

# perfSONAR activities in GÉANT Project Work Package 6 Task 3

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#### **Overview**

- GÉANT Project Overview
- Network Technologies and Services Development Work Package
- GÉANT and perfSONAR
- perfSONAR
- perfSONAR Consultancy and Expertise
- Performance Measurement Platform



## **GÉANT Project**

**GÉANT's vision** is to ensure equal network access for all scientists across Europe to the research infrastructures and the e-infrastructure resources available to them.

A part of the European Union's Horizon 2020 research and innovation programme

- GÉANT 2020 Framework Partnership Agreement (FPA)
- Grant Agreement No. 731122 GN4-2
- 40 partners, 500 contributors
- 50 M users
  - GN4-3 starts 1 Jan 2019 as 4 year project



## **GÉANT Project Structure**

WP2 Communications

WP3 Stakeholder engagement

WP4 Online services dev & delivery

Task1

Service delivery:

platform

WP5 T&I services evolution & dev

Task1

T&I Services

Task2

T&I Incubator

Task3

T&I Operational

Support

WP6 Network technologies & services dev

Task1

Net technology

evolution

Task2

Net services

evolution & dev

WP7 Net Core Infr & Core Service **Evolution & Ops** 

Task1

Network

**Engineering &** 

**Implementation** 

Task2

Network

**Evolution &** 

**Future Planning** 

WP8 Security

Task1

Business

Continuity

Task2 Security Baselining

Task3 Products and Services

WP9 Operations Support

Task1 Operations Centre including CERT

Task2 Software Governance and Support

Task3 Service Management

Development and Operations

Task1 Communications Graphic Design

> Task2 Services Marketing

Task3 Event Management

Task1 Partner Relations

Task3

Intelligence

Gathering

Task4

Community

Programme

Task2 Task2 Research Service delivery: Engagement business desk

> Task3 Service dev: video conferencing

Task4 Service dev: cloud offerings

T&I Enabling

Task4

Task3 Monitoring & Management

Task3 Implementation of the Fibre IRU Project

Communities

Task4 **GEANT Software** 

Task5 Service adoption support

4

#### **Network Technologies and Services Development Work Package**

- Project code Work Package 6 (WP6)
- WP Leaders:
  - Tim Chown Jisc
  - Ivana Golub PSNC
- WP6 budget: > 6,2 mil EUR
- 78 team members from 32 organisations from 23 countries
- 3 Tasks + Management task (Task 0)
  - Task 1: Network Technology Evolution TL: Xavier Jeannin (Renater)
  - Task 2: Network Services Evolution and Development TL: Roman Lapasz (PSNC)
  - Task 3: Monitoring and Management TL: Task Leader: Pavle Vuletić (UoB/AMRES)



#### **GÉANT** and perfSONAR



- GÉANT contributing to the perfSONAR project
  - Since 2004
  - Working on current perfSONAR products from 2014 onwards
- 1 out of 5 perfSONAR project contributor, along with
  - ESnet
  - Indiana University
  - Internet2
  - University of Michigan
- Current effort: 2 FTE, 6 persons, 4 NREN



#### Recent and current GÉANT contributions to perfSONAR

- Debian/Ubuntu port
- TWAMP support (and thanks to external contributor)
- Ansible automation (with University of Michigan)
- Security review and improvements
- Using perfSONAR in new network topologies (MD-VPN)
- perfSONAR integration with vendor platforms
- Lookup Service content analysis
- Traceroute visualisation
- Documentation, training and support globally
- Dissemination in the GÉANT area



#### perfSONAR footprint in Europe



April 2019



#### perfSONAR Consultancy and Expertise

- Provides support and disseminate knowledge about perfSONAR usage for the GÉANT community
  - Helping to fit measurement architectures and infrastructures based on perfSONAR with the needs of the requesting party.
  - Providing specific training and running workshops on perfSONAR deployment, usage and best practices.
  - Providing **extra support** to assist GÉANT and NRENs deploy and operate perfSONAR, as requested.



#### **PMP: Performance Measurement Platform**

- AKA perfSONAR Small Nodes in GÉANT
  - Launched in 2016
  - Initially 20 nodes in NREN and Universities Europe and Africa
  - ~ 200 EUR per device
- GÉANT project run the perfSONAR infrastructure
- 1 central archive and MaDDash
- Latency, Loss, Trace and Throughput measurements from the pS nodes towards the GÉANT core network



#### **PMP** future



- Currently being extended to 50 nodes
- To cover all GÉANT participating NREN (~40)
- Ready to also expand the scope:
  - More diversity in the measurements
  - Different tool set
  - New projects
  - While keeping it a production level service
- http://perfsonar-smallnodes.geant.org/maddash-webui/





# Thank you

Any questions?

www.geant.org



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