pS TWAMP monitoring with Juniper routers

GÉANT Operations experience

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perfSONAR is developed by a partnership of

Agenda

- Current implementation for GÉANT Operations
- Measurement result details
- Implementation challenges TWAMP
- Implementation challenge RTT
- Future for GÉANT Ops dashboard
- Possible pS future improvements

Current implementation

- Considerations
  - 37 Juniper routers with TWAMP reflectors to test against
  - Regular testing
  - Non-intrusive to the network
  - GÉANT pS deployment, benefit of the partners

- A dashboard and a measurements history

Measurement result details

- Misses and expectations on graph
  - Single result for the forward one-way delay and loss measurement

- Added RTT tests

- Comparison LoLa team implementation
  - pS based TWAMP

Implementation challenges: TWAMP

- TWAMP test type
  - Latency (only)
  - class Normal
  - pS MaDDash: loss alerts

- pScheduler management challenge
  - 37x (10s + 5s) / 30min = 10min / 30min = 1 / 3 of the time

- pSconfig hint on slip time
  - pS MaDDash stability

- Time synchronisation

Implementation challenges: RTT

- RTT test type
  - RTT
  - class Background
  - pS MaDDash: loss alerts

- pSconfig management challenge
  - Number of runs to schedule
  - 37x 6x 24h = 5 328 at pSconfig run
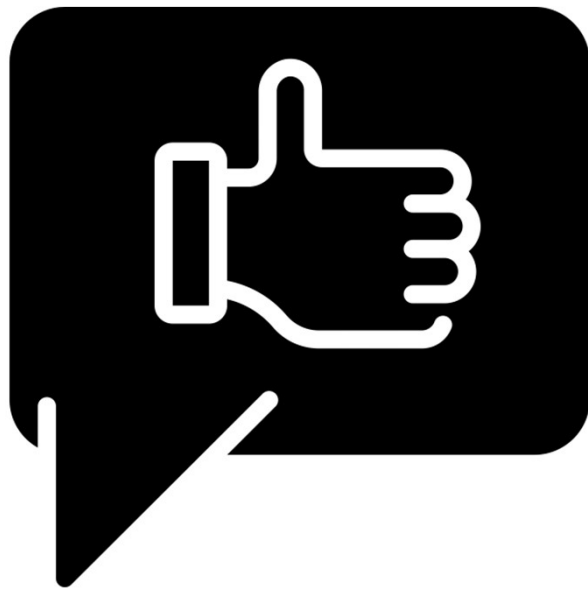
- Time synchronisation

Future for GÉANT Ops dashboard

- Juniper routers are being upgraded with TWAMP
  - Measurements in between routers only

- Solution aims at a full map coverage
  - https://timemap.geant.org/
  - Grafana + Elasticsearh / InfluxDB

Possible pS future improvements

- Collection and/or submission of all TWAMP measurement results
  - pScheduler server
  - pScheduler Test plugin
  - pScheduler Archiver plugin

- "background-multi" test implementation for
  - TWAMP
  - RTT

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Thanks!

For more information,
please visit our web site:
https://www.perfsonar.net

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