Multi-Vendor Interoperability Testing Results Update to MPLS WG

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Multi-Vendor Interoperability Test Areas
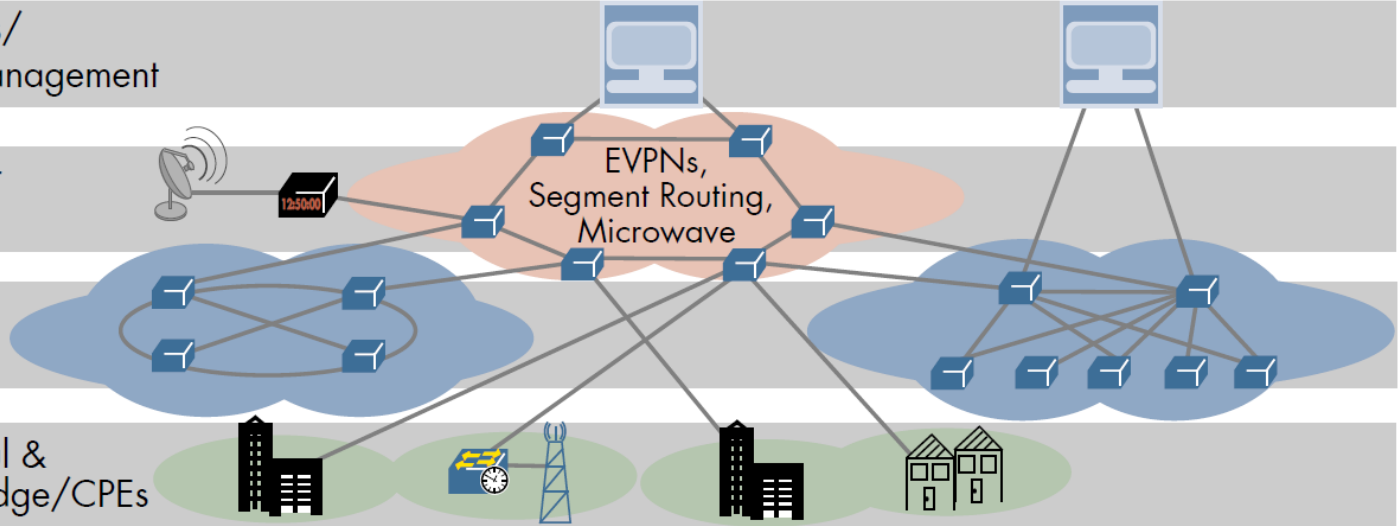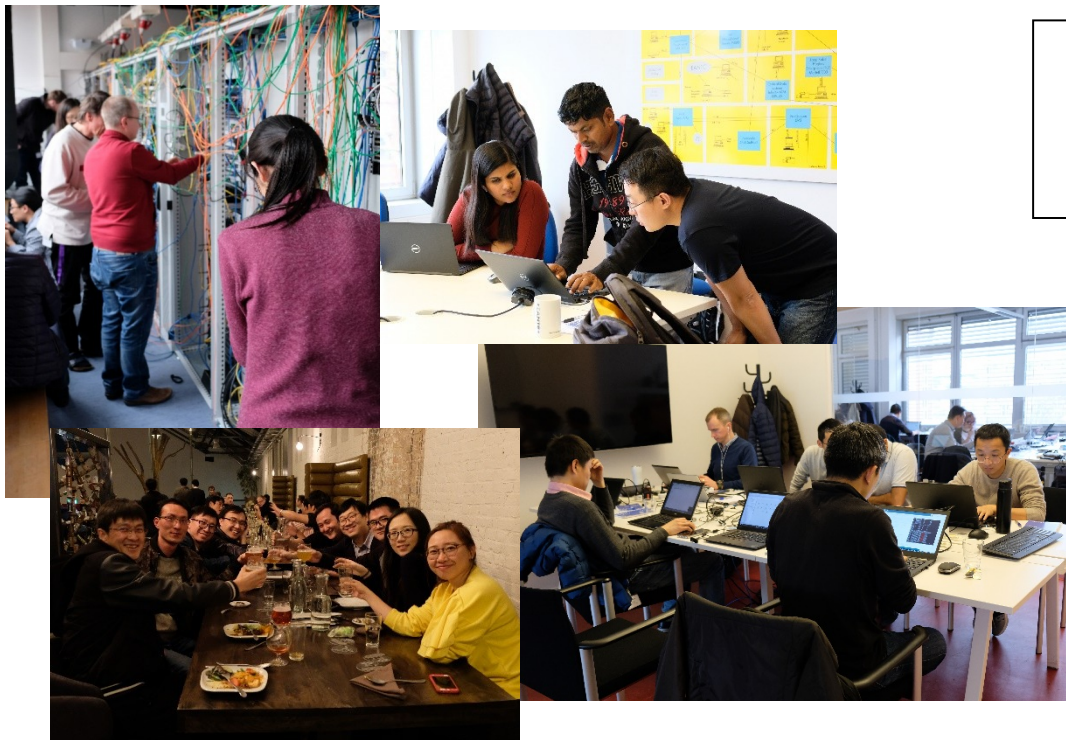
Hot Staging

March 5-16: Hot Staging
at EANTC, Berlin
with 21 vendors,
75 engineers

March 2018 > April 2018

MPLS+SDN
+NFVVORLD
@PARIS2018

- IETF standard: RFC 8287

- LSP Ping and Traceroute for SR IGP-prefixes with MPLS data plane

- IS-IS with SR extensions configured in all test runs

- Eight vendors initially participated in the test but only three of them achieved successful results

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Segment Routing – LSP Ping/Trace Test Coverage
Setup

- We setup two ring topologies
- In the first one we verified LSP Ping and traceroute mechanisms
  - Additionally, we introduced a network failure between Node 1 and Node 2 to verify the ping/traceroute function
- On the second setup, we only verified the Ping mechanism
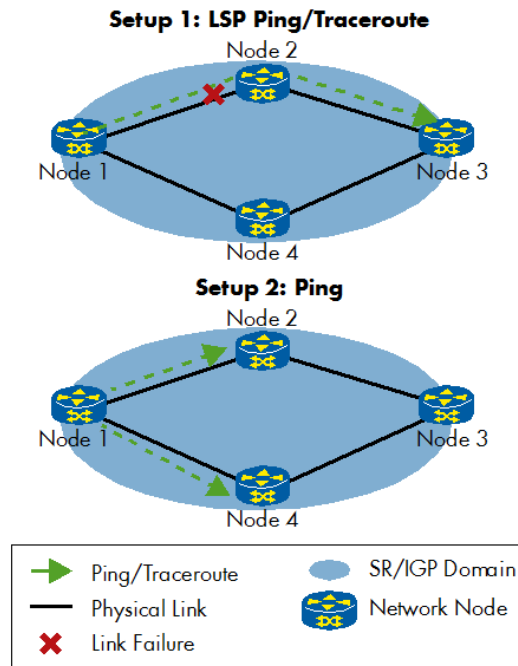
Figure 7: LSP Ping/Traceroute

Segment Routing – LSP Ping/Trace
Findings

- One vendor claimed to support "single-hop" ping/traceroute only
  - Effectively supporting one-hop ping probes only
- We found different interpretations of the sub-TLV type/Length in Fec Stack TLV for SR LSPs
  - Some vendors claimed that the standard does not say clearly whether to consider the reserved octets to be part of the length or not

Vendor Name	Sub-Tlv Type Encoded	Sub-Tlv Length Encode	Protocol
Vendor A	34	6	0 (Any)
Vendor B	34	8	2 (ISIS)
Vendor C	34	8	2
Vendor D	34	8	1(OSPF) // Vendor Fix pending
Vendor E	31744	8	6 //Vendor claim not having full support for it.
Vendor F	31744	6	2

MPLS+SDN+NFV World Congress 2018

Detailed white paper with all results will be published on April 10th

www.eantc.de/en/showcases/mpls_sdn_2018

In addition to mplswg, drafts of other IETF WGs were covered:

- 6man (for SRv6)

- rtg (for segment routing)

- spring (for PCE)

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