Extensions to Path Computation Element Protocol (PCEP) to Support Resource Sharing-based Path Computation

PCE WG, IETF-100, Singapore

draft-zhang-pce-resource-sharing-05.txt

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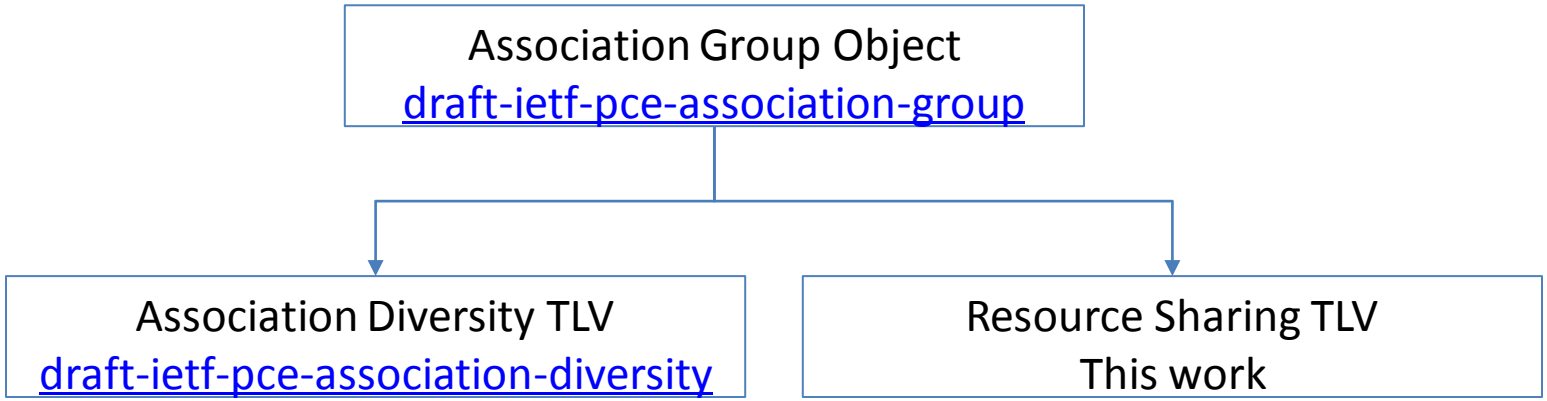
Overview

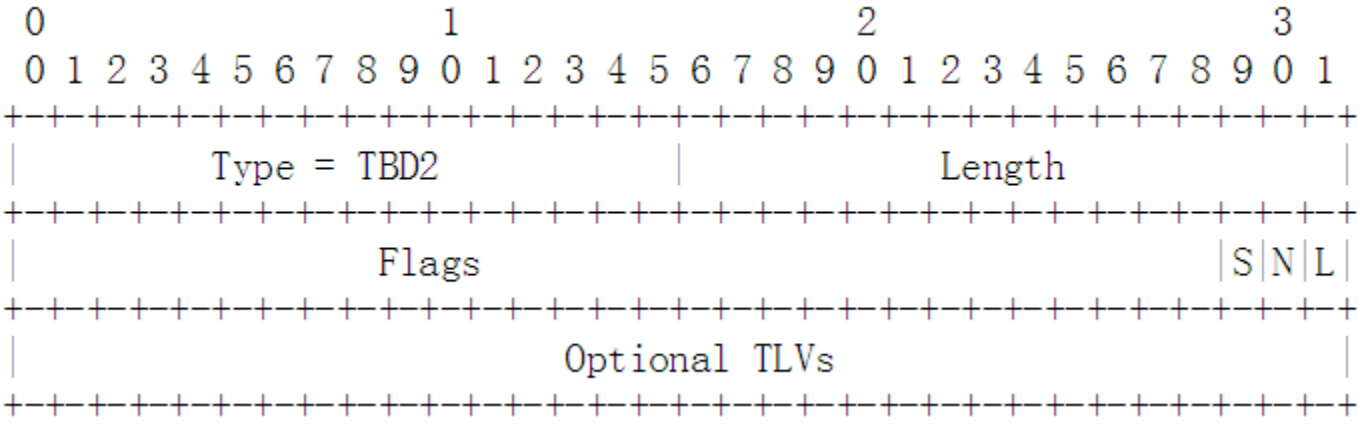
- ✓ Re-Scope:
  - ✓ Support specifying resource sharing strategy, especially when a new LSP is used to replace an existing LSP;
  - ✓ Support resource sharing between two LSPs with different parameters such as end points, bandwidth, etc. ;
- ✓ Use Cases:
  - ✓ Use case for Single PCE
  - ✓ Use case for Inter-PCE scenario
  - ✓ Resource sharing with links/nodes/SRLG…
- ✓ Extensions to PCEP:
  - ✓ Work with the Association draft, using their object and extend RS TLV;

Coordination & PCEP Extensions



- What we are reusing:
  - Association group object
- What we are introducing:
  - New association type: “sharing”;
  - Resource Sharing TLV in Association Type Object

Flag Designs



- L bit: prioritize link share during path computation;
  - Firstly try to share link, if failed, try to find a path without link share, report failure if failed again; same below;
- N bit: prioritize node share during path computation
- S bit: prioritize SRLG share during path computation
- The information of link/node/SRLG to be shared is carried in the optional TLVs;

Discussion and Next Step

- Comments?
  - Confirm relationship with existing works
  - Any suggestion to the solution?

- WG Adoption