

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

draft-pdutta-l2vpn-vpls-ldp-mac-opt-02.txt

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Rationale

- Flush all MAC addresses for the corresponding VSI behind a specific PE
 - For SS-PW and FEC 128, Identifier = PE Address
 - For SS-PW/MS-PW and FEC 129, Identifier = All(AGI is already in FEC TLV)
- Benefits:
 - Prevent unnecessary re-learning and hence flooding

History

- In last IETF at San Diego -01 version was presented.
- Defined the problem of “blind” MAC flushing in RFC 4762 : unaffected MACs get flushed unnecessarily when topology changes in H-VPLS.
- Proposed an optional TLV for FEC 128 in LDP Address Withdraw Message with empty MAC List for optimized/selective flushing in H-VPLS.

Update in -02 revision

- Extended the optional TLV definition for FEC 129.
- Now applicable with both FEC 128 and FEC 129 in LDP based MAC Withdrawal.
- u-PE (or MTU-s) and n-PE initiated MAC Withdrawal is explained

Benefits

- **Faster Convergence**
 - Fewer MACs need to be relearned
 - As per RFC 4762 procedures, with H-VPLS full-mesh of n peers, MAC flushing happens on $(n-1)$ Pseudowires.
 - When a PE-rs receives a LDP Address Withdraw message with the PE-ID TLV option, it **SHOULD** flush MACs learned from **ONLY** one PW whose end point is identified by combination of FEC TLV and PE-ID TLV.

Next steps

- Solicit discussion and comments on L2VPN list
- Request that this I-D be adopted as WG document.