

LDP Extensions for Pseudo Wire Transfer in MPLS-TP Network

[draft-bao-pwe3-pw-transfer-03](#)

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Changes compared to 01 version

- **ER-TLV** is added to carry the PW path information
- Add clarification about transfer failure.

Contents in this draft

- Advantages compared with MBB
- LDP extensions and procedures
 - PW Transfer Capability TLV
 - PW Ownership Transfer TLV
 - SP-PE TLV or **ER-TLV**

Advantages

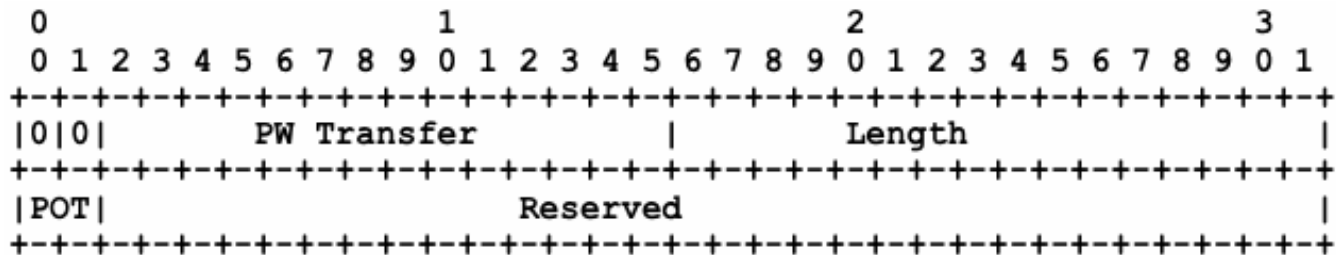
- Compare with MBB, PW transfer in this document have following advantages:
 - FEC label binding would not be modified.
 - PW LSP binding would not be modified.
 - Extra data plane resource is not needed.
 - Available and efficient batch operation.

Requirements

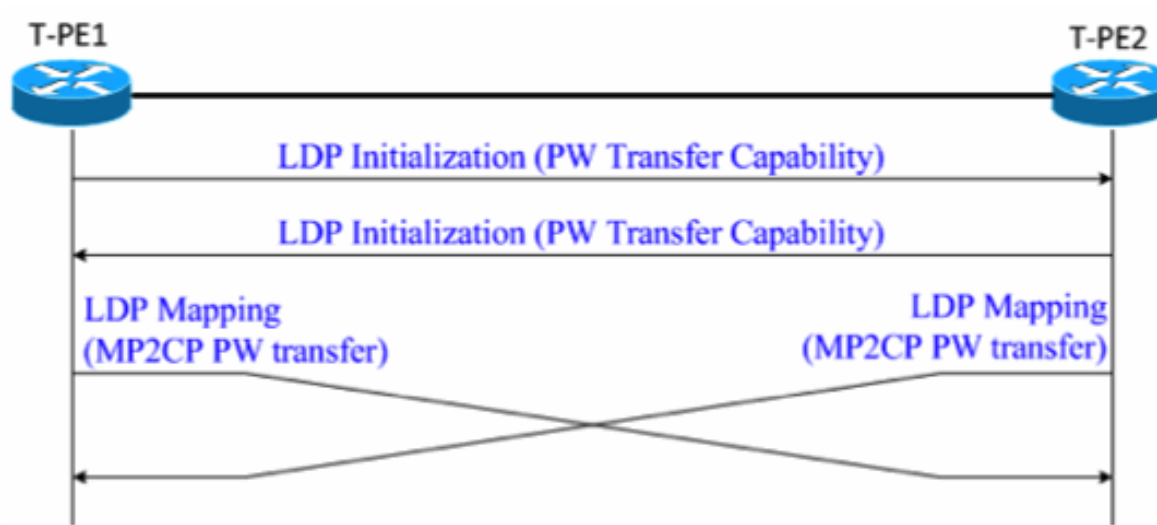
- Requirements
 - RFC6373
 - Section 5.3.3 describes the dynamic transfer of PW Control/Ownership to satisfy the requirement 47.
 - Requirements in RFC5493 also apply (e.g., No disruption of user traffic during the process of transfer).
- Consistency in the process of transfer
 - PW attributes MUST not be changed
 - PW transfer MUST be independent of LSP
- Support partial MS-PW segments transfer

LDP Extensions

- PW Transfer Capability TLV
 - Carried in LDP Initialization Message (RFC5561)
 - Negotiating the PW transfer capability between LDP peers
- SP-PE TLV (RFC6073) and ER-TLV (mospw-er)
 - Both are used to carry data plane PW path information
- PW Ownership Transfer TLV
 - Carried in Label mapping and notification message

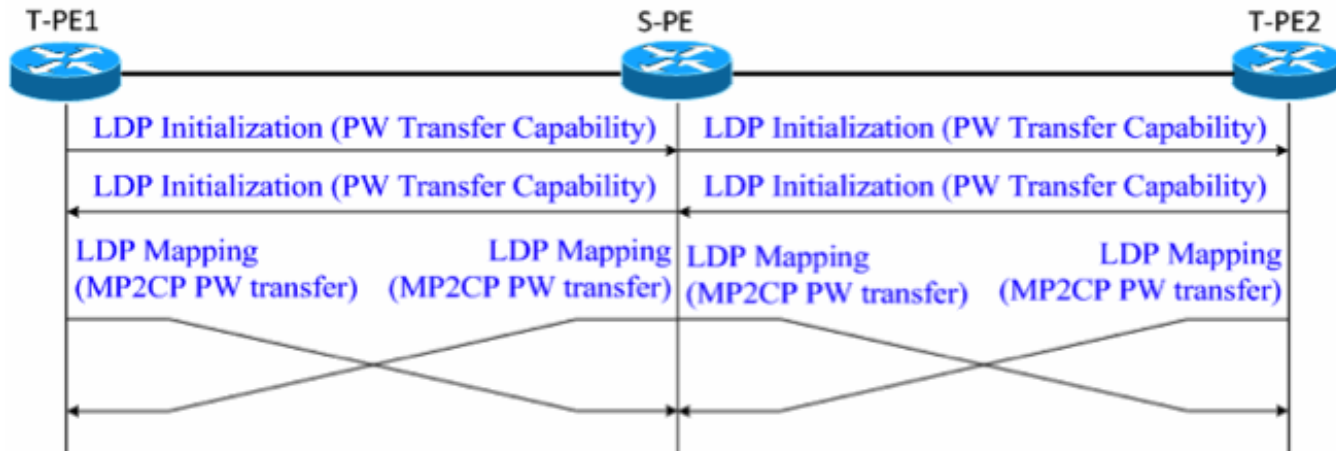


MP to CP transfer Procedure (SS-PW)



- T-PEs
 - Negotiate PW transfer capability
 - Send/Receive Label Mapping message with PW Transfer TLV
 - Create/Maintain PW signaling state in CP

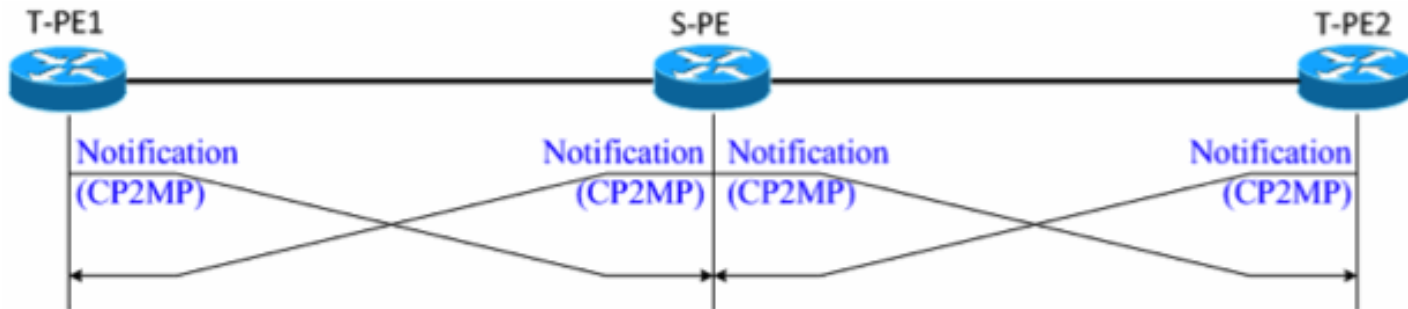
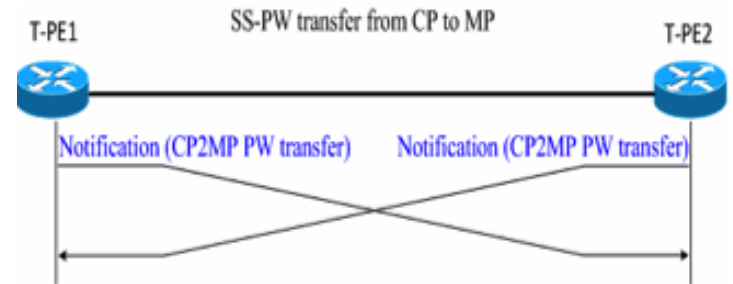
MP to CP transfer Procedure (MS-PW)



- T-PEs
 - Perform all the procedures in MP2CP SS-PW transfer plus
 - Encoding PW path into SP-PE TLV or **ER-TLV**
- S-PE
 - Create PW LDP signaling state in CP
 - Decode the SP-PE TLV or **ER-TLV** to find the next hop
 - Forward Label Mapping message to the next hop

CP to MP Transfer Procedure

- T-PEs
 - Send CP2MP PW transfer Notification message
 - Delete T-LDP session according to local policy
- S-PEs
 - Forward Notification message
 - Delete T-LDP session according to the local policy



Next step

- Refine the document according to the feedback of this meeting and mailing list.