draft-cohn-mpls-tp-pw-protection-01

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Problem Statement (1)

- MPLS-TP transport path recovery requirements (RFC 5654, section 2.5) apply to PW as well as to LSP
  - "In an MPLS-TP environment, a transport path corresponds to an LSP or a PW"
- MPLS-TP Survivability Framework (draft-ietf-mpls-tp-survive-fwk-06) specifies that the "functional architecture…applies to both LSP and PWs"
- However, MPLS WG linear protection draft (draft-ietf-mpls-tp-linear-protection-07) does not explicitly describe mechanisms for PW protection in MPLS-TP

Problem Statement (2)

- PW linear protection is required to protect MS-PW in the event of S-PE node failure
  - Protection against link failure events can be more efficiently provided by LSP linear protection (working and protection LSP shown in blue and red respectively)
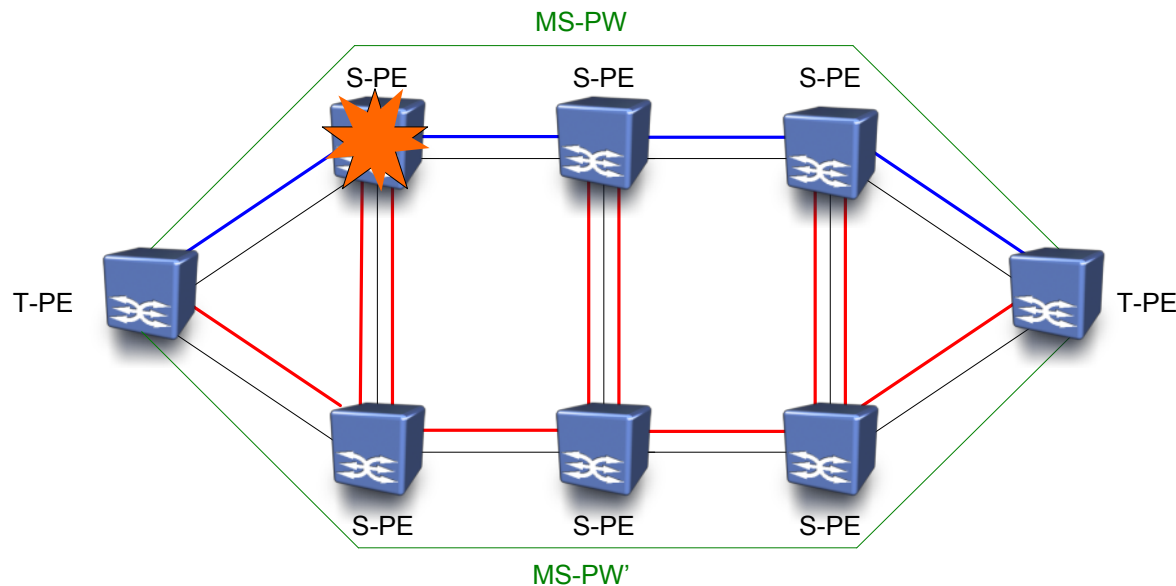
Proposed Solution

- The draft is an applicability statement that applies the LSP linear protection mechanism in draft-ietf-mpls-tp-linear-protection-07 to MPLS-TP MS-PW

- Specifically:
  - References to OAM indications apply as referring to MS-PW OAM, provided by PMEG
  - References to LER apply as referring to T-PE
  - References to server layer apply to the LSPs over which MS-PW is carried
  - PSC protocol PDUs are encapsulated in PW associated channel (RFC 4385)

Benefits (1)

- Compliance with MPLS-TP PW protection requirements with full reuse of LSP linear protection concepts and mechanism from draft-ietf-mpls-tp-linear-protection-07
  - With consequent reuse of existing LSP linear protection implementation

Benefits (2)

- Unlike other PW redundancy proposals (e.g. draft-ietf-pwe3-redundancy-bit-04), this draft meets MPLS-TP requirements (RFC 5654, draft-ietf-mpls-tp-survive-fwk), such as:
  - Support for 1:1 and 1+1 schemes
  - Handling of coexisting triggers
  - Ability to distinguish administrative recovery actions from other triggers
  - Full support of revertive/nonrevertive
  - Full support of administrative triggers
  - Requirement of fast retransmission of PSC messages (faster recovery in message loss scenario)
  - 1-phase protocol (faster recovery)
  - Support of hold-off timer (to avoid race conditions)

Next Steps

- Incorporate input into next draft
- Request working group adoption

Thank You

Questions ? Comments ?