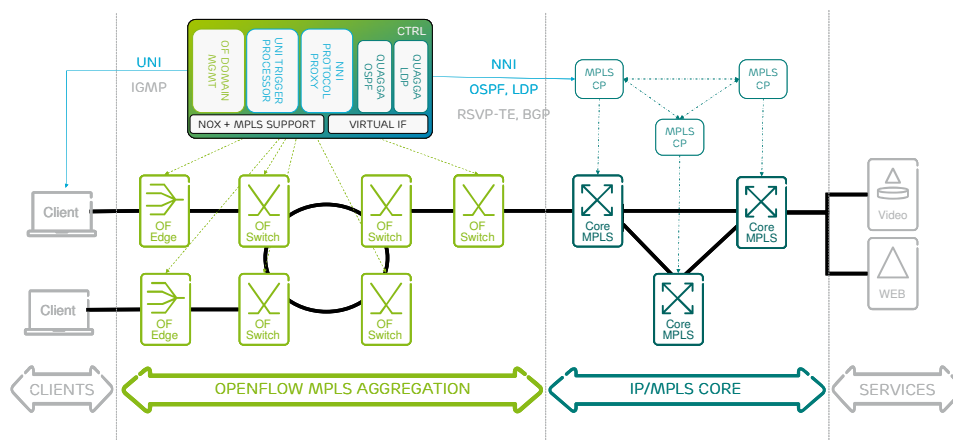




Split Architecture: OpenFlow based MPLS access/aggregation network – *DEMONSTRATOR*

András Kern, Zoltán Lajos Kis, Dávid Jocha, Attila Takács – Ericsson Research
Pontus Sköldström, Viktor Nordell – Acreo AB
E-mail: andras.kern@ericsson.com

The "Split architecture carrier grade networks" (SPARC) 7th framework EU project (<http://www.fp7-sparc.eu/>) aims at designing and prototyping a scalable control plane solution for public networks by splitting the control and forwarding functions. This is done by the use of an open interface between a centralized controller and a set of forwarding elements. The focus use-case is an MPLS based access and aggregation network and the inter-working with IP/MPLS based core network. Making use of open-source components, our proof-of-concept prototype demonstrates a semi-centralized control scheme, where a centralized controller manages an MPLS based aggregation domain and seamlessly inter-works with a legacy distributed MPLS core network.



In our demo we show (i) the connectivity setup across OpenFlow aggregation and the core IP/MPLS network, utilizing the OSPF and LDP protocols, (ii) a multicast video streaming with dynamic subscription/un-subscription and optimal transmission tree recalculation, and (iii) LLDP based controller driven restoration versus BFD based data plane managed protection.

Our NOX OpenFlow controller and Linux based soft-switch implementation of OpenFlow 1.1 will be available open-source. Please send request for more information to andras.kern@ericsson.com.