

MetraNOVA

An Open Source Software Stack for Sharing Network Telemetry

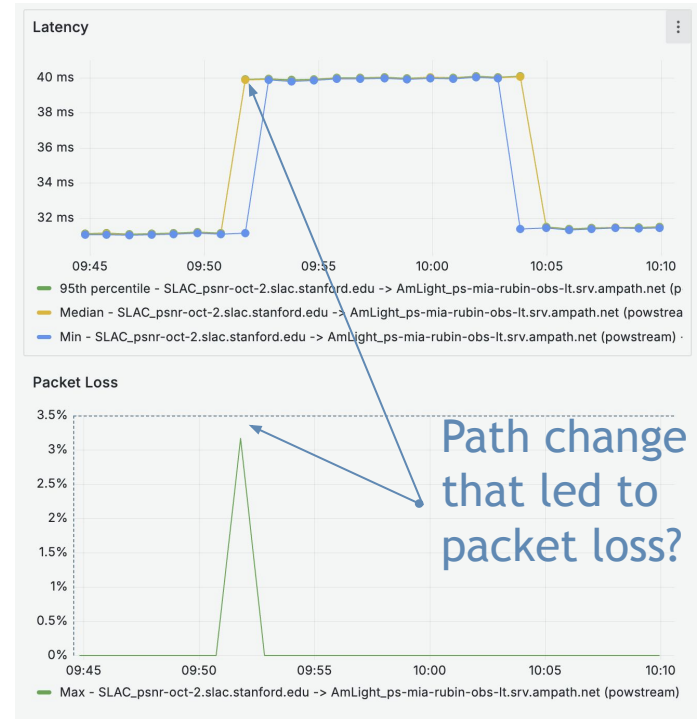
Andy Lake - ESnet
TNC26 Network Latency BOF - June 9th, 2026





Zooming in on a typical case...

- Something interesting clearly happened
- I can only see my network and no obvious path changes
- What do I do now?
 - Do the other networks have public portals?
 - Do I create a ticket somewhere...even though I am not sure where the problem is?
 - Do I know someone that can help?
 - Do I just ignore it and hope users didn't notice?



Can we do better?



What is MetrANOVA?

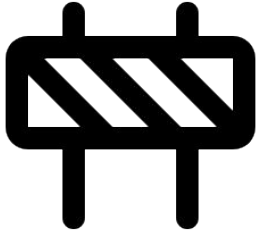
Open source software stack for collecting and storing **flow**, **SNMP** and **streaming telemetry** data

Key Features:

- **Free and open source** always
- **Easy to deploy** at small and large scales
- Easy to integrate **metadata from multiple sources**
- Hooks to **share data responsibly** between organizations



MetrANOVA's Mission



1. **Lower the barriers of entry to get relevant network measurement data**



2. **Advocate for end-to-end network measurements with appropriate access within all of R&E**



Consortium Participants (alpha order)

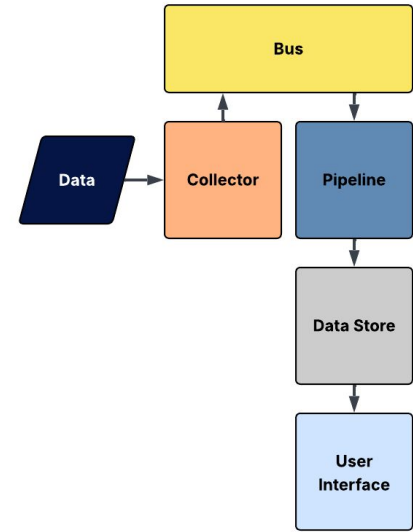




Active Workstreams

1. Develop Network Measurement Software Stack
 - a. Lowerer barrier to entry for both big and small deployments
 - b. Leverage prior work with NetSage, Stardust, etc
 - c. **Data Store** and Ingest Pipeline primary focus at this stage
 - i. Elasticsearch and Logstash used in past
 - ii. Both very effective but resource intensive
 - iii. Need something more thrifty and performant

2. Develop a data sharing policy framework
 - a. Support goal of enabling end-to-end visibility
 - b. Provide requirements for stack developers



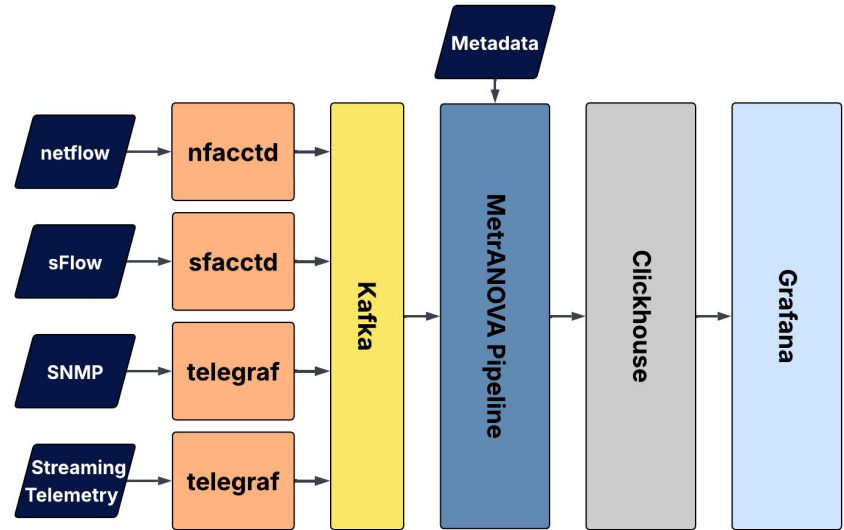
Network Measurement Stack

1. Collect data
2. Normalize and enrich
3. Store for retrieval
4. Analyze and present



Building the MetrANOVA Stack

- Support common network measures such **netflow**, **sFlow**, **SNMP** and **Streaming Telemetry**
- Easy to deploy package
- Support for custom metadata
- Pre-built dashboards for common use cases
- Containerized deployment





Debugging Latency

- Tools like perfSONAR and TimeMap are good at showing latency events
- What do people use to diagnose **the cause** of the problems?
 - Traffic stats?
 - Queue stats and similar from SNMP/Streaming Telemetry?
 - BGP or other routing data?
 - Ticketing/Maintenance Calendar data?
 - Heuristics?
 - What else?



[Website](#)

[Mailing List](#)

Questions?