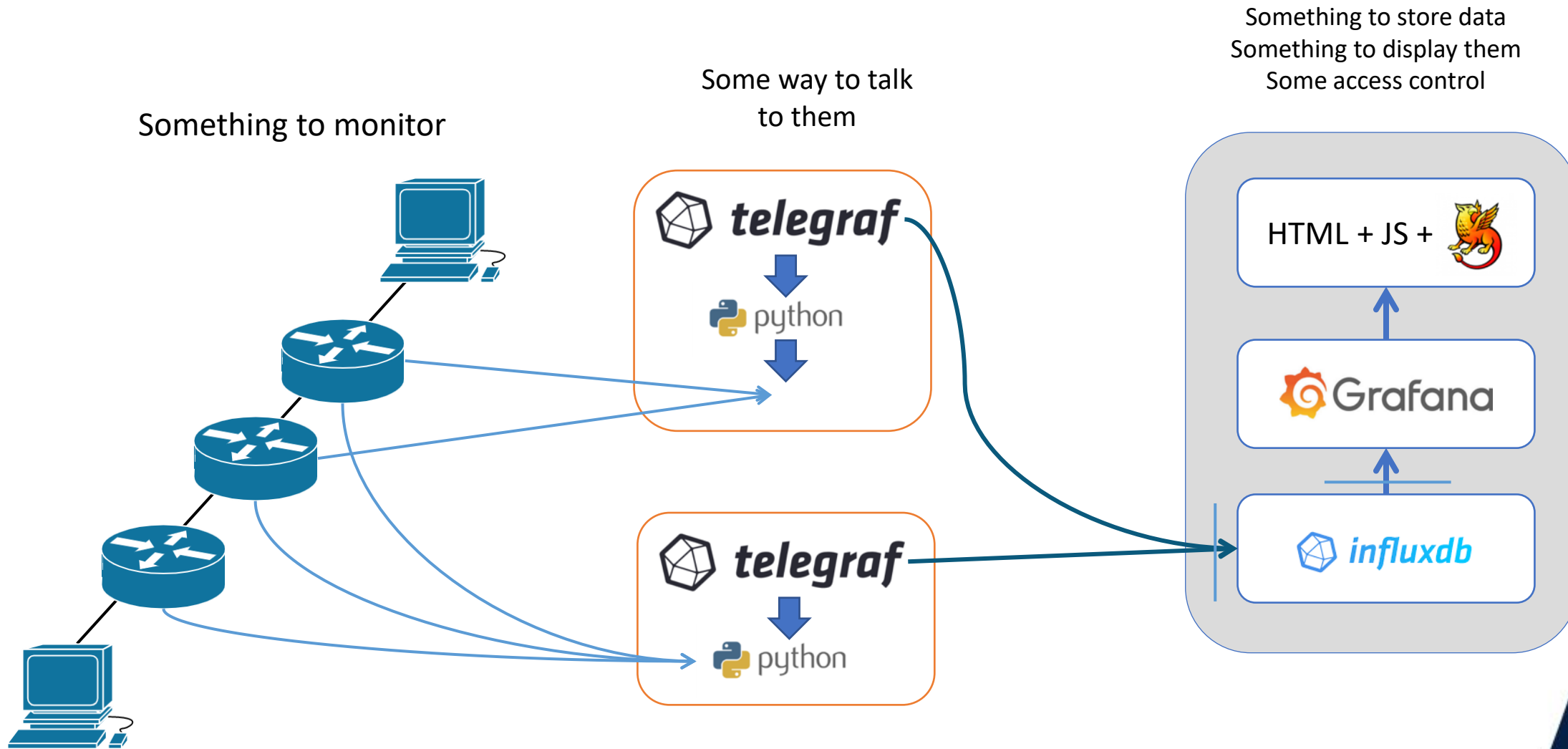
Monolithic Monitoring Systems need a lot of development and support

- Shall we change approach?
 - Can we be light, flexible and adaptive?
 - Can we be abstract and generic enough?
 - Can we just have “others” to do most of the job?



TimeMap!

What is a monitoring system?

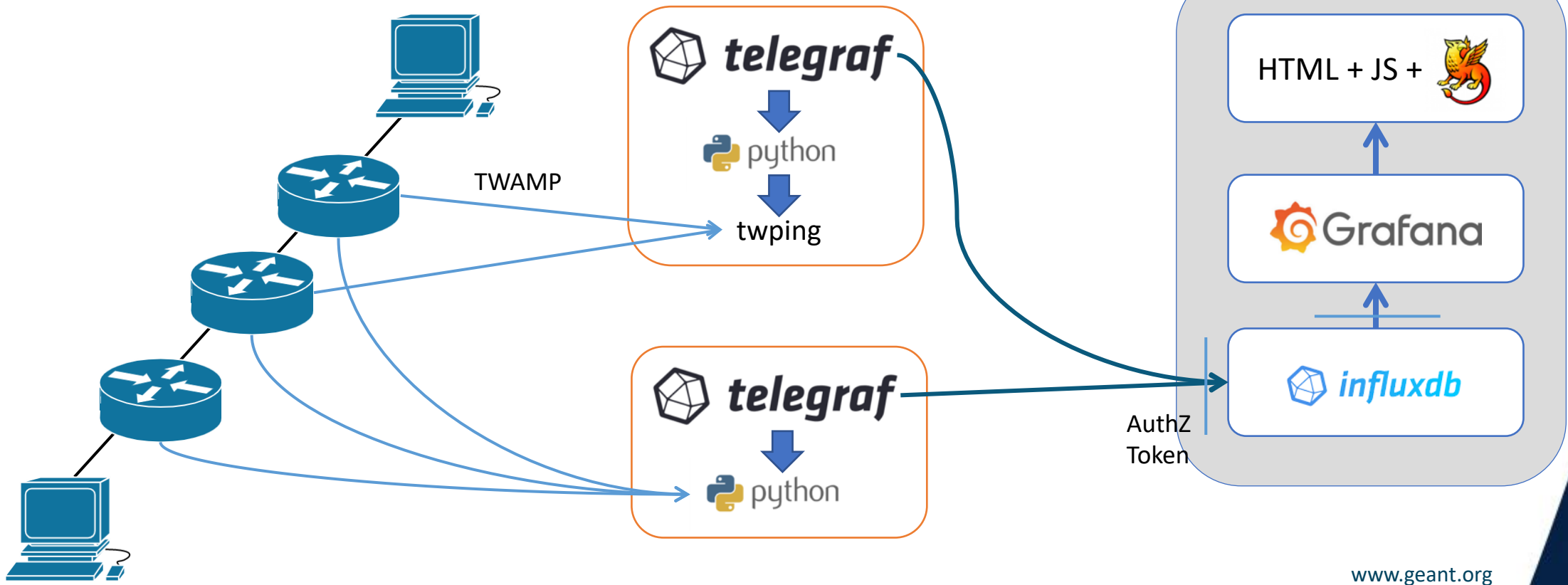


TIMEMAP architecture – the universal core

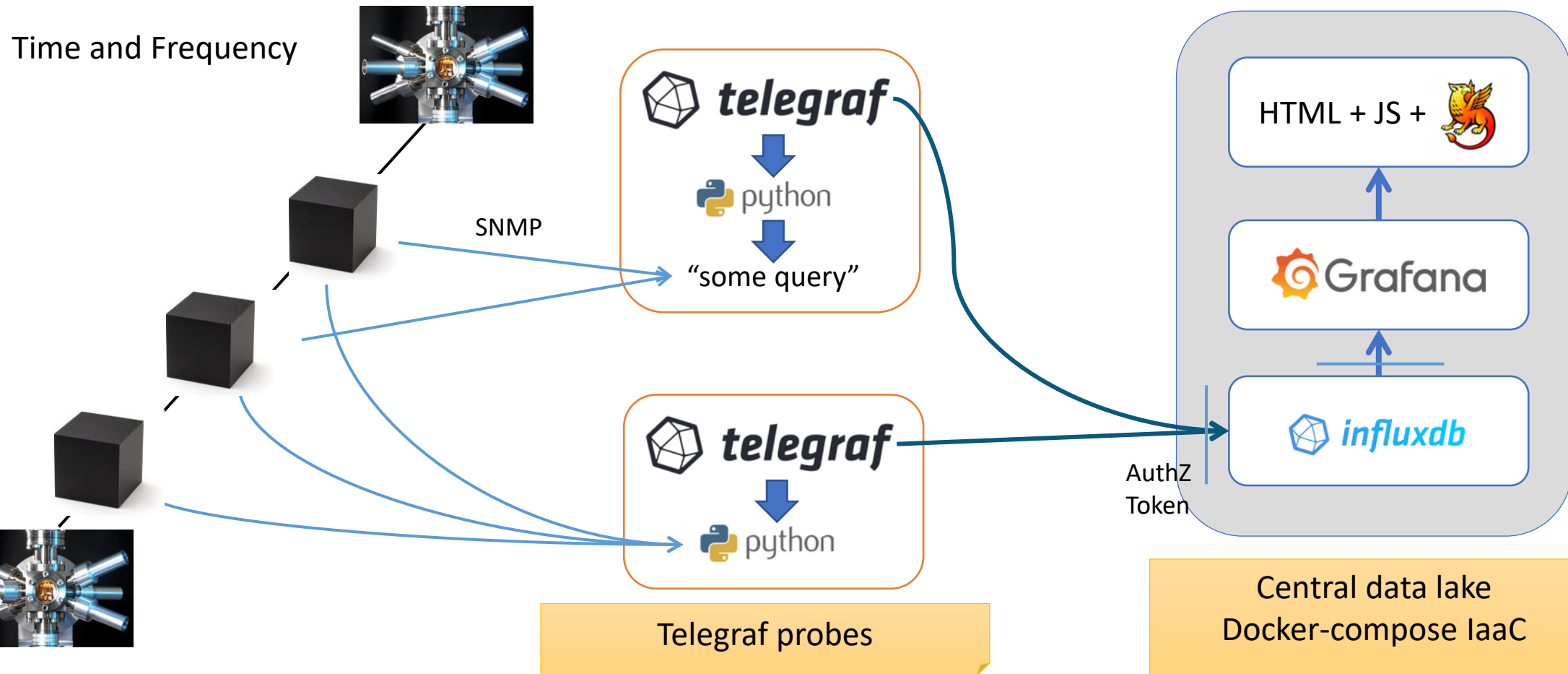
Jitter and latency,...

telegraf probes

Central data lake
Docker-compose IaaC

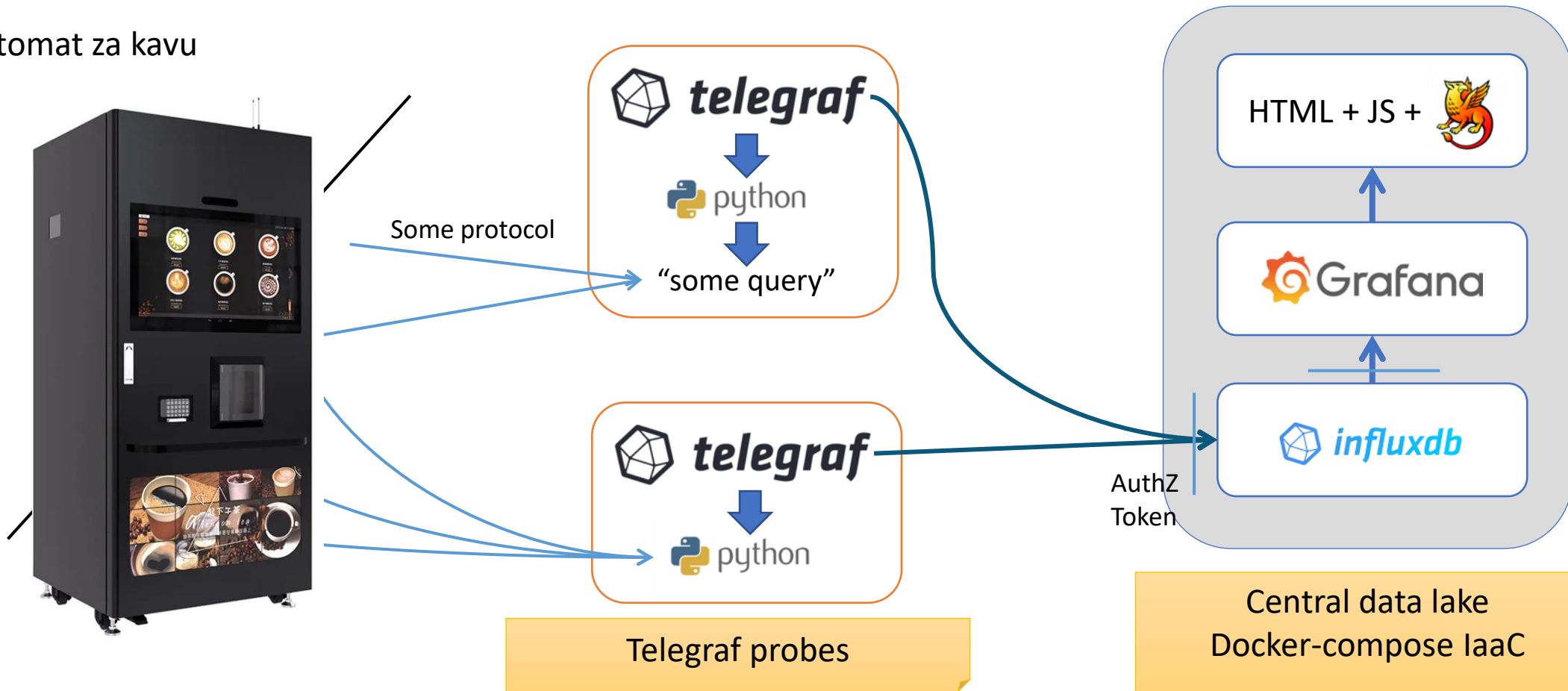


TIMEMAP architecture – the universal core OTFN



It can monitor whichever device providing data

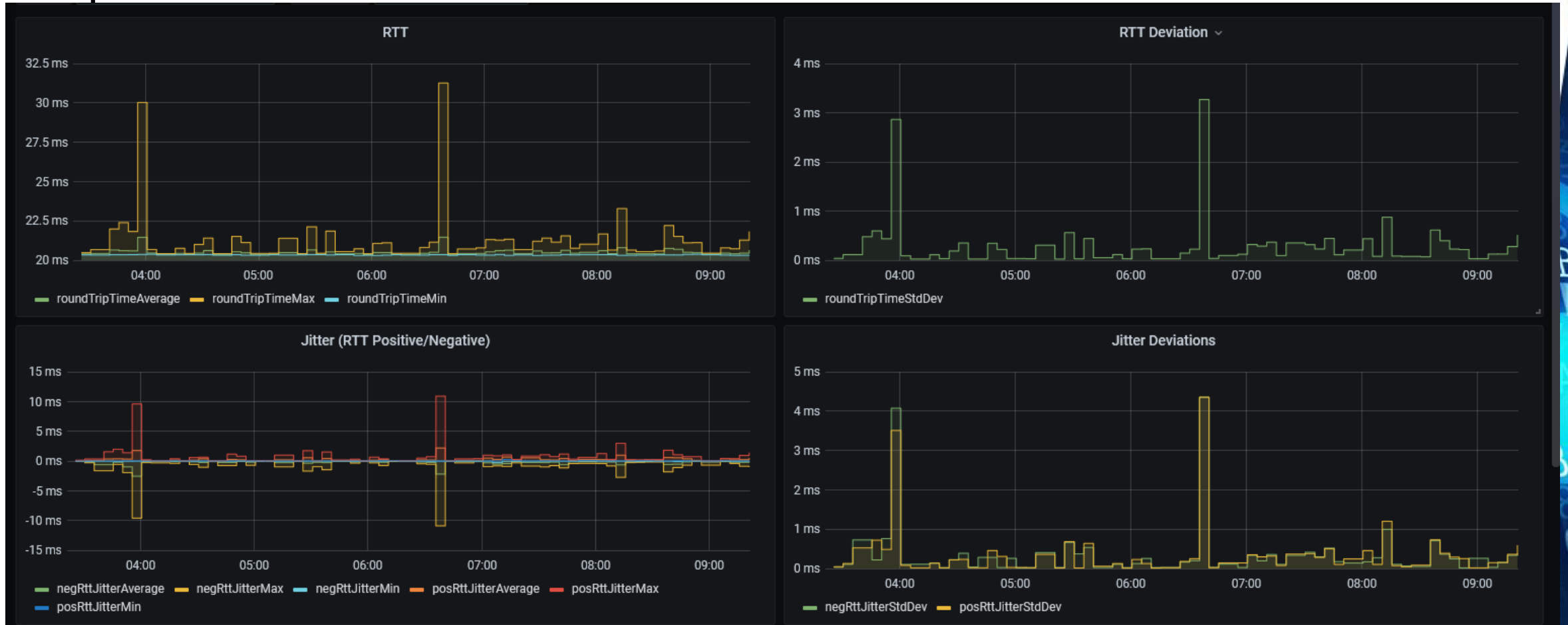
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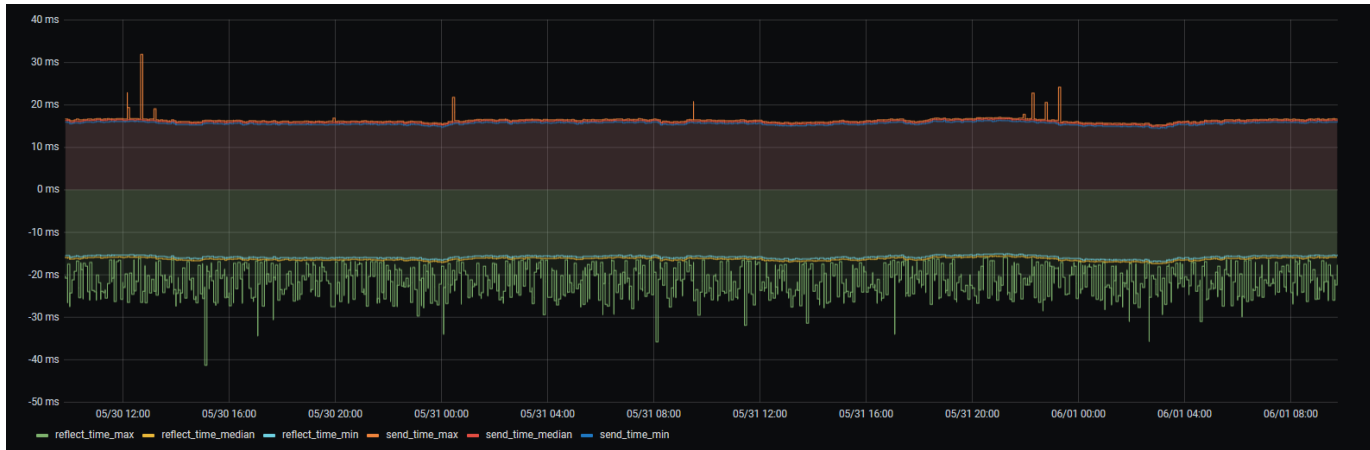
Timemap (latency-jitter) main features

- Latency & Jitter data collection
- Simplicity: almost zero footprint
 - Docker + standard Linux packages, minimal custom code
- Security and flexibility
 - eduGAIN federated authentication
 - multi-tenancy in Grafana and InfluxDB
 - R/W authorization token for APIs

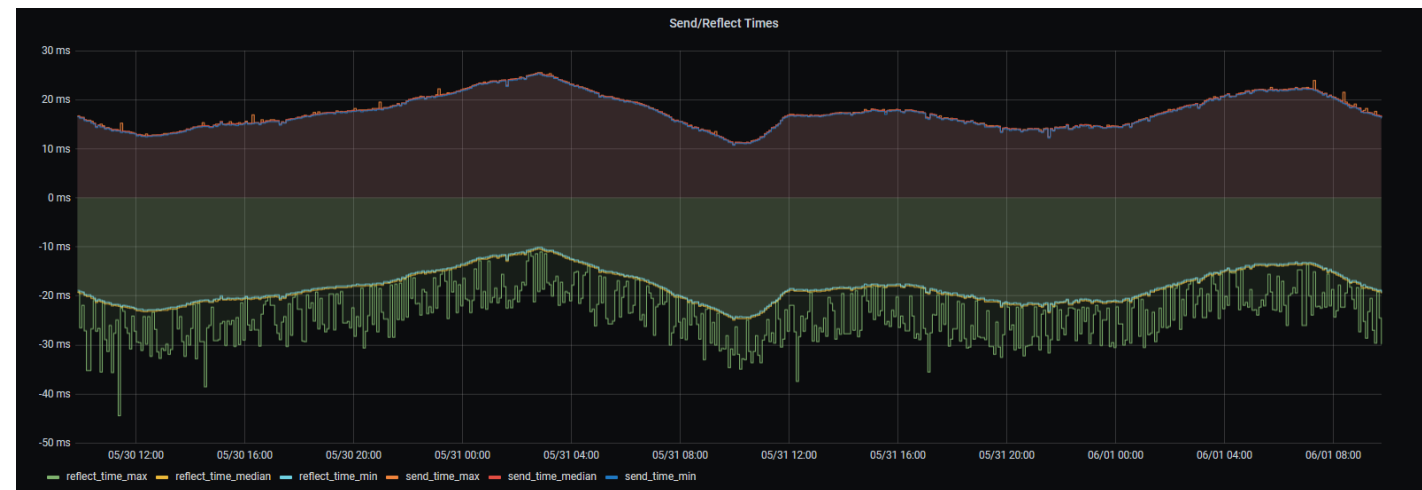
Timemap useful examples: rerouting and periodic events



Timemap useful examples: trends



False negative issue,
after long investigation



Hvala!

Any questions?

https://gitlab.geant.org/gn4-3-wp6-t1-lola/timemap_public

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