

MPLS LSP PW Status Refresh Reduction For Static Pseudowires

draft-martini-pwe3-status-aggregation-protocol-02.txt

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Requirements

- Greatly increase the scalability of the PW status protocol
- Detect a remote PE restart
- Detect a Remote PE mis-configuration.

How does it work ?

Basic Protocol

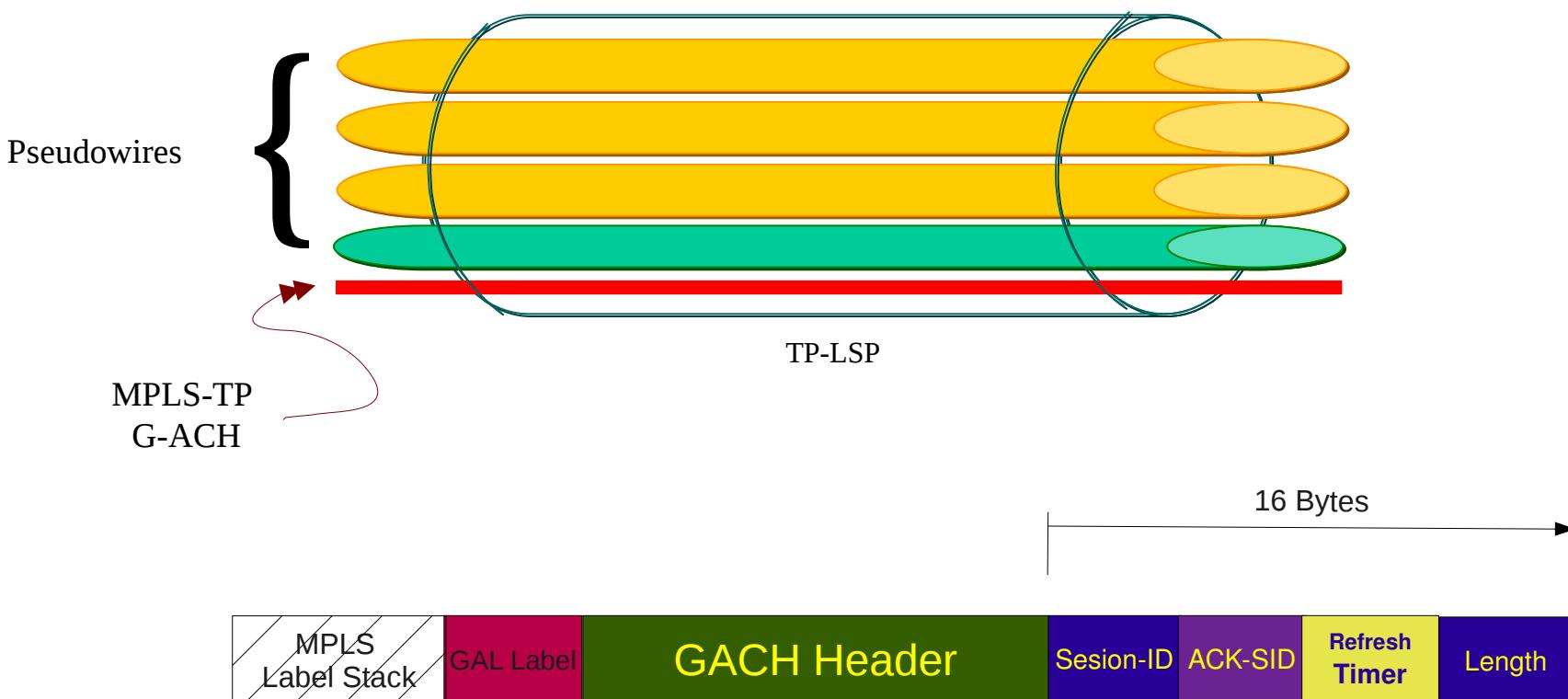
- Use MPLS-TP GACH with a PW refresh reduction protocol type.
- Use a “random” session ID.
- PE flexible request for refresh timer.
- Very simple ACTIVE,INACTIVE,STARTUP state machine.
- Extensible

How does it work ?

Extended Protocol

- Additional OPTIONAL fields: Message Sequence, Check-sum, Message Type.
- Optional messages to verify PW configuration on Edge PEs.
- Expandable to include other verification functions.
- Provides reliable session.

Status Verification Session.



- Send time of day derived SID, ACK-SID=0
- Refresh timer field determines refresh frequency
- Reply with Ack-SID=SID , and PE own SID
- Process repeats indefinitely

Simple Basic design

0	1	2	3								
0 1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1								
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											
MPLS LSP (tunnel) Label											
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											
GAL											
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											
0 0 0 1 Version Reserved 0xZZ PW OAM Message											
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											
Session ID		Ack Session ID									
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											
Refresh Timer		Total Message Length									
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											
Checksum		Message Sequence Number									
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											
Last Received Seq Number Message Type U C Flags											
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											
~ ~											
Control Message Body											
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+											

Opinions ?

Thank You!