PCEP Extensions for Signaling Multipath Information

M. Koldychev – Cisco Systems (mkoldych@cisco.com) – Presenter
M. Sivabalan – Ciena Corporation (ssivabal@ciena.com)
T. Saad – Juniper Networks (tsaad@juniper.net)
V. Beeram – Juniper Networks (vbeeram@juniper.net)
H. Bidgoli – Nokia (Hooman.Bidgoli@Nokia.com)
S. Peng – Huawei Technologies (pengshuping@Huawei.com)
B. Yadav – Ciena (byadav@ciena.com)
Recent updates

Version-03 and Version-04
• Editorial changes

Version-05
• Composite candidate path signaling
Composite Candidate Path

Composite Candidate Path, introduced in [draft-ietf-spring-segment-routing-policy-09], allows an SR Policy Candidate Path to ECMP/UCMP traffic to other SR Policies on the same headend.

Example of Composite Candidate Path and Explicit Candidate Path:

SR policy POL100 <headend = H1, color = 100, endpoint = E1>
   Candidate-path CP200 <protocol-origin = 20, originator = 100:1.1.1.1, discriminator = 1>
      Preference 200
      Weight W1, SR policy <color = 1>
      Weight W2, SR policy <color = 2>
   Candidate-path CP100 <protocol-origin = 20, originator = 100:1.1.1.1, discriminator = 2>
      Preference 100
      Weight W1, SID-List1 <SID11...SID1i>
      Weight W2, SID-List2 <SID21...SID2j>
Example

SR policy POL100 <headend = H1, color = 100, endpoint = E1>

Candidate-path CP200 <protocol-origin = 20, originator = 100:1.1.1.1, discriminator = 1>
  Preference 200
  Weight W1, SR policy <color = 1>
  Weight W2, SR policy <color = 2>
Candidate-path CP100 <protocol-origin = 20, originator = 100:1.1.1.1, discriminator = 2>
  Preference 100
  Weight W1, SID-List1 <SID11...SID1i>
  Weight W2, SID-List2 <SID21...SID2j>
PCEP Extensions

Composite Candidate Path can be signaled by putting COLOR TLV [I-D.peng-pce-te-constraints] into the PATH-ATTRIB object and sending an empty SR-ERO object.

<LSP>
<ASSOCIATION Type=SRPOLICY>
<PATH-ATTRIB <WEIGHT-TLV Weight=W1> <COLOR-TLV Color=1>>
<SR-ERO (empty)> 
<PATH-ATTRIB <WEIGHT-TLV Weight=W2> <COLOR-TLV Color=2>>
<SR-ERO (empty)>
Next steps

• Wait for WG adoption
• Discuss