PCEP Extensions for Associated Bidirectional Label Switched Paths (LSPs) with Stateful PCE

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Agenda

- Requirements and Scope
- Double-sided Initiation of Bidirectional LSP
- Single-sided Initiation of Bidirectional LSP
- PCEP Object Definitions
- Next Steps

Requirements and Scope

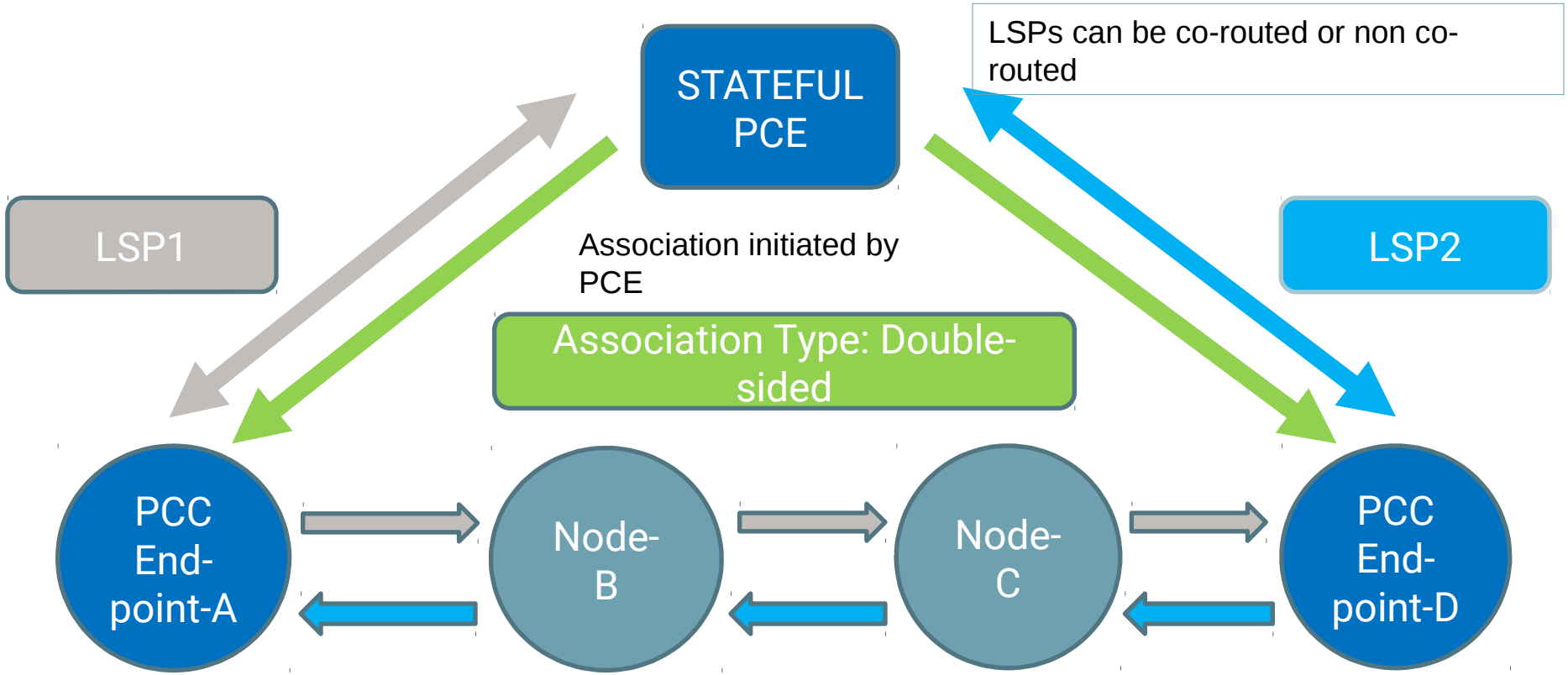
Requirements:

- Packet transport networks deploying bidirectional LSPs
- Co-routed and non co-routed forward and reverse LSP paths
- Asymmetric forward and reverse LSP bandwidths

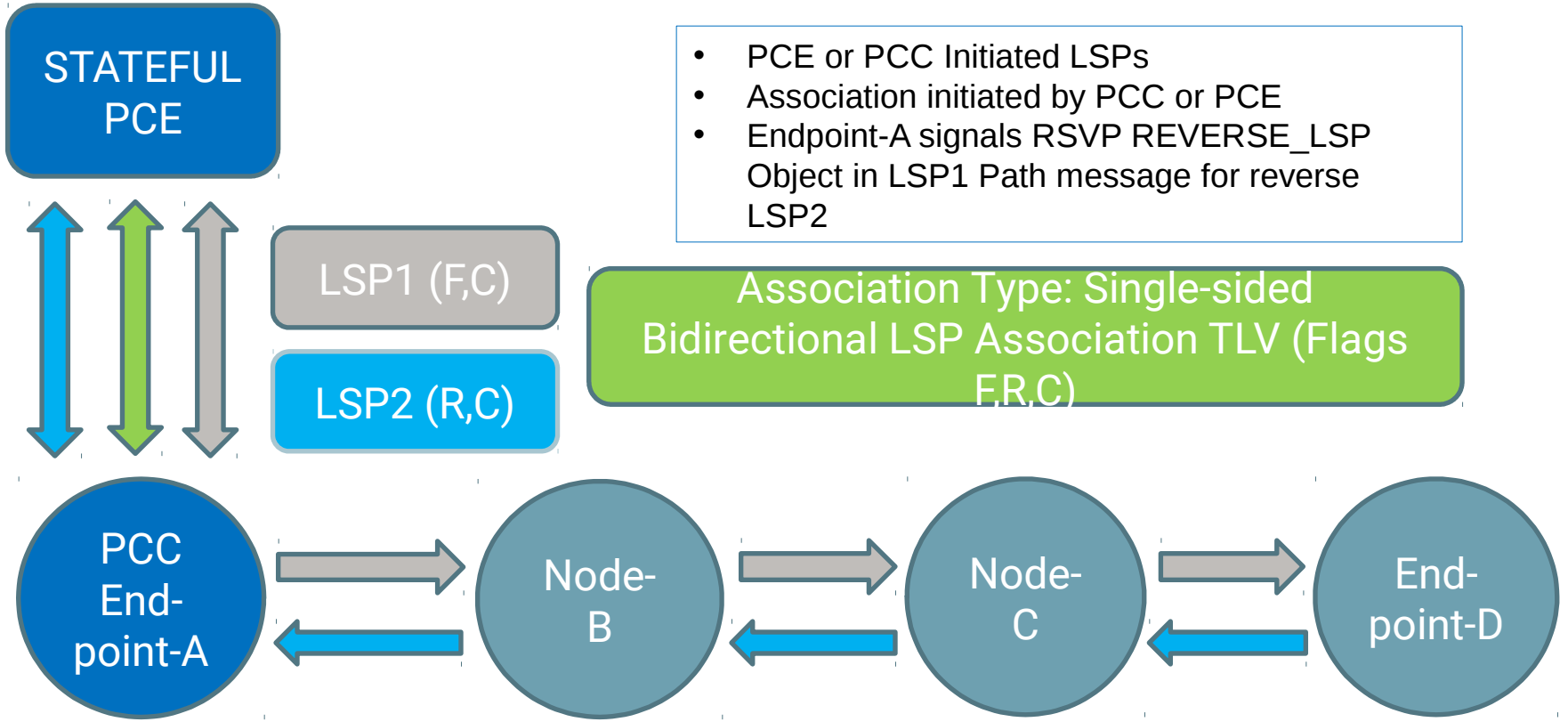
Scope:

- Associated bidirectional LSPs
- PCE-Initiated LSPs
- PCC-Initiated LSPs
- Stateless PCE (e.g. for co-routed path computation requests)

Double-sided Initiation of Bidirectional LSP



Single-sided Initiation of Bidirectional LSP



PCEP ASSOCIATION Object

- Association Type (TBD1) = Single-sided Bidirectional LSP Association Group
- Association Type (TBD2) = Double-sided Bidirectional LSP Association Group
- The Association ID, Association Source, Global Association Source and Extended Association ID in the Association Object of the bidirectional LSPs are populated using the procedures defined in [RFC7551].

Bidirectional LSP Association Group TLV

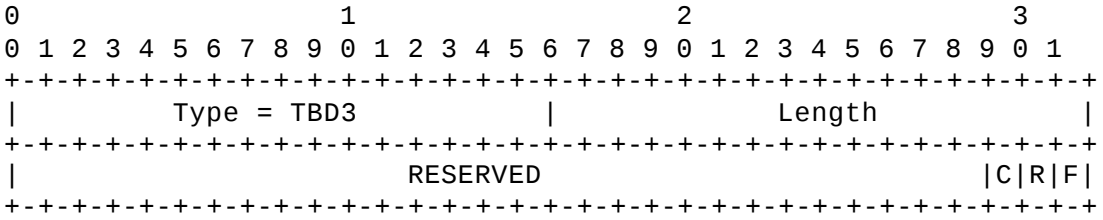


Figure 3: Bidirectional LSP Association TLV format

- F (Forward LSP, 1 bit)
  - Indicates whether the LSP associated is the forward LSP of the bidirectional LSP.
- R (Reverse LSP, 1 bit)
  - Indicates whether the LSP associated is the reverse LSP of the bidirectional LSP.
- C (Co-routed LSP, 1 bit)
  - Indicates whether the associated bidirectional LSP is co-routed.

Next Steps

- Useful functionality to have?
- Welcome your comments and suggestions
- Request for WG adoption

Thank you.