

PRESS RELEASE

European Industry Consortium Successfully Demonstrates SDN-based Reach Planning in a Multi-Vendor Optical Network Field Trial

Celtic-Plus Project SENDATE Simplifies Operations of Open Optical Networks

STOCKHOLM, Sweden, 19 September 2018 – SENDATE, the Celtic-Plus flagship project for secure networking of data centers in Europe, today announced successful completion of an [industry-first multi-vendor SDN field trial](#) featuring real-time planning of transparent high-speed services across a disaggregated, multi-domain optical network. The SENDATE trial showcased the critical role that standards-based SDN interworking and integrated planning play in simplifying operations and reducing end-to-end provisioning times in multi-domain, disaggregated optical networks.

Conducted this month in the Telia Company R&D lab in Stockholm with live connectivity to production network fibers, the multi-vendor, multi-domain trial included participation from optical networking and SDN solution suppliers and research partners, including ADVA, Coriant, highstreet technologies, VPIphotonics, and the RISE Research Institutes of Sweden.

“As new high-bandwidth end-user applications drive increased demand for photonic layer connectivity, service providers face the real-world challenge of provisioning across multi-vendor optical networks. Today these networks are operated as separate domains involving proprietary and mostly offline planning,” said Mauro Costa, Director Network and Infra Architecture, Telia Company. “An open and integrated approach to multi-domain service planning helps solve this challenge. In combination with SDN-based orchestration of multi-vendor transport elements, including open line systems, integrated and real-time service planning paves the way for a more agile and automated optical infrastructure capable of meeting stringent performance demands of new services, including 5G.”

Based on the SENDATE SDN Control Architecture, the multi-vendor trial configuration was designed to demonstrate end-to-end wavelength service activation between disaggregated transponders spanning SDN-enabled ADVA and Coriant optical domains. Use cases tested during the trial included dynamic optical reach planning using open APIs and SDN-enabled 100G and 200G alien wavelength provisioning across multi-vendor optical domains. The successful interworking leveraged an extension of the standardized ONF T-API interface significantly enhanced and extended with optical impairment capabilities for automated network planning. The SDN controller was based on OpenDaylight with an integrated photonic planning app running as a micro-service.

This work has been performed in the framework of Celtic-Plus project SENDATE by the sub-projects SENDATE-Secure-DCI and SENDATE-FICUS, and it is partly funded by the German Federal Ministry of Education and Research, BMBF, and the Swedish Governmental Agency for Innovation Systems, Vinnova.

For more information on the field trial, visit the VPIphotonics booth 302 at the ECOC exhibition on 24-26 September in Rome, Italy.

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About Celtic-Plus

Celtic-Plus is an industry-driven European research initiative to define, perform and finance through public and private funding, common R&D projects in the area of telecommunications, new media, future Internet, and applications & services focusing on a new "Smart Connected World" paradigm. Learn more at www.celticplus.eu.

About SENDATE

SENDATE, Secure Networking for a Data Centre Cloud in Europe, is a 70 million euro public-private partnership project comprising 83 companies, research organizations, and universities from Germany, France, Finland, and Sweden. The strategic goal of the three-year project is to address the current performance and security issues of data centers and pave the way to a more effective and secure network topology for data centers based on de-localization and secure connectivity. SENDATE aims to create a secure, flexible and efficient control of data flows on the Internet in Europe. The project runs from April 2016 to May 2019 under Celtic-Plus, the EUREKA Cluster for a Smart Connected World, and is partly publicly funded by the research ministries/ agencies BMBF (Germany), DGE (France), TEKES (Finland), and VINNOVA (Sweden). Learn more at www.sendate.eu.

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