Update on LDP Extensions for Optimized MAC Address Withdrawal in H-VPLS

draft-ietf-l2vpn-vpls-ldp-mac-opt-04

Geraldine Calvignac (geraldine.calvignac@orange-ftgroup.com)
Olen Stokes (ostokes@extremenetworks.com)
Pranjal Kumar Dutta (pranjal.dutta@alcatel-lucent.com)
Florin Balus (florin.balus@alcatel-lucent.com)

Background - draft-ietf-l2vpn-vpls-ldp-mac-opt

- Optimize, extend LDP MAC Flush to address existing LDP VPLS deployments, including PBB-VPLS use cases
- Two components
  - New “flush-all-from-me” procedure to minimize the MAC re-learning and unknown unicast flooding
  - Required extensions for PBB VPLS
- IETF-79 presentation proposed to consolidate some procedures
  - Re-use MAC Flush TLV to address also the HVPLS use case (A/S PW access)

Background - draft-ietf-l2vpn-vpls-ldp-mac-opt (cont.)

Applicability	PW Access**	Ethernet Access***	PBB-VPLS extensions
MAC Flush TLV			
PE-ID TLV*			

** PE-ID TLV procedure may result in PE-rs overloading and slower convergence due to additional LDP MAC Flush propagation in PE-rs*

*** PW Access – MTU multi-homed to VPLS PEs via A/S PWs*

**** Ethernet Access multi-homed to VPLS PEs (Ethernet access multi-homing example - ICCP, MC-LAG, BGP MH, G.8032 rings)*

Changes in version 04

- Added a brief description of Ethernet access use case
- Consolidated text in the solution section - PE-ID TLV procedure removed
- Fixed wording throughout the document

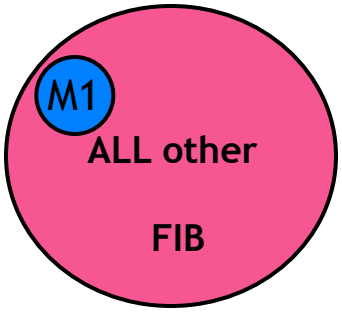
Next steps

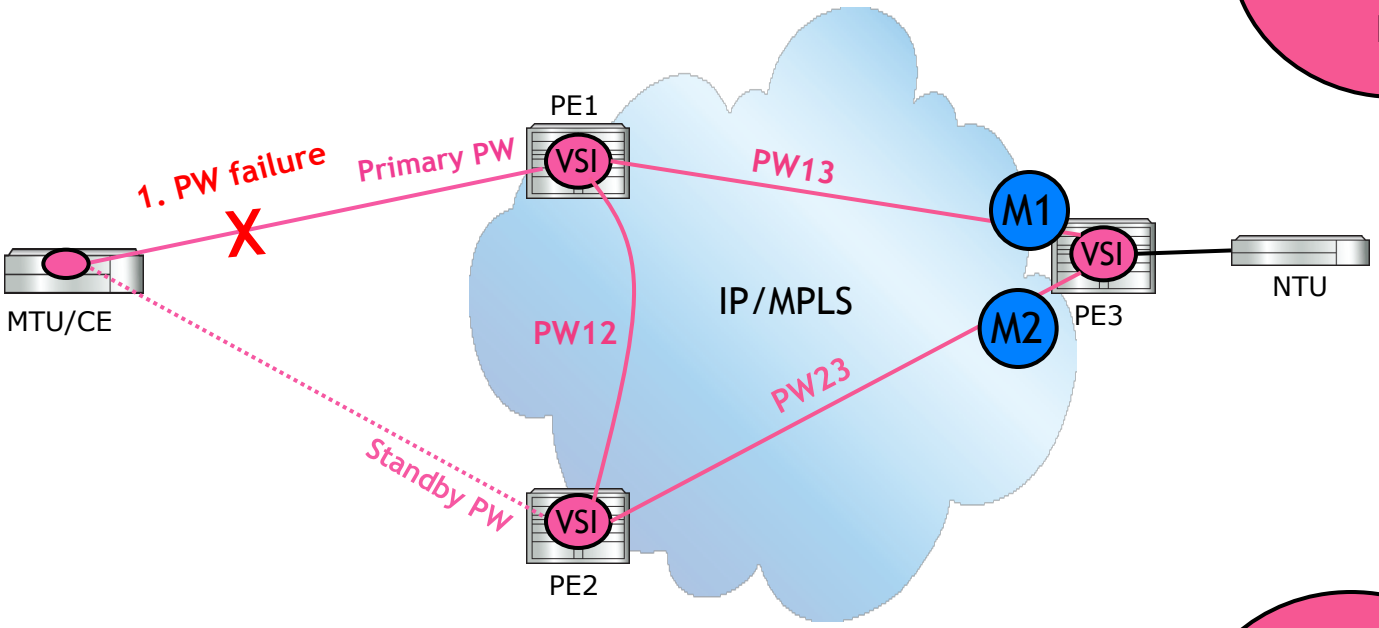
Incorporate WG feedback on some of the wording for backwards compatibility/emulating RFC 4762 procedure

Draft ready for LC?

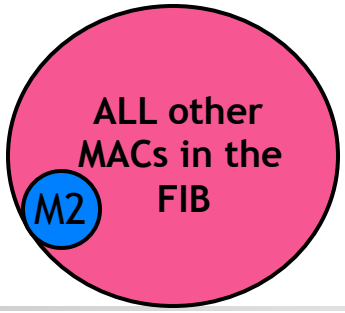
MAC Optimization benefits

Flush-all-from-me benefit: optimized MAC Flush, less flooding - flush only the MACs associated with PW13

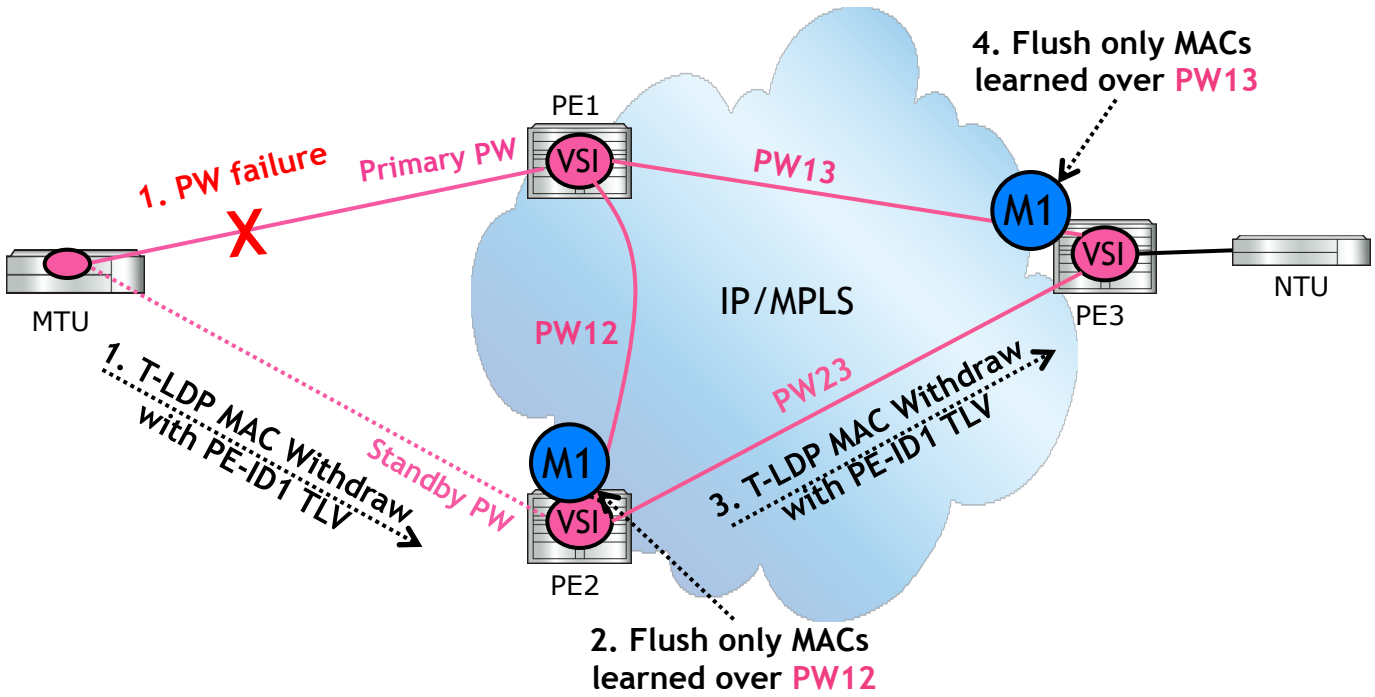




Flush-all-but-mine (RFC4762): flush all the MACs except the MACs learned from PE2

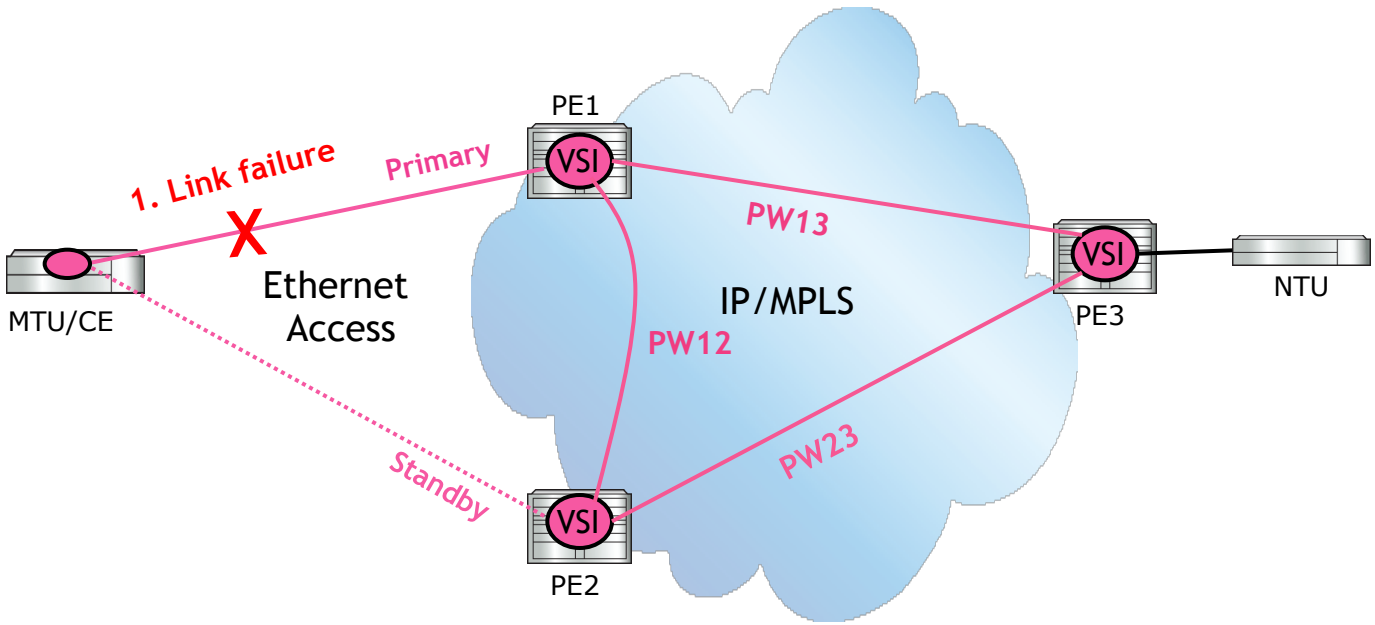


Old PE ID TLV based solution for "flush-all-from-me"



Applicable only to HVPLS resiliency using (A/S) PW Access

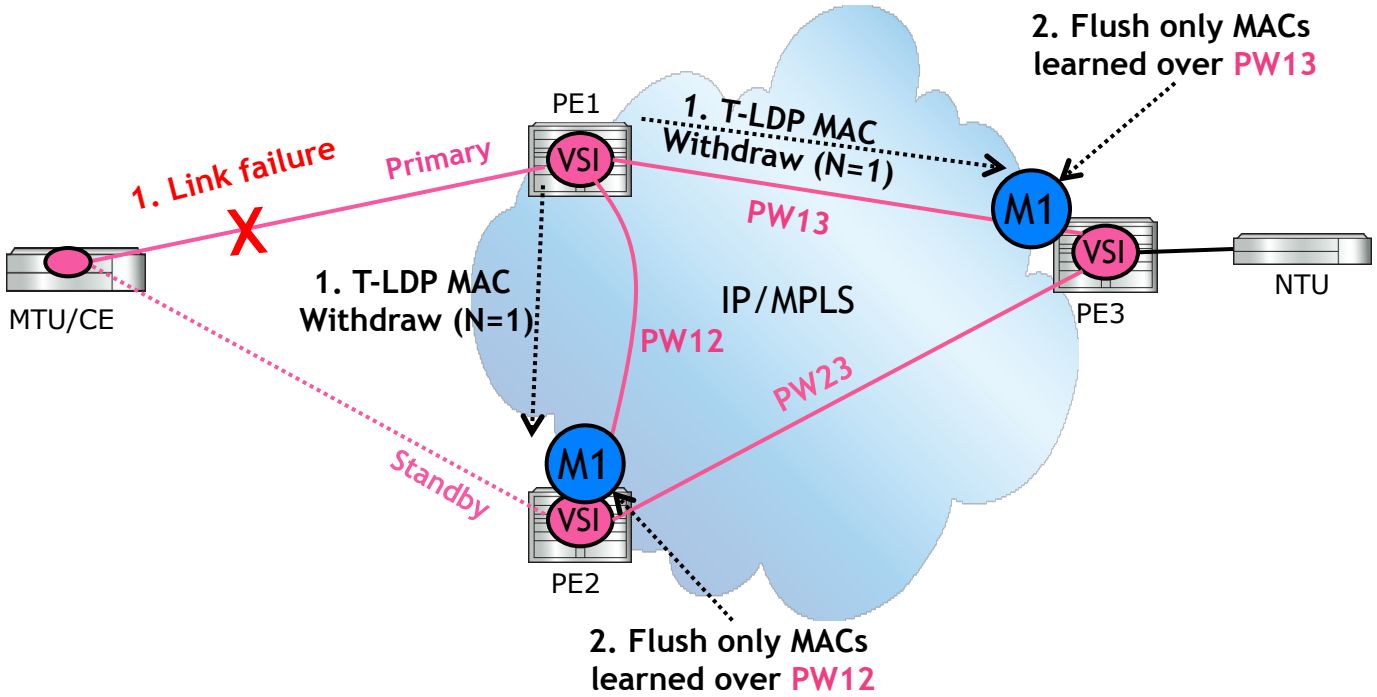
Native Ethernet use case



Solution expanded to address the native Ethernet access

Applicable to any non-STP based resiliency scheme –
ICCP, MC-LAG, BGP MH, G.8032

MAC TLV based solution for “flush-all-from-me”



Use the N-Flag from MAC Flush parameters TLV: N=1 indicates “flush-all-from-me” is required – re-uses the method proposed before for PBB-VPLS

Same procedure for both Ethernet and PW Access