2nd Performance Management Workshop

Report of Contributions

Contribution ID: **1**   Type: **not specified**

100G tests between GEANT, SURF and RNP

Tuesday, 8 March 2022 14:15 (15 minutes)

Over the last three months, we have been running network performance tests involving perf-SONAR hosts in Europe, Brazil and USA. We have
also compared results with tests run on a test bed with four hosts connected to a switch.

One special case of our tests involved testing the new Bela link that connects Europe (through Portugal) to Brazil at 100G. We were aiming to identify routing problems, and to obtain maximal throughput with a minimum of retransmits. We tested the effect of different congestion of algorithms, socket length and MTU.

We report sustained throughput from Netherlands to Fortaleza above 96Gbps. We present cases of limited performance between 100G hosts and try to identify the reasons for low performance.

Presenter: LOPES, Raul (JISC)

Session Classification: High speed network monitoring

Contribution ID: **2**　　　　　　　　　　　　　　　　　　　Type: **not specified**

Data Mover Challenge (DMC) 2021 report

Tuesday, 8 March 2022 14:30 (15 minutes)

Presenters:　HOWARD, Andrew (Australian National University, Australia);　CHOWN, Tim (JISC)

Session Classification:　High speed network monitoring

Contribution ID: **3**   Type: **not specified**

Achieving 100 Gigabit Performance

Tuesday, 8 March 2022 14:45 (15 minutes)

The talk will present the tests and measurements made on 100 Gigabit network infrastructure using TCP/IP. It will cover three domains: between end sites in the UK and Italy, between Latin America and Europe using the EllaLink Submarine Cable, and transfers between Australia to Europe to support SKA using both a path via the US and a path on the CAE1 link.

Presenter: HUGHES-JONES, Richard (GEANT)

Session Classification: High speed network monitoring

Contribution ID: **4** Type: **not specified**

Q&A

Tuesday, 8 March 2022 15:00 (10 minutes)

Session Classification: High speed network monitoring

Contribution ID: **5** Type: **not specified**

PMP data analytics

Tuesday, 8 March 2022 15:20 (15 minutes)

Performance Measurement Platform explores performance of the GÉANT backbone while experiencing perfSONAR on small nodes. In our work we explore the possibilities of using machine learning algorithms on perfSONAR collected data in order to detect network anomalies.

Presenter: HRBOKA, Ljubomir (CARNET)

Session Classification: Analytics and correlation

Contribution ID: **6** Type: **not specified**

AI/ML based path optimisation

Tuesday, 8 March 2022 15:50 (15 minutes)

Presenters: BURAGLIO, Nichloas (ESnet); CAMPBELL, Scott (ESnet)

Session Classification: Analytics and correlation

Contribution ID: **7**   Type: **not specified**

SAND project

Tuesday, 8 March 2022 16:15 (15 minutes)

Presenter: MCKEE, Shawn (University of Michigan)

Session Classification: Analytics and correlation

Contribution ID: **8** Type: **not specified**

NetSage

Tuesday, 8 March 2022 16:30 (15 minutes)

NetSage is an open privacy-aware network measurement, analysis, and visualization service designed to address the needs of today's international networks. Modern science is increasingly data-driven and collaborative in nature, producing petabytes of data that can be shared by tens to thousands of scientists all over the world. NetSage services provide an unprecedented combination of passive and active measurements, including SNMP data, flow data, and tstat-based traffic analysis, perfSONAR, and longitudinal network performance data visualization. Several new applications of the NetSage framework are being explored for campus use, upcoming HL-LHC data challenges, and as the basis for other monitoring platforms such as ESnet's Stardust. This talk will explain how NetSage operates, its current applications, and plans for future development.

Presenter: SOUTHWORTH, Doug (Indiana University)

Session Classification: Analytics and correlation

Contribution ID: **9** Type: **not specified**

Stardust

Tuesday, 8 March 2022 16:45 (15 minutes)

Presenter: LAKE, Andrew (ESNET)

Session Classification: Analytics and correlation

Contribution ID: **10** Type: **not specified**

Q&A

Tuesday, 8 March 2022 17:00 (10 minutes)

Session Classification: Analytics and correlation

Contribution ID: **11** Type: **not specified**

Wrap up

Tuesday, 8 March 2022 17:10 (5 minutes)

Session Classification: Analytics and correlation

Contribution ID: **12**   Type: **not specified**

Detecting anomalous latency and jitter in Timemap

Tuesday, 8 March 2022 15:35 (15 minutes)

Timemap is a real-time monitoring tool to collect, visualize and analyze latency and jitter. Timemap is collecting data from the Géant backbone devices since April 2021. Recent Timemap updates introduce support for streaming ML anomaly detection. In this talk we will introduce the algorithms adopted in Timemap, the usability improvement enabled by the new feature and we will discuss some detection performance aspects.

Presenter: FARINA, Fabio (GARR)

Session Classification: Analytics and correlation

Contribution ID: **13** Type: **not specified**

Q&A

Tuesday, 8 March 2022 16:05 (10 minutes)

Session Classification: Analytics and correlation