Stateful PCE Extensions for Data Plane Switchover and Balancing

draft-tanaka-pce-stateful-pce-data-ctrl-00

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Introduction

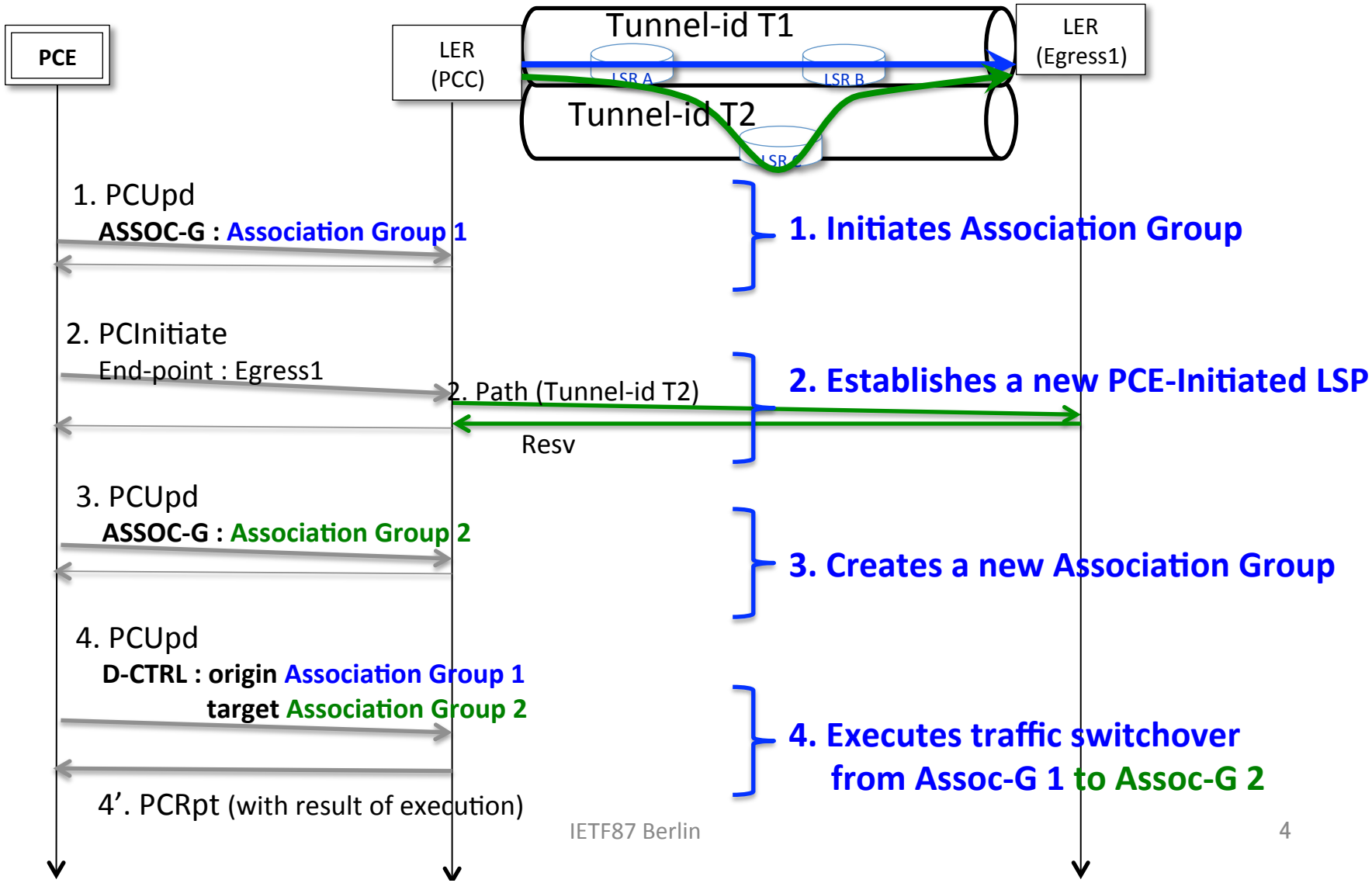
- Motivation
  - Switchover traffic from one MPLS-TE Tunnel to another
    - For example from existing LSP to PCE-initiated LSP
  - Load-balance traffic across several MPLS-TE Tunnels

-> This I-D proposes a simple solution using PCEP messages with some extensions for data traffic switchover/load-balancing.

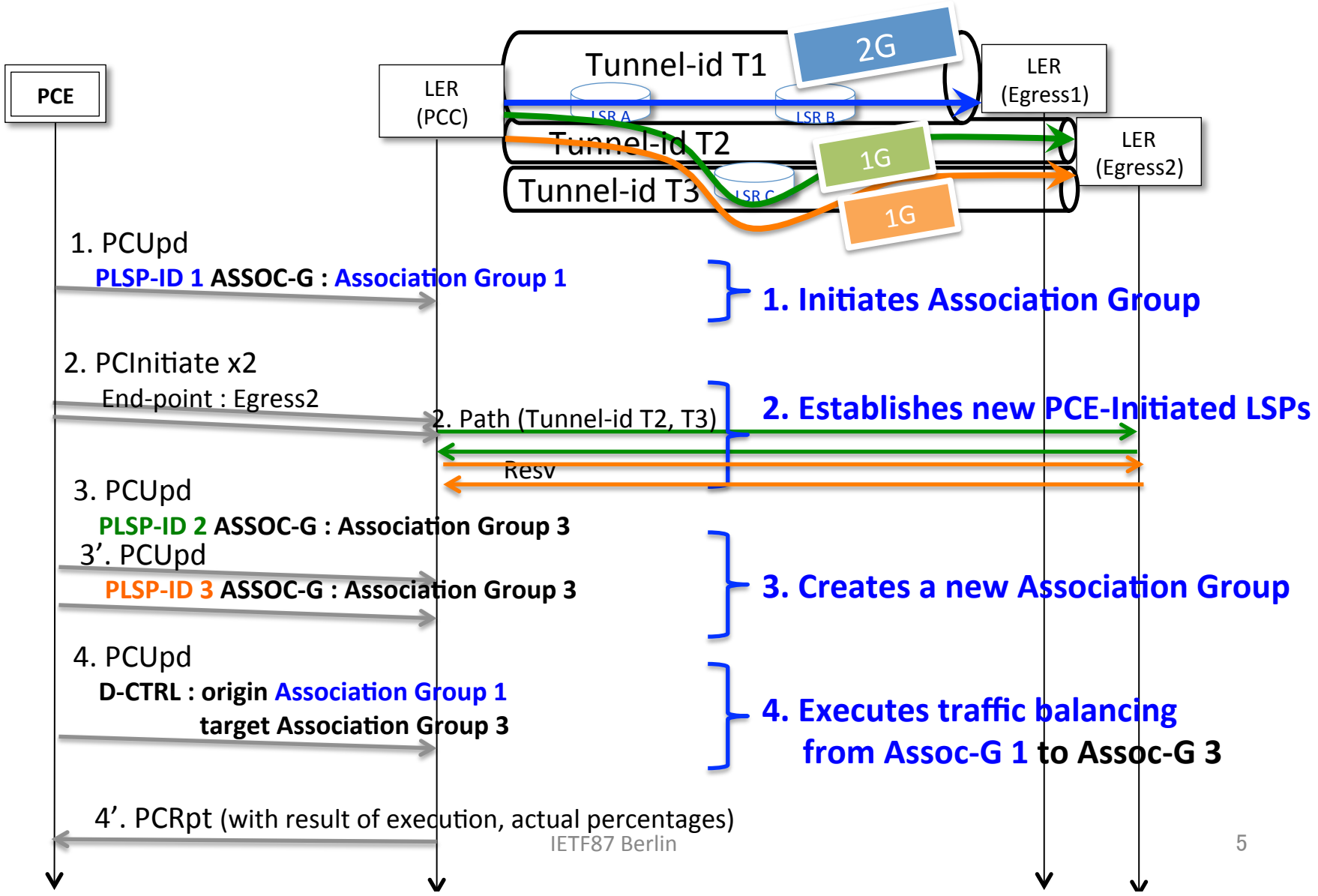
Solution overview

- Use the PCUpd message to request the LSP to switch over traffic from a source to a destination LSP.
  - The src and dest can be specified as a set
- Traffic is load balanced proportional to the bandwidth of the members of the set
- The percentages are reported back in the PCRpt message.

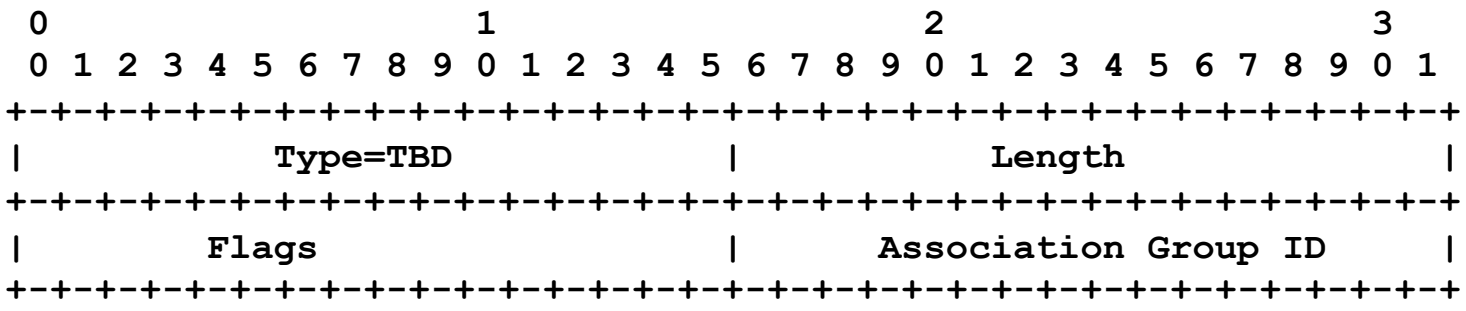
Procedure (Switchover from T1 to T2)



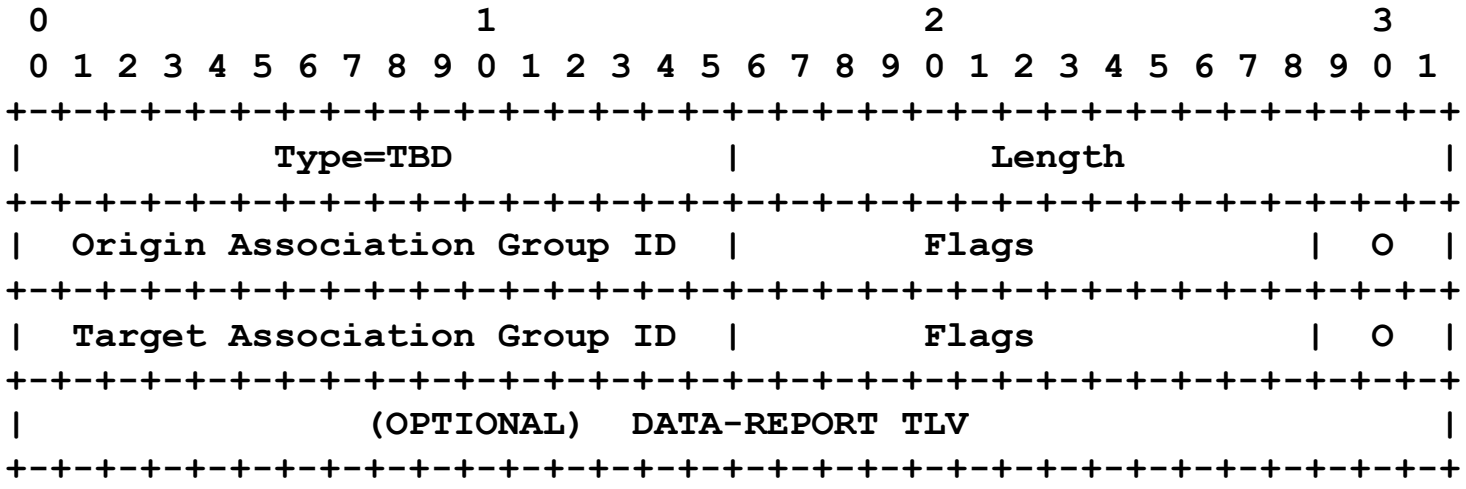
Load-Balancing from T1 to T2 and T3



Flags and Fields in LSP Object



ASSOCIATION-GROUP TLV



DATA-CONTROL TLV

Next Steps

- Get feedback from WG
  - Association Group to take over traffic
  - Error handling
- Invite contributors
- incorporate several private feedback