



Sharing Network Telemetry Data between NRENs and R&E organisations

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Scope of this session

- The growing interest in sharing network telemetry data
 - Use cases for sharing network telemetry data
 - Challenges
 - Next steps
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- We have a very short deck, and a quick menti, to allow time for your comments and discussion

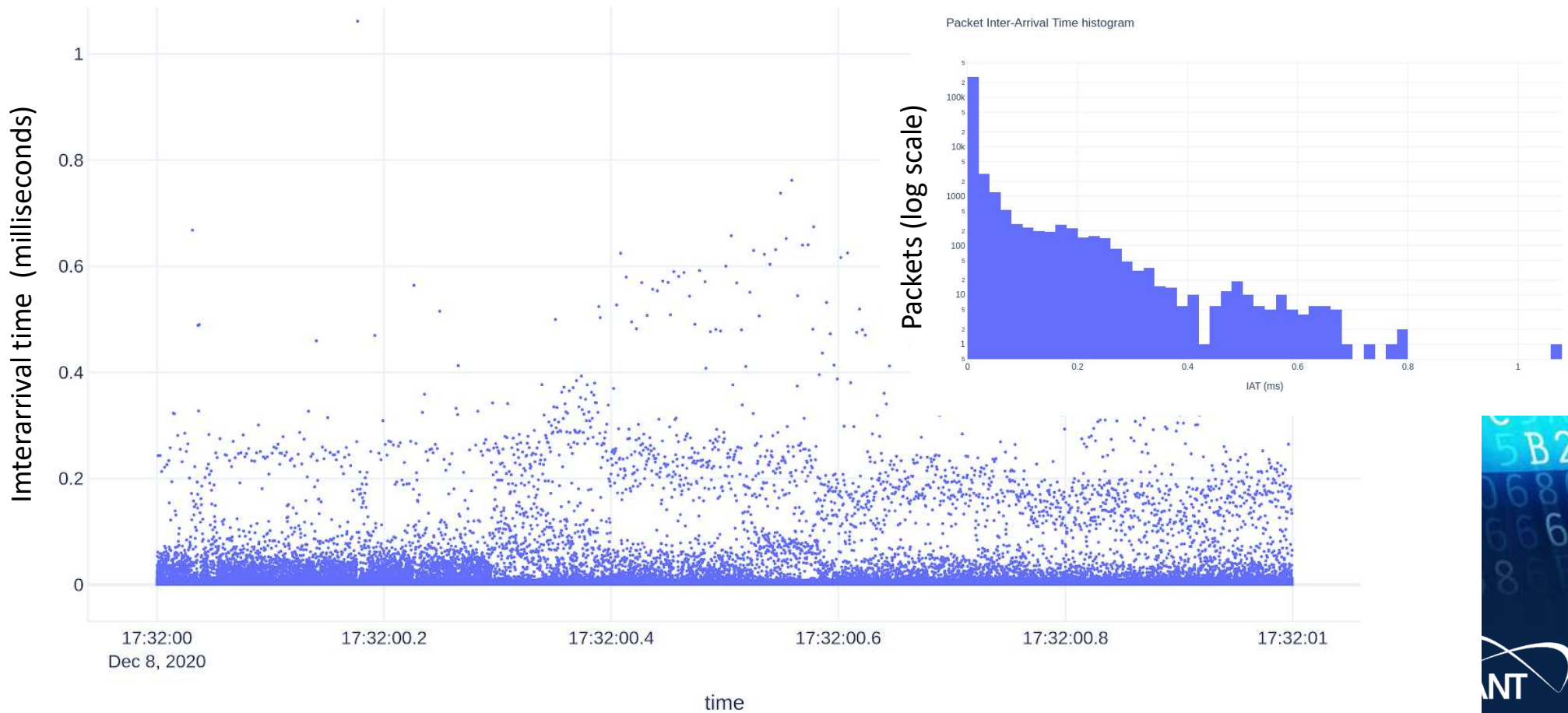
Can we identify a set of use cases beyond security?

- Analysis of large-scale data transfer performance
 - Work by I2 perf WG, extending to a Utah-Imperial case study
 - Sharing specific data from devices on multi-domain e2e path
 - Initial work uses a limited set of MIB data (buffers, errors, discards, CPU, ...)
- Analysis of jitter for real-time applications
 - LoLa subtask work in GN4-3 project – PoC view: <https://timemap.geant.org>
 - Latency/jitter “weather map” for GÉANT/NRENs backbones
 - Sharing TWAMP latency and jitter measurements
- Others...?
 - Perhaps taking shared control plane decisions in response to observed network events or congestion

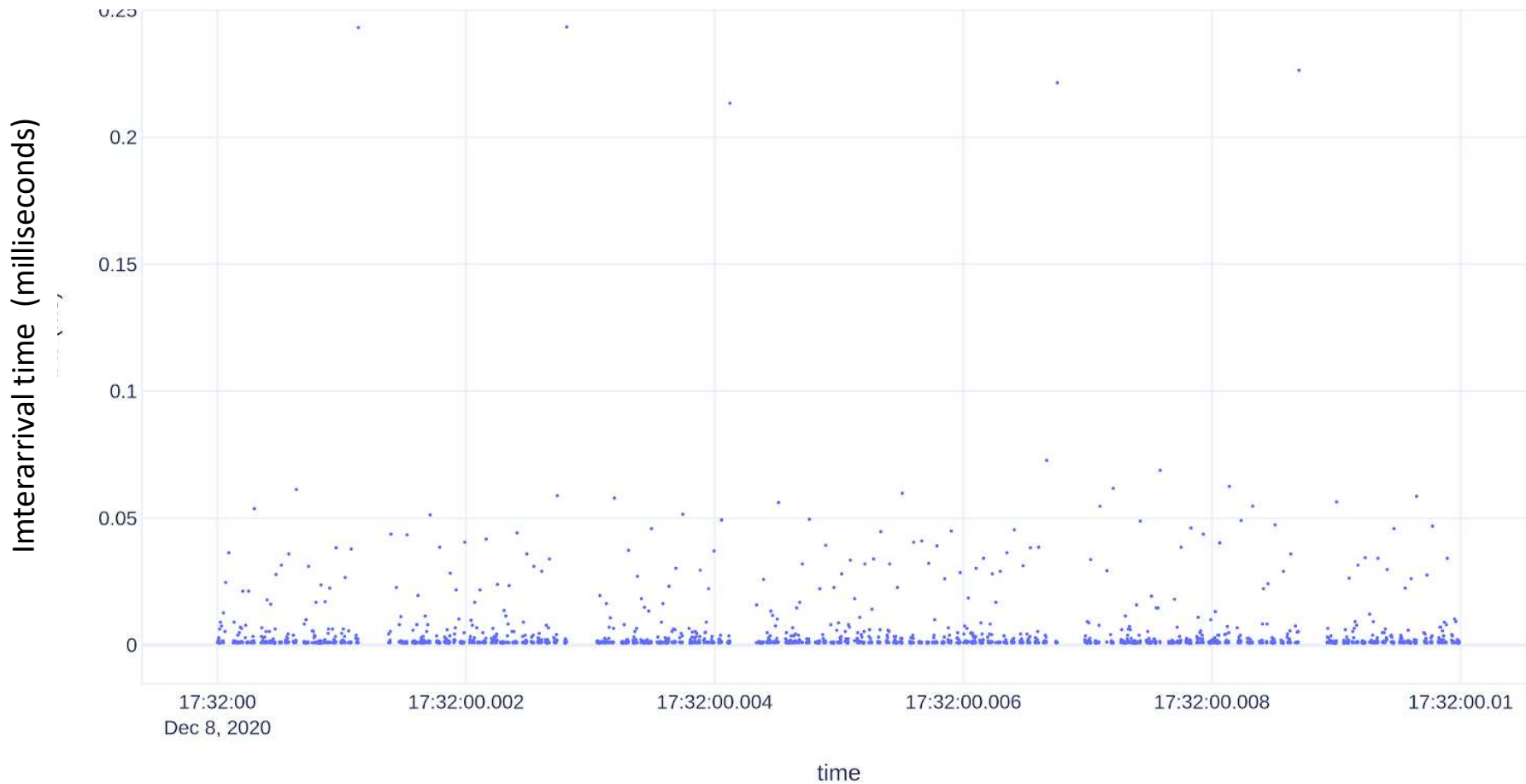
There are challenges

- Goal: build and share community knowledge on data analysis and best use of the vast set of available telemetry information
- What should the technical approach be?
 - Via secure and logged access to NREN back-end measurement databases, and/or via a collated “data lake”?
 - How does this scale?
 - e.g., telemetry “firehose”, high data rate per-packet INT collection
- Addressing privacy concerns?
 - What is the necessary identity and security infrastructure?
 - Handling trust and GDPR compliance
 - Appropriate data anonymisation where required
 - Where is the expertise in this in the community?

INT example: 1 second of interarrival packet time for a UDP flow of 260 K packets / second (4 microseconds average) between two NRENs



10 milliseconds of interarrival packet time for a UDP flow of 260 K packets / second (4 microseconds average)



What are your views?

- Hopefully these few slides have primed some discussion
- Before that, a quick menti poll...
- Please go to: <https://www.menti.com/>
- And enter code **26 16 411**

Open discussion...

- Comments and suggestions?
- Next steps - what should we do, as a community?
- How can the GN4-3 project help?

If you are interested to participate (work!) on the topic...

- Please contact
 - gn4-3-wp6-wpls@lists.geant.org



Thank you

Any questions?

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