

Network Technologies and Services Development

GN4-3 WP6

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Agenda

- GÉANT Project Overview
- Network Technologies and Services Development GN4-3 Work Package



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)





• 50 M users



• GN4-3 starts 1 Jan 2019 as 4 year project



GÉANT Project Structure

WP2 Communications Task1 Communications Graphic Design Task2

Services

Marketing

Task2 Research Engagement

Task3

Task3 Intelligence Event Management Gathering

> Task4 Community Programme

WP3 Stakeholder engagement

> Task1 Task1 Service delivery: Partner Relations platform

> > Task2 Service delivery: business desk

WP4

Online services

dev & delivery

Task3 Service dev: video conferencing

Task4 Service dev: cloud offerings

Task5 Service adoption support

WP5 T&I services evolution & dev

> Task1 **T&I Services**

Task2 T&I Incubator

Task3 **T&I Operational** Support

Task4 T&I Enabling Communities

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

WP6

Network

technologies &

services dev

Task1

Net technology

evolution

Task2

Net services

evolution & dev

Task3

Monitoring &

Management

Task1 Network Engineering & Implementation

Task2 Network **Evolution & Future Planning**

Task3 **Implementation** of the Fibre IRU Project

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

Task4 **GEANT Software Development** and Operations



GÉANT Project Structure

WP2 Communications

WP3 Stakeholder engagement

WP4 Online services dev & delivery

WP5 T&I services evolution & dev

WP6 Network technologies & services dev

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

WP8 Security

WP9 Operations Support

Task1 Communications Graphic Design

Task1 Partner Relations

Task1 Service delivery: platform

Task1 T&I Services

Task1 Net technology evolution

Task1 Network Engineering & Implementation

Task1 Business Continuity

Task1 Operations Centre including CERT

Task2 Services Marketing

Task2 Research Engagement

Task2 Service delivery: business desk

Task2 T&I Incubator

Task2 Net services evolution & dev

Task2 Network **Evolution & Future Planning**

Task2 Security Baselining

Task2 Software Governance and Support

Task3 Event Management

Task3 Intelligence Gathering

Task3 Service dev: video conferencing

Task3 **T&I Operational** Support

Task3 Monitoring & Management

Task3 **Implementation** of the Fibre IRU Project

Task3 Products and Services

Task3 Service Management

Task4 **GEANT Software Development** and Operations

Task4 Community Programme

Task4 Service dev: cloud offerings

Task4 T&I Enabling Communities

Task5 Service adoption support

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
- 33 organisations from 25 countries
- 76 team members



WP6 Structure

- 3 Tasks + Management task (Task 0)
- Task 1: Network Technology Evolution
 - Task Leader: Xavier Jeannin (Renater)
- Task 2: Network Services Evolution and Development
 - Task Leader: Sonja Filiposka (MARnet)
- Task 3: Monitoring and Management
 - Task Leader: Pavle Vuletić (UoB/AMRES)



Task 1: Network Technology Evolution

- Working with the community (NRENs, GÉANT partners and operators, interested campuses, etc.) to build and maintain a direction for new network technology development
- Identifying and prototyping potential new technologies
- Developing successful prototypes towards a full service
- Identifying research and/or development activities that could help enhance production application services and infrastructure
- Topics:
 - LoLa, White box, OCN, T&FINFRA, QK(D&E), Data plane programmability



Task 2: Network Services Evolution and Development

- Working with the community (NRENs, GÉANT partners and operators, interested campuses, etc.) to build and maintain a direction for new service development
- Evaluating existing services and their usage for particular use cases
- Exploring mechanisms to orchestrate and automate the deployment and management of services
- Continuing the work on Service provide architecture (SPA) from GN4-2 JRA2 T2
- Extending and further developing Service Ordering Portal
- Identifying opportunities for the deployment of new network services.



Task 3: Monitoring and Management

- Working with the community (NRENs, GÉANT partners and operators, interested campuses, etc.) to build and maintain a direction for network monitoring and management;
- Continued development and evolution of monitoring and management tools:
 - perfSONAR, NMaaS, NetMon, WiFiMon
- Campus network monitoring and management



We would like to hear from you

White box

OCN

QK D&E

DTN

Data Plane Programmability

Orchestration

Automation

Virtualisation

perfSONAR

Monitoring

NMaaS

Performance Monitoring

NetMon

Telemetry

Campus Network Management

- What do you have
- What do you use and how
- What would you like to have
- What would you recommend
- What would you (try to) avoid

• ...





Thank you

Any questions?

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