

Ethernet Services over Transport MPLS (T-MPLS)

Italo Busi

Alcatel (Editor of G.8110.1)



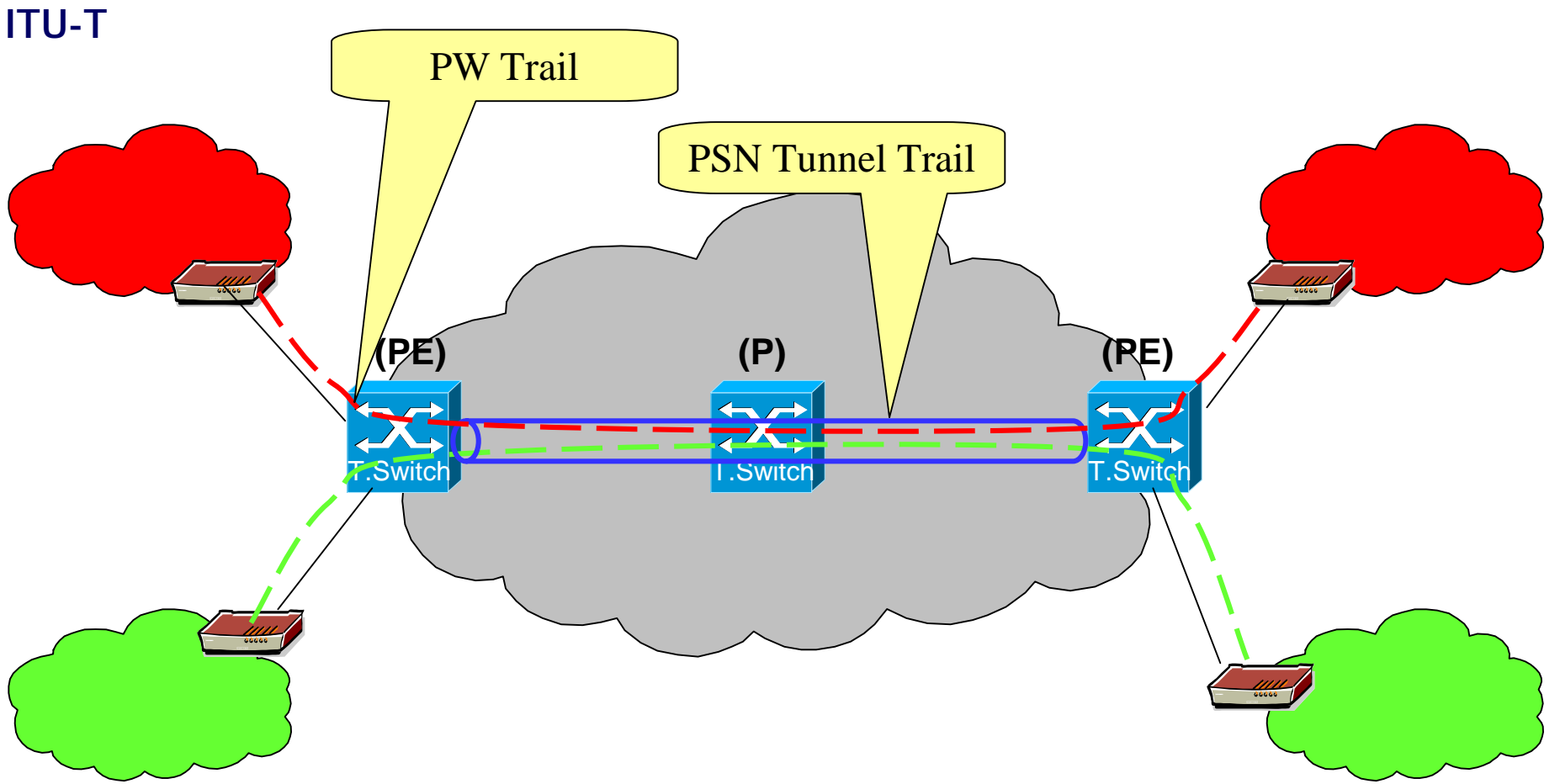
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Introduction to Ethernet services over T-MPLS

- Transport MPLS has been defined by ITU-T as an application of the MPLS technology for packet transport networks.
- Ethernet services have been defined by G.8111.x ITU-T Recommendation series as well as by MEF Technical Specification
 - Ethernet services are defined irrespectively on the transport network technology that is used to support them
- Transport MPLS is a packet-based transport network technology well suited to support Ethernet services



- Transport MPLS networks can be used to implement the following services:
 - Point-to-point EPL/EVPL based on MEF E-Line (point-to-point EVC)
 - Multipoint EVPLAN (Ethernet Virtual Private LAN) based on MEF E-LAN (multipoint EVC)
 - Rooted multipoint Services based on MEF rooted multipoint EVC
- The implementation of Ethernet services with T-MPLS benefit from the Transport MPLS of being both
 - a packet technology (i.e. better fitting the nature of packet services like Ethernet)
 - a transport technology (i.e. a carrier-grade technology supporting OAM and protection switching capabilities).



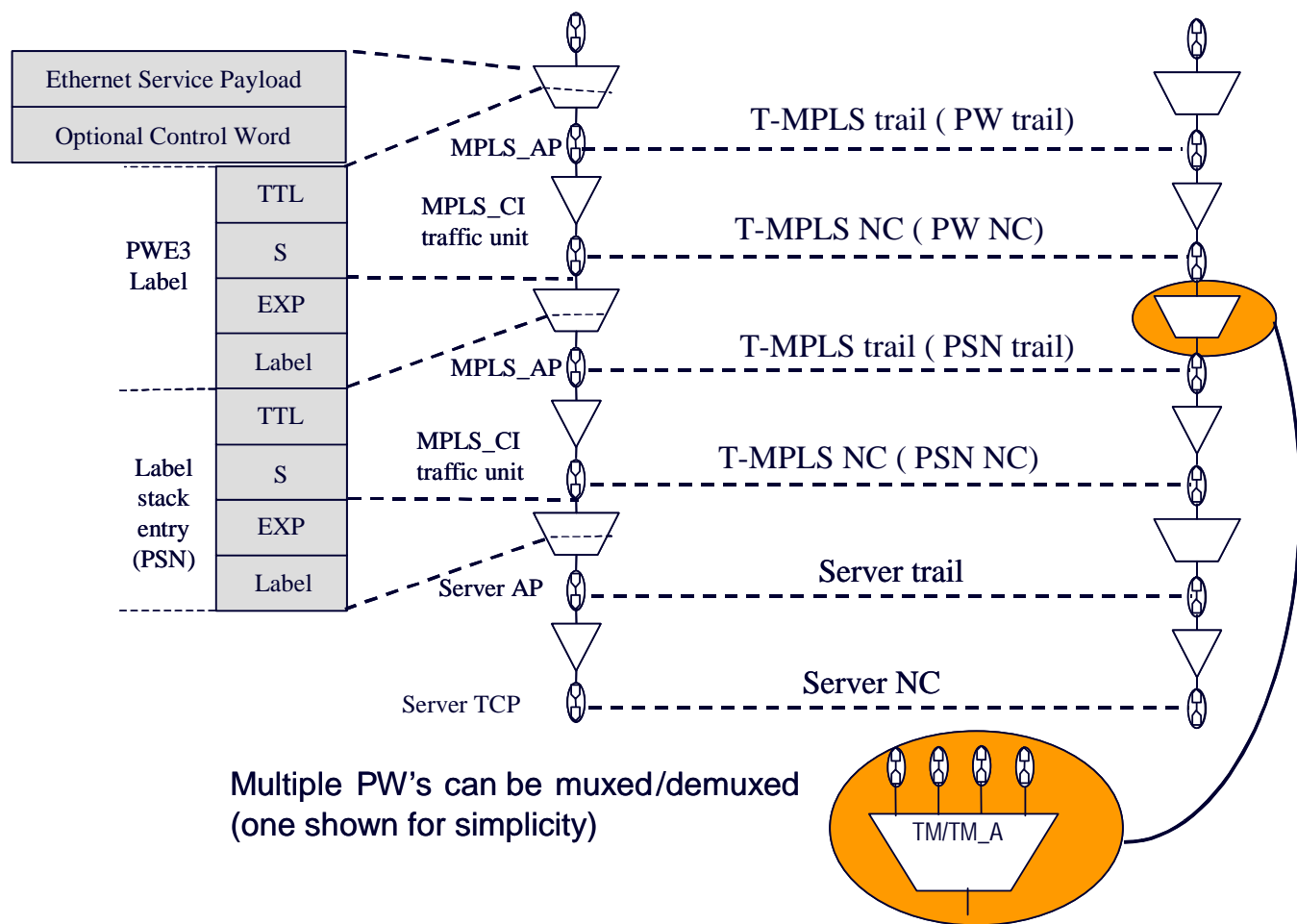
PW architecture defined in RFC3985

PW application in T-MPLS networks defined in appendix I/G.8110



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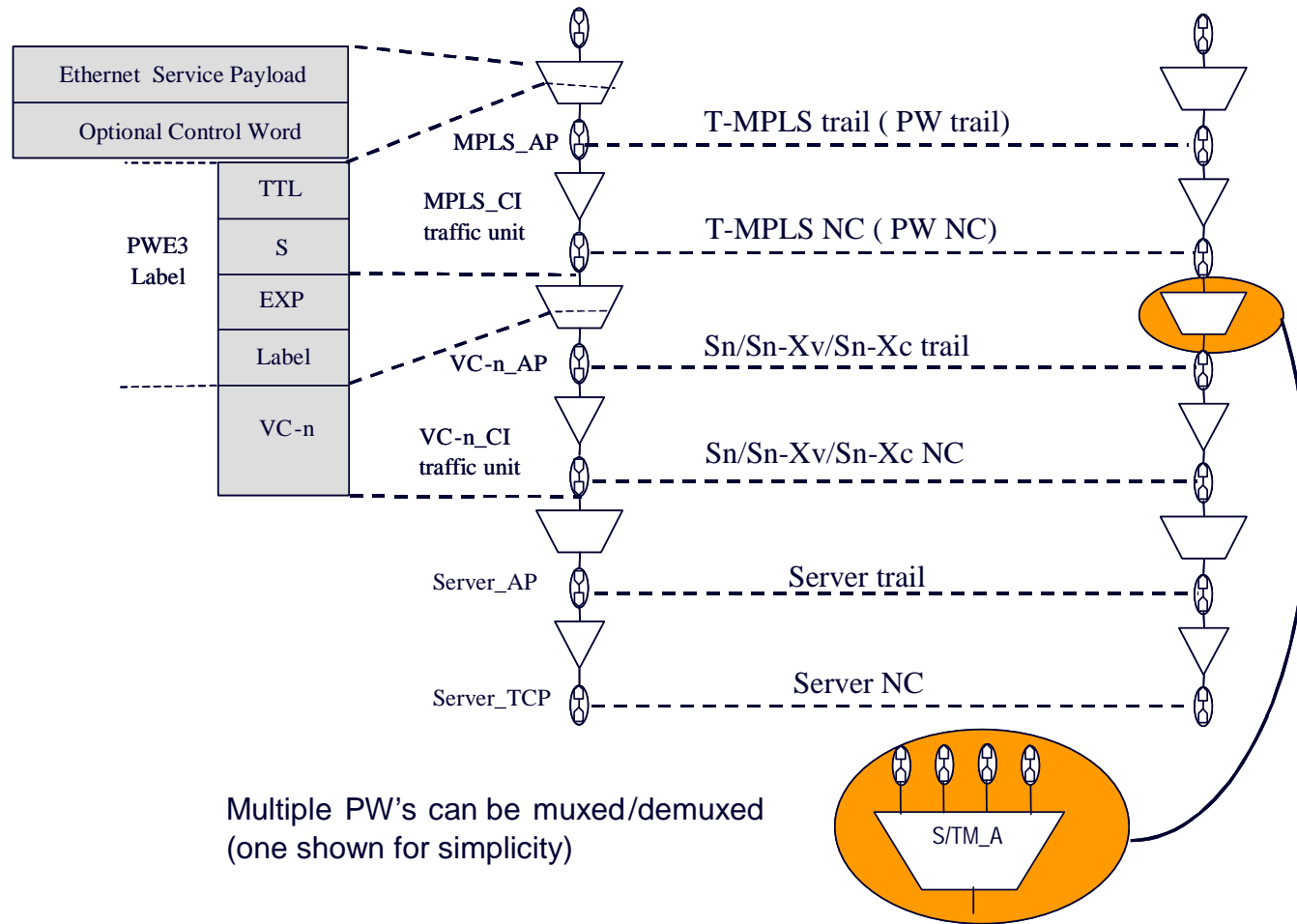
PW Application in T-MPLS (Appendix I/G.8110.1)



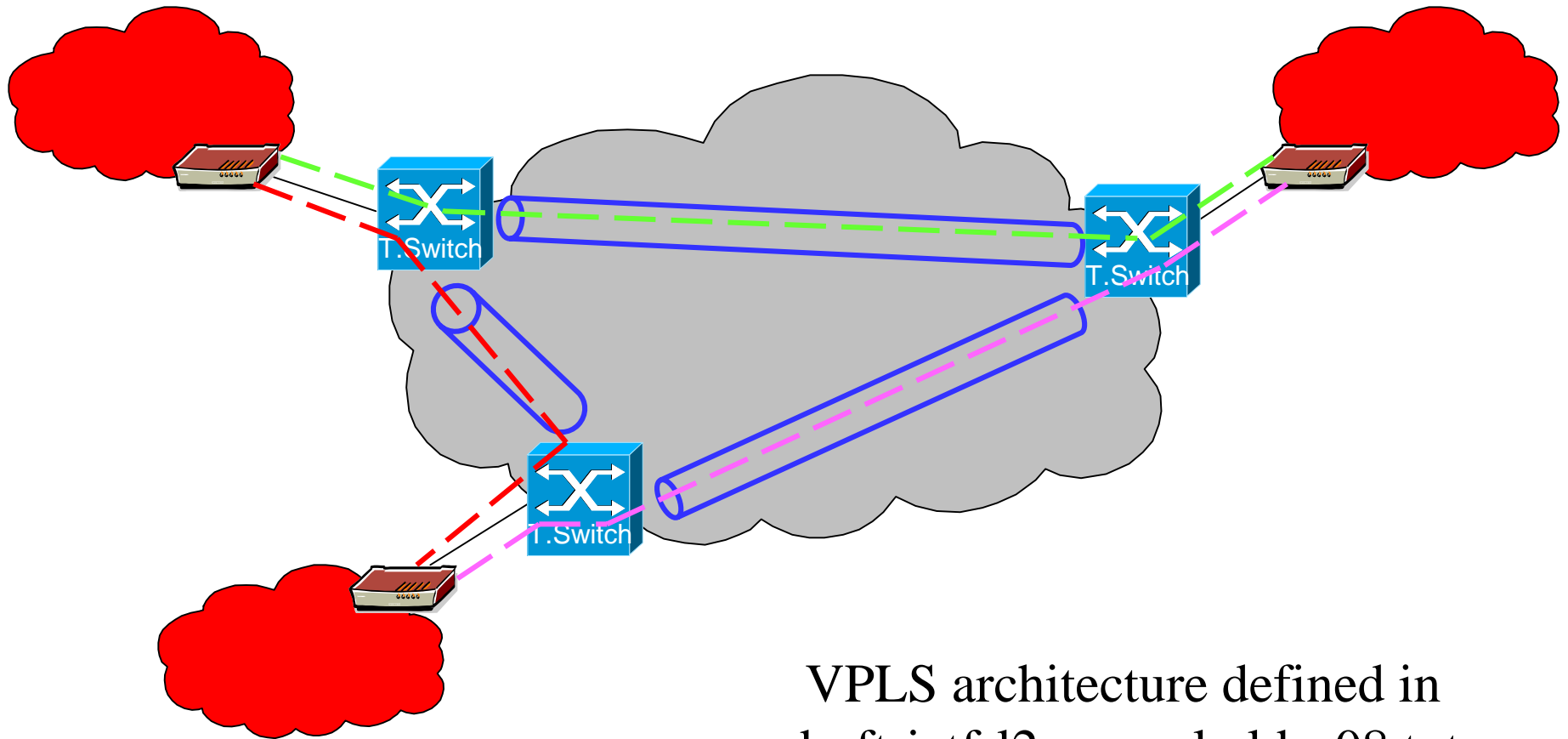


PW over SDH in T-MPLS (Appendix I/G.8110.1)

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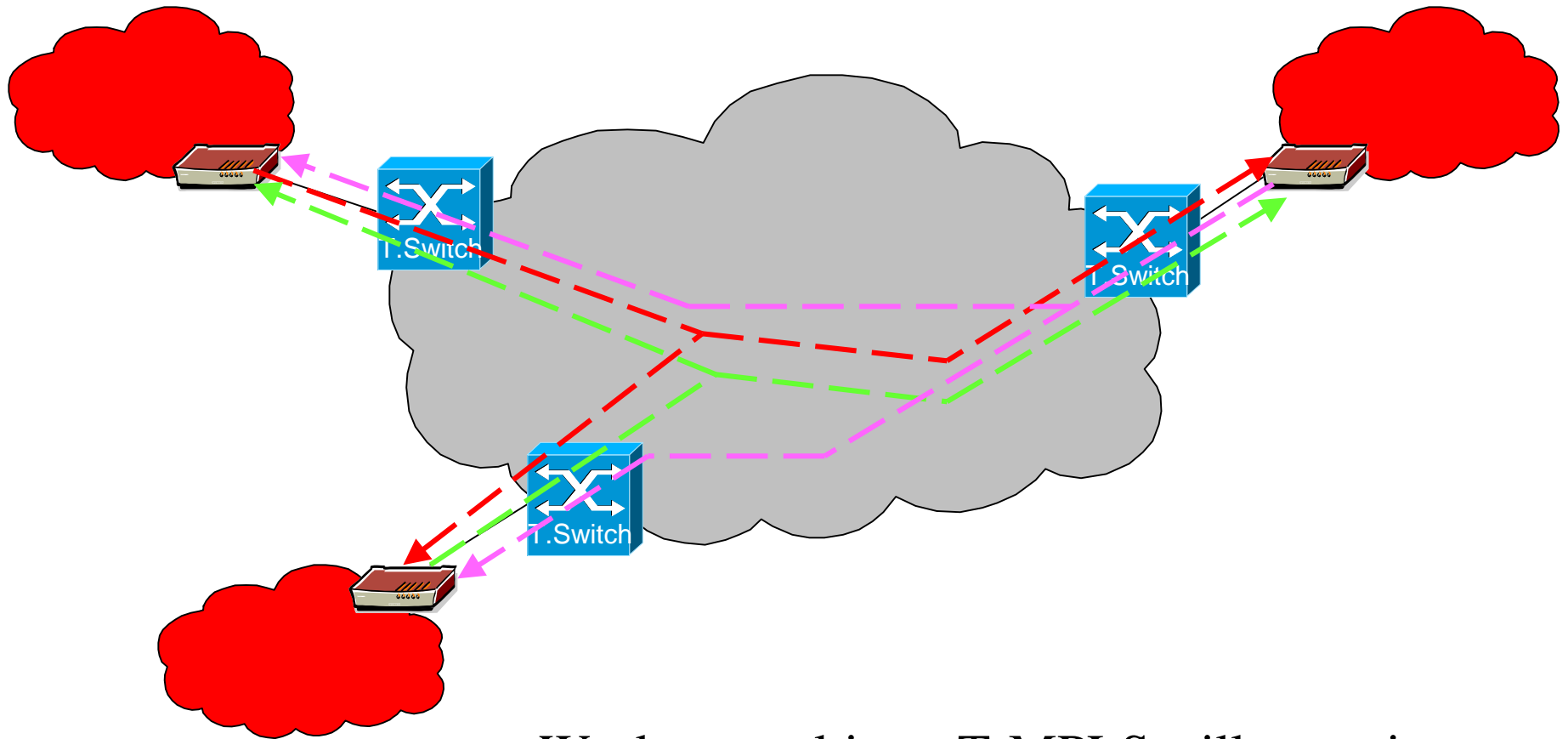


Multipoint EVC over T-MPLS



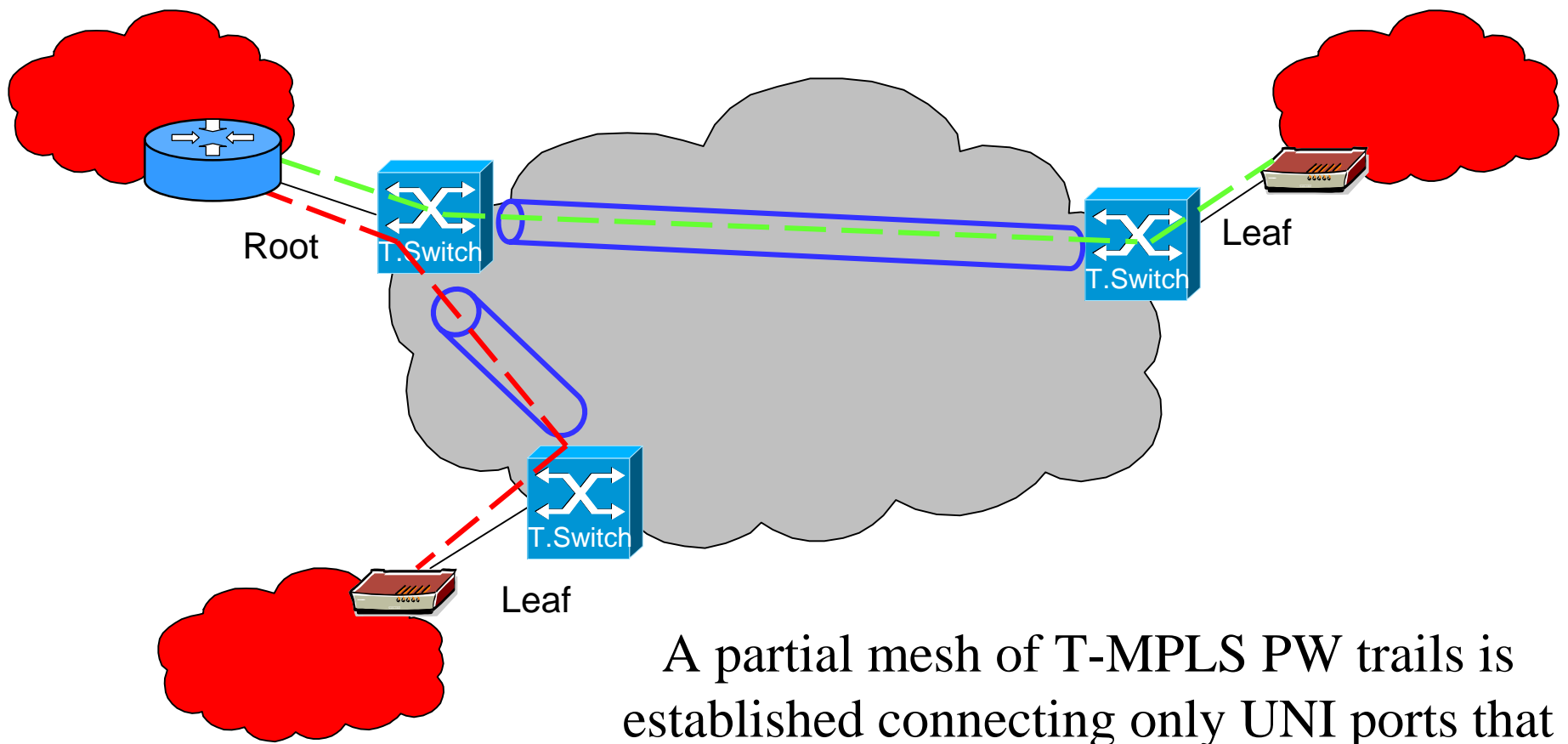
VPLS architecture defined in
draft-ietf-l2vpn-vpls-ldp-08.txt

MP EVC over Multicast T-MPLS



Work on multicast T-MPLS still on-going

R-MP EVC over T-MPLS

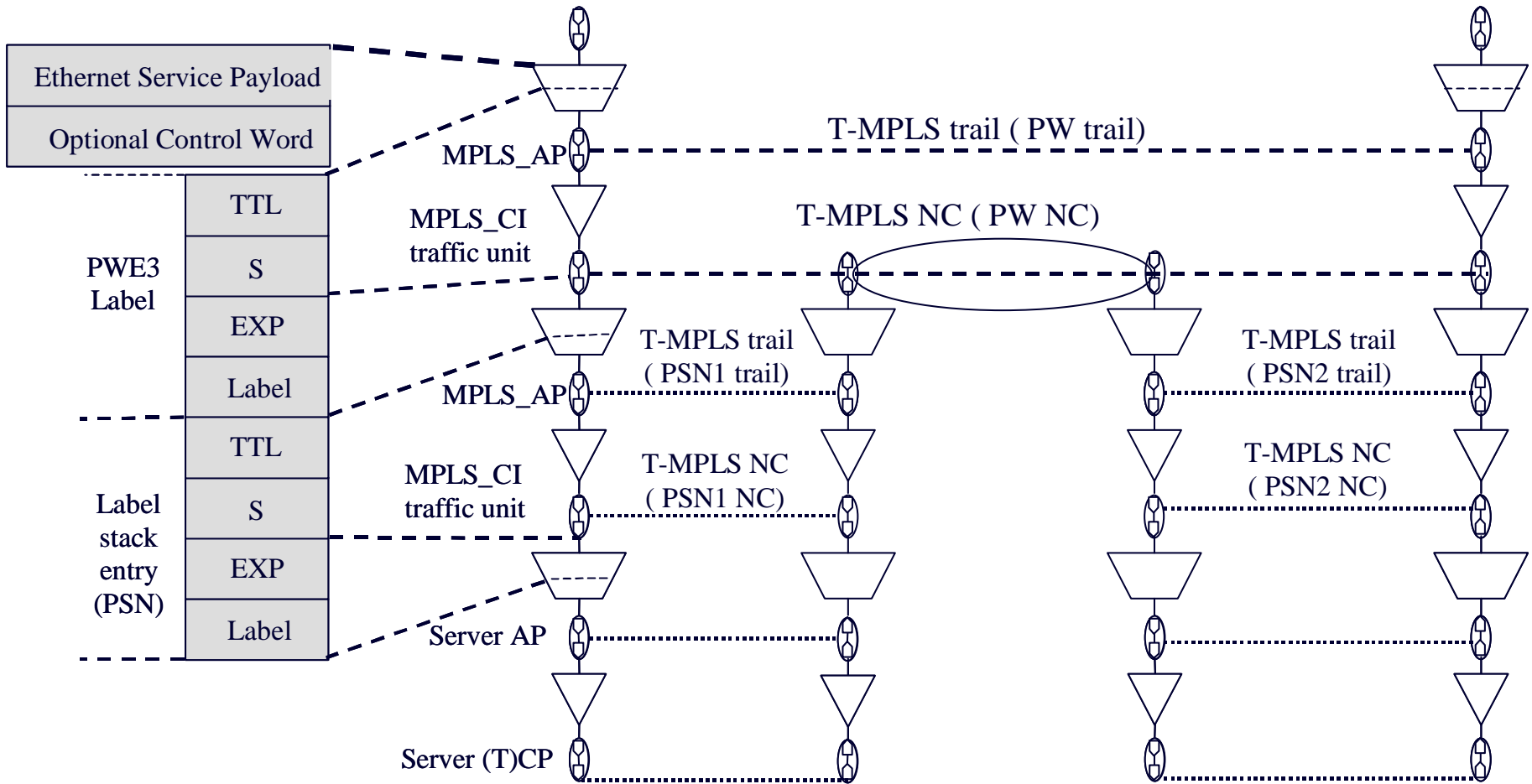


A partial mesh of T-MPLS PW trails is established connecting only UNI ports that are allowed to speak to each other



- T-MPLS is designed to be a scalable end-to-end packet transport technology
- T-MPLS supports network partitioning
 - Network partitioning at the PW level is supported in line with the multi-segment PW architecture (draft-ietf-pwe3-ms-pw-arch-00.txt)
- T-MPLS supports sub-layer hierarchy

MS-PW Application in T-MPLS (Appendix I /G.8110.1)





- Transport MPLS is a very promising carrier-grade packet transport technology for supporting packet services over new-generation transport networks
- This presentation has shown how T-MPLS networks can be used to support carrier-grade Ethernet services
 - Point-to-point, multipoint as well as rooted-multipoint Ethernet services can be supported