PCEP extension to support Segment Routing Policy Candidate Paths

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History of the Draft

  - Introduce a new ASSOCIATION type to represent an SR Policy.
  - SR Policy is a collection of Candidate Paths.
  - Each Candidate Path is a PCEP LSP.
  - SR Policy Association Group is a collection of PCEP LSPs.

  - Define 3 TLVs of the association object:
    - SRPOLICY-POL-ID TLV
    - SRPOLICY-CPATH-ID TLV
    - SRPOLICY-CPATH-ATTR TLV

  - Extra details and clarification.
Purpose of the draft

• Recently there was introduced a concept of SR Policy (draft-ietf-spring-segment-routing-policy), which has extra information that cannot be adequately described by the existing PCEP segment-routing IETF documents.

• PCEP was lacking a way to signal information about an SR Policy and its Candidate Paths.

• Our current draft is meant to address this gap in PCEP, by allowing the PCE and/or the PCC to signal: Color, End-point, Protocol Origin, Originator, Discriminator and Preference.
Overview

Define how SR objects correspond to PCEP objects:
- SR Policy == PCEP Association Group
- SR Candidate Path == PCEP LSP
- SR Segment List == PCEP ERO

Define a standard way to signal:
- SR Policy ID: Color, Endpoint
- Candidate Path ID: Protocol, Originator, Discriminator
- Candidate Path ATTR: Preference
SRPOLICY-POL-ID TLV

• MUST be same among Candidate Paths of the same SR Policy.
• MUST be different among Candidate Paths of different SR Policies.
SRPOLICY-CPATH-ID TLV

+--------------------------------+---------------------------------+
| Type | Length | Proto. Origin | Reserved |
+--------------------------------+---------------------------------+
| origin ASN | | | |
| | | | |
| | | | |
| | | | |
| | | | |

• MUST be different among Candidate Paths of the same SR Policy.
SRPOLICY-CPATH-ATTR TLV

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
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<tbody>
<tr>
<td>Preference</td>
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• MUST NOT be used to identify the Candidate Path
Next Steps

• Initiate WG adoption.