Static pseudowire configuration checking using Generic Associated Channel (G-ACh) Advertisement Protocol

PWE3 IETF83
draft-jc-pwe3-mpls-tp-static-checking-00

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Motivation

• Manual configuration of static PW in MPLS-TP:
  – Requires configuring many parameters at two PE sides, and parameters should be consistent, to make PW be operational.
• If parameters mis-match at two PE sides, it is difficult for operators to do trouble shooting.

• To ease trouble shooting:
  – Introduces an application of GAP, to transfer PW configuration parameters through underlying PSN Tunnel.
• With this new feature, PE is able to check PW configuration parameters automatically to figure out parameter mis-matching.
Extensions to GAP

• New GAP application "static PW checking" is defined.
• Define “local static PW element” to report local configuration,
• Define “remote static PW element” to echo back received remote configuration.
• Define static PW suppressing message to stop checking process.
PE processing step

Start

Get local PW info only
Get local & remote info
Receive remote PW info only
Receive remote PW info only
Get local PW info only
Get local & remote info
Send suppress msg

Finished
PE message process

PE-A

Start

Get Local PW info A only

Message with Local_conf_A

Message with Local_conf_B

and with Remote_conf_A

Suppress message for PW

Have received A, tell peer to not send

PE-B

Start

Get local&remote PW info B&A

Have received B, tell peer to not send

Suppress message for PW
Configuration Check Process

• Parameters to be checked
  – Check control word, if both sides have same capability.
  – Check PW type, if both sides have the same
  – Check and negotiate interface parameters as specified in [RFC4447].
  – Check In&Out PW label.

• If mis-match, report the corresponding mis-match parameters
Label auto-configuration

• The mechanism could also be used as label auto-configuration:
  – The received in_label could be used as local out_label.
  – Then the static PW is allowed to configure only in_label, instead of both in&out label.
Some comments received

• Is it an alternative to LDP signaling?
  – No!
  – This is a checking tool, and only applied to static PW.

• Management system could do that, why we need it?
  – Sometimes management system does not exist
  – Management system could not do label auto configuration

• Why we use the corresponding PNS Tunnel?
  – Only when its corresponding PNS Tunnel is UP, the PW could be UP.
Next steps

• Need further comments from working group
• Refine the draft to avoid misunderstanding.

Thank you