draft-ietf-pce-association-diversity-01

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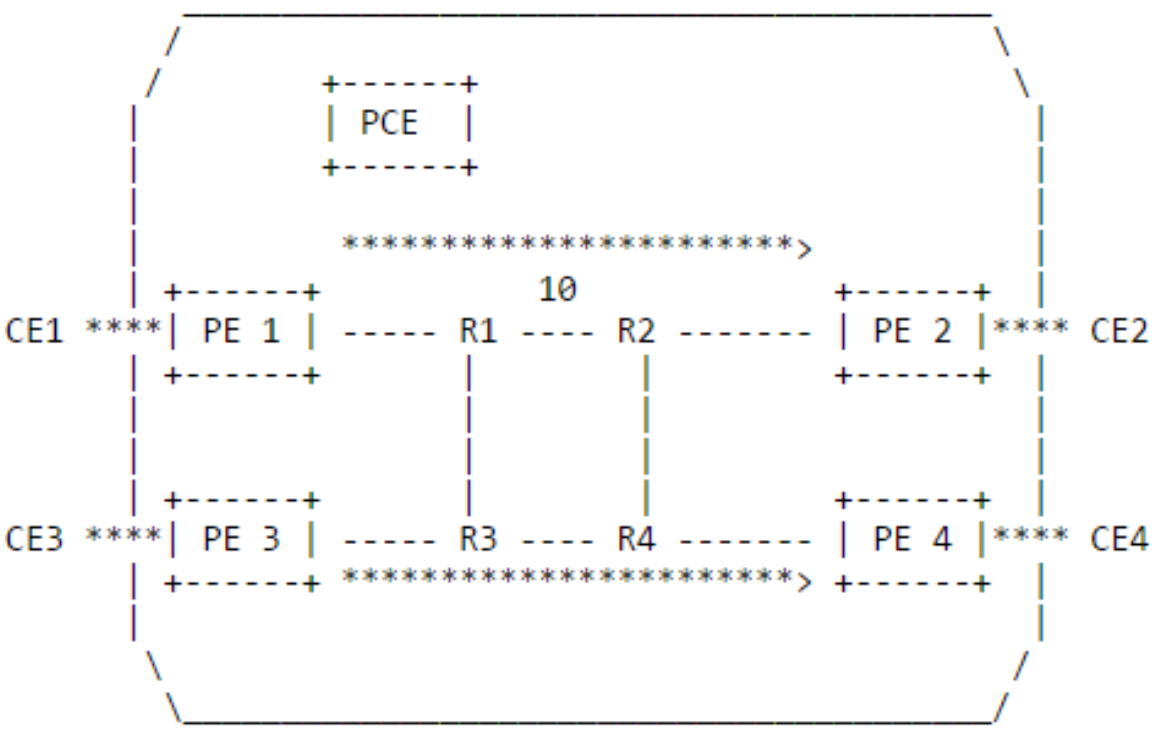
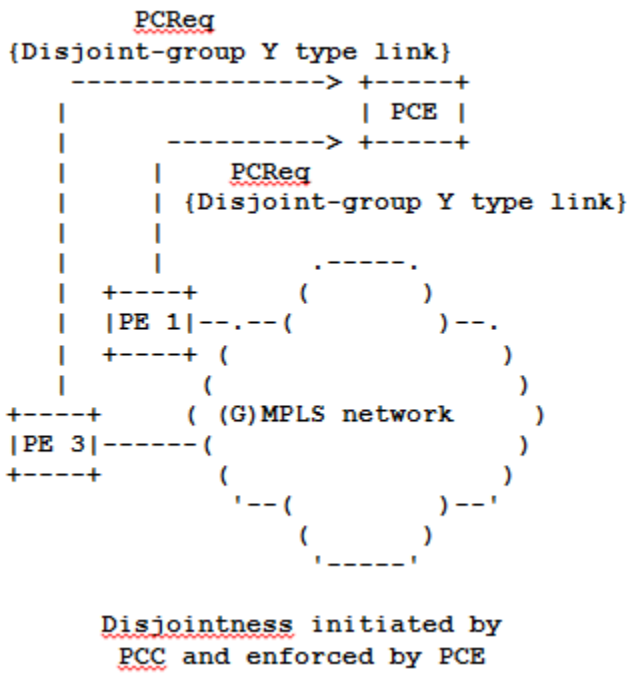
Goal

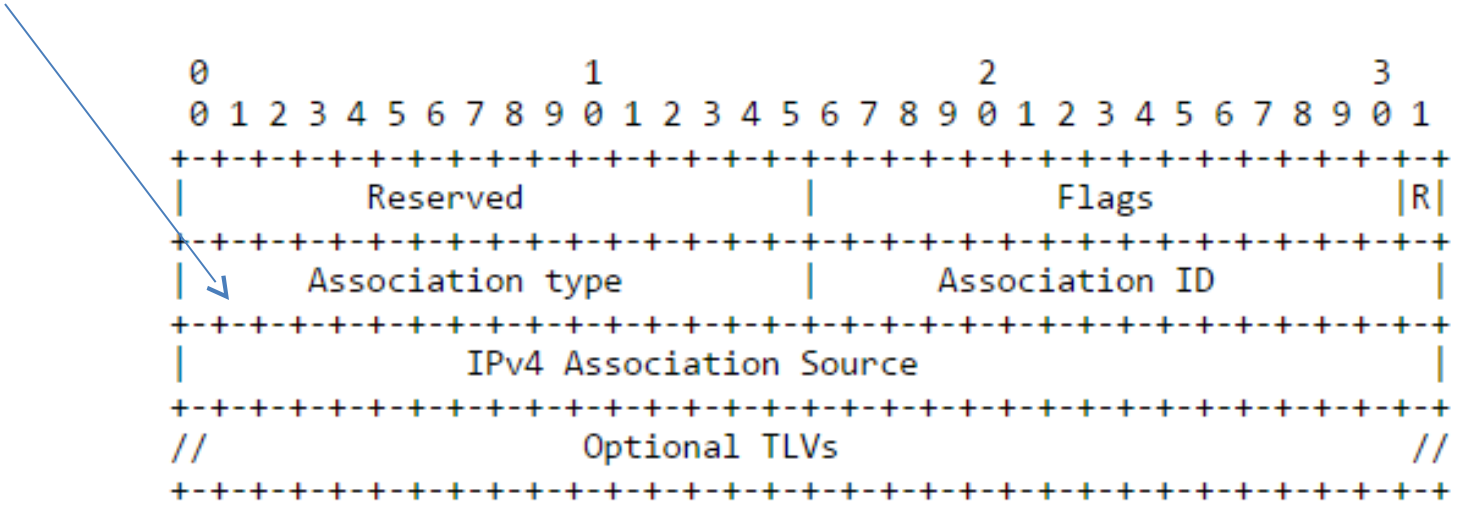
- Give ability for a PCC to advise PCE that a particular LSP is bound to a disjoint group of LSPs





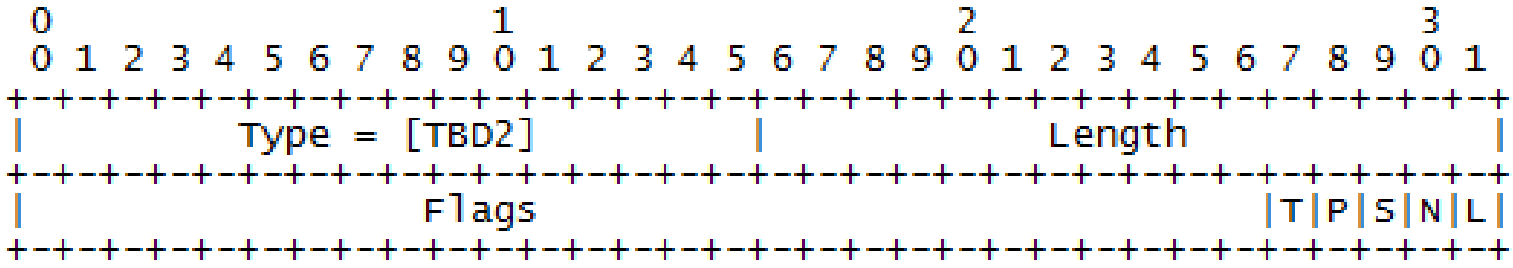
How ?

- We simply rely on I-D.ietf-pce-association-group
- New Association type for PATH DIVERSITY



Changes from previous version

- We use a single association type rather than one per disjointness type
  - The disjointness type is encoded as part of the DISJOINTNESS-INFORMATION-TLV which becomes mandatory (SVEC like encoding)



Disjointness type

Shortest path bit

Strictness bit

Changes from previous version

- Coupling with an OF is possible by using the OF-List TLV (with a single entry) in the Association group object
  - Disjointness OFs are defined as part of I-D.dhody-pce-of-diverse

- Dedicated paragraph added to describe the use of the Shortest Path bit (P-bit)

Disjointness computation issues

- There may be cases where the PCE cannot find a disjoint path
- The S-bit (when unset) allows the PCE to relax the disjointness constraint
- As a consequence the PCE may:
  - Provide a path which is not disjoint
  - Not provide a path at all

Disjointness computation issues

- We propose a PCE to use the NO-PATH-VECTOR TLV as part of the LSP Object when it cannot provide a path, two new bits are added:

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bit "TBD3": when set, the PCE indicates that it could not find a
disjoint path for this LSP.

bit "TBD4": when set, the PCE indicates that it does not support
the requested disjointness computation.
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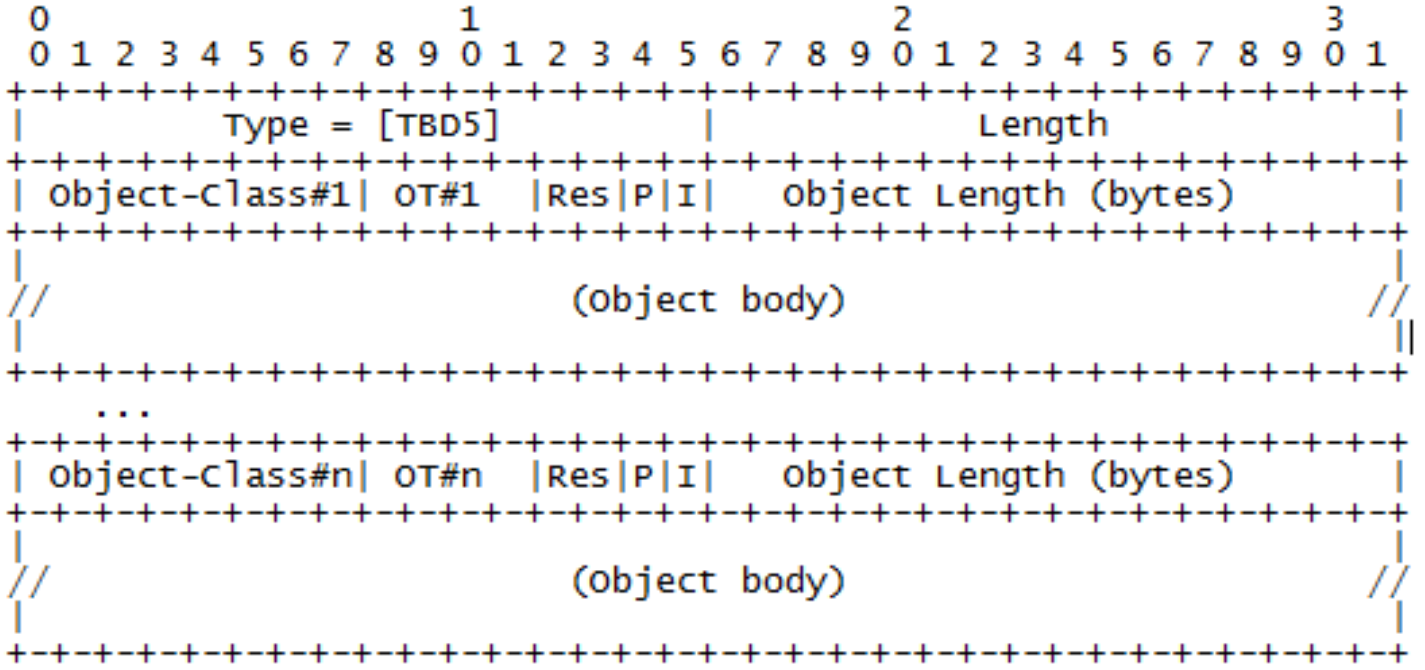
Disjointness computation issues

- When PCE relaxes a constraint, we propose a new TLV: RELAXED-CONSTRAINT TLV to be used in the LSP Object as well



Next steps

- We tried to address the WG comments
- If we missed something, let us know !
- Please provide your feedback on the changes done