COMMUNICATION PLATFORM FOR TENDERS OF NOVEL TRANSPORT NETWORKS



HIGHLIGTS

Newsletter No. 5

With the sixth COMPLETE newsletter project partners present dissemination and promotion activities undertaken at the major conferences for public network operators and researchers: TNC2017 and the 9th CEF Workshop.

This issue is concluded with a detailed report from a technical presentation and trial performed by PSNC during the TNC17 conference in Linz (Austria).

The presentation was focused on the Software-Defined Packet-Optical Networking specifically the multi-layer network coordination that is a powerfull tool for the network operators. It reduces time-to-market, automates network operations and removes operational difficulties.

Dear Readers,

With the latest newsletter we would like to present an update of dissemination/promotion activities of the COMPLETE project at the two major conferences, targeting the audience from network operators and researchers working in the networking field. The Project Consortium presented during the conference a technical showcase in the area of Software-Defined Packet-Optical Networking—The Joint Packet-Optical SDN Demonstration.

The project main concept is to create support and communications platform in the area of PPI/PCP procedures for Public and Government Institutions, Bodies, Organizations and Agencies. The platform delivers information regarding latest and future solutions in the area of optical networking. The series of newsletters present the latest information regarding the project, future roadmaps of vendors and information about the needs expressed by Procurers, i.e. operators of public networks.

Your sincerely,

Bartosz Belter, the Project Coordinator

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The Art of Creative Networking



The TNC17 Networking Conference is the largest and most prestigious European research networking conference, with more than 650 participants attending this annual event. TNC brings together decision makers, managers, networking and collaboration specialists, and identity and access management experts from all major European networking and research organisations, universities, worldwide sister institutions, as well as industry representatives.

The 33rd edition of TNC17 was hosted by the Austrian Academic Computer Network (ACOnet), the Austrian National research and education network (NREN) for science, research, education, and culture. The conference was held in the picturesque, UNESCO City of Media Arts of Linz, Austria between 29 May - 2 June 2017.

The workshop organized by COMPLETE gathered around 60 people in the plenary room. The workshop was opened by Bartosz Belter (PSNC), the project coordinator, who detailed the current framework of public procurements, the workshop agenda and the expected outcomes. Next, Lieve Bos from the European Commission presented the overview of the Innovation Procurement program, highlighting key instruments the EC uses to help public procurers the adoption and implementation of PCP instruments in their organizations. Building upon the background information presented by Lieve, Sara Bedin, an independent expert, gave a detailed overview of PCP/PPI procedures and explained practical ways of implementing PCP for beginners. The remaining part of the workshop was dedicated to demonstrating success stories from existing projects, including PRACE-3IP (presented by Rudolf Vohnut, CESNET) and ROWANet (presented by Petr Pavlinec, ROWANet). The workshop was concluded with open discussion led by Chrysostomos Tziouvaras, GRNET, where researchers and network managers received useful tips and hints from the experts about PCP and PPI. For more information please refer to the conference website: https://tnc17.geant.org/.



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The Joint Packet-Optical SDN Demonstration at TNC17

Multi-layer network coordination is a powerful tool for network operators. It reduces time-to-market, automates network operations and removes operational difficulties. It also increases overall network availability. In the case of packetoptical layer integration, it provides network topology awareness in the packet layer and means that fewer configuration steps are needed during service set up. Such packetoptical layer coordination is enabled by a software-defined network architecture and associated SDN controllers.

Juniper Networks and ADVA Optical Networking have been collaborating on joint packet-optical solutions for years and have achieved numerous customer wins. These solutions are the foundation of an SDN architecture that both companies are jointly releasing onto the market right now. The Demonstration included three use cases.

Use Case 1: Multi-Layer Visualization

- NorthStar connects to Network Hypervisor
- Network Hypervisor pushes abstract optical topology, including Shared Risk Link Group information, to NorthStar
- NorthStar displays topology of both IP and transport layers

Use Case 2: Diverse Shared Risk Link Group Label Switched Path Pair

 NorthStar provisions two SRLG diverse LSPs with abstract optical topology information from Network Hypervisor

Use Case 3: Fiber Cut

- Simulate fiber cut in optical network (and failure of associated IP links)
- Optical Network GUI visually shows failure
- Network Hypervisor pushes abstract topology update to NorthStar
- NorthStar visually shows failed optical link
- NorthStar visually shows new LSP path

The top level service running on the demonstration was live 8k video stream. The picture below presents the full schematic of the demonstration.



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9th CEF WORKSHOP

After a three-year break, CESNET organized , the 2017 edition of its popular Customer Empowered Fibre Workshop, on 12-13 September in Prague. This year's workshop title was "Support of new applications and disciplines requiring photonic or dark fibre connectivity". The COMPLETE project was represented by Rudolf Vohnout from CESNET, who gave a presentation about "the optimal approaches to procure optical transmission technology". The purpose of the presentation was not only to raise awareness of the PCP/PPI advantages but also to introduce and promote the use of these procurement tools at the R&E ecosystem.

The presentation was followed by an open discussion about investigating best approaches to reach users. The main conclusion drawn by the participants is that there are two different user approaches by NRENs: the direct approach of the user base (e.g. in person meetings, education workshops, on premise trainings, etc.) and the non-direct interaction with the users due to the lack of resources. NRENs that directly reach their users are those whose customers (universities, research institutions etc.) pay for the provided services, thus they do not hesitate to give valuable feedback, especially when they are not satisfied - personally (rare) or on request. On the other hand, NRENs that in most cases offer services paid directly by the government (i.e. where customers tend to have those network services for "free") are most often evaluated periodically by theirs sponsors (ministries), but there is no direct interaction among the services' provider and the users".

As pointed out by many speakers, new trends are emerging into the telecom market, such as. open line systems and full disaggregation, stemming from service, content providers and research community. Thanks to the community's requirements, vendors led innovation towards this direction.

Full agenda and presentations are available at:

https://www.cesnet.cz/cesnet/events/cef2017/?lang=en







