draft-hegde-mpls-spring-epe-oam

Shraddha Hegde
Kapil Arora
IETF-103
EPE Usecase

- draft-ietf-spring-segment-routing-central-epe defines SIDs for egress link selection
- New SID types
  - BGP Peer node-SID
  - BGP-Peer Adj-SID
  - BGP-Peer set SID
- OAM Requirements
  - Validate control plane/data plane
  - Many cases the different ASes belong to same operator
    - Cross AS fault localization is useful
  - In case of diverse ownership, cross-AS OAM may not be desired
Target FEC stack definitions FOR EPE-SIDs

2.1. PeerNodeSID/PeerAdjSID

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>TBD</td>
</tr>
</tbody>
</table>

- **Local AS Number (4 octets)**
- **Remote AS Number (4 octets)**
- **Local Interface address (4/6 octets)**
- **Remote Interface address (4/6 octets)**
- **Advertising BGP router ID (4 octets)**
- **Receiving Node BGP Router ID (4 octets)**

**Figure 1: Peer Node/Adj Segment ID Sub TLV**

<table>
<thead>
<tr>
<th>Type: 37 (TBD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length: variable based on ipv4/ipv6 interface address</td>
</tr>
<tr>
<td>AS Number: 4 octet unsigned integer representing the autonomous system inside the Confederation. [RFC5065]</td>
</tr>
<tr>
<td>Interface Address: BGP session IPv4/IPv6 local/remote address</td>
</tr>
<tr>
<td>BGP Router ID: 4 octet unsigned integer representing the BGP Router Identifier as defined in [RFC4271] and [RFC6286].</td>
</tr>
</tbody>
</table>
Peer Set SID

Type : 38 (TBD)

Length : variable based on ipv4/ipv6 interface address

No.of elements in set : Number of links in the set

AS Number : 4 octet unsigned integer representing an AS inside the Confederation. [RFC5065]

Interface Address : BGP session IPv4/IPv6 local/remote address

BGP Router ID : 4 octet unsigned integer representing the Identifier as defined in [RFC4271] and [RFC6286]

Figure 2: Peer set SID Segment ID Sub TLV
Procedures for validation

• Local configuration to allow cross-AS validation
  > Procedures same as defined in RFC 8287

• Local configuration disallows cross-AS validation
  > The ASBR of the local AS validates the target FEC and sets return code as “egress”
Next steps

• Request Feedback from WG
• WG adoption?