SRv6 BGP-LS

draft-dawra-idr-bgpls-srv6-ext-03

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London, UK
MUST READ !!!!!!!!

draft-filsfils-spring-srv6-network-programming

Also Read

draft-dawra-idr-bgp-sr-service-chaining-00
Agenda

- Problem
- Solution
What’s the update

- Note: Presented 00 version in IETF100
- BGP-LS EPE SIDs for SRv6
- SRv6 END SIDs originated for BGP protocol.
- Added reference to OSPFv3 and updated TLVs to match IGP encodings
Agenda

• Problem

• Solution
Node Attribute TLVs

- SRv6 Node Level Attribute TLVs to signal Node level Capabilities and Local SID Function Table.

<table>
<thead>
<tr>
<th>TLV Code Point</th>
<th>Description</th>
<th>Length</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBD</td>
<td>SRv6 Capabilities</td>
<td>variable</td>
<td>Section 2.1.1</td>
</tr>
<tr>
<td>TBD</td>
<td>SRv6 SID Node Attribute</td>
<td>variable</td>
<td>Section 2.1.2</td>
</tr>
</tbody>
</table>
Node SID TLV

- Added SRv6 END SIDs originated for BGP protocol
- Function flags & Function is now incorporated in the main SID TLV
- Extensible to include other Sub-TLVs
## Link Attribute TLVs

- SRv6 SIDs with their link or adjacency level functions (e.g. END.X function) and Peering SID
- Added BGP-LS EPE SIDs for SRv6

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<tr>
<td>TBD</td>
<td>SRv6 SID Link Attribute</td>
<td>variable</td>
<td><strong>Section 2.2.1</strong></td>
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<tr>
<td>TBD</td>
<td>SRv6 SID LAN Link Attribute</td>
<td>variable</td>
<td><strong>Section 2.2.2</strong></td>
</tr>
<tr>
<td>TBD</td>
<td>SRv6 Peer Node END.X SID</td>
<td>variable</td>
<td><strong>Section 2.2.3</strong></td>
</tr>
<tr>
<td>TBD</td>
<td>SRv6 Peer Set END.X SID</td>
<td>variable</td>
<td><strong>Section 2.2.4</strong></td>
</tr>
</tbody>
</table>
### SRv6 Peer Node END.X SID TLV

- Advertise the BGP Peer Node SID for SRv6 (Similar to SR-MPLS in I-D.ietf-idr-bgpls-segment-routing-epe).
- END.X SRv6 SID indicates Cross-Connect Layer-3 path to the specific BGP Session Peer.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tbody>
<tr>
<td>Type</td>
<td>Length</td>
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<td></td>
</tr>
<tr>
<td>SID-Flags</td>
<td>Function-Flags</td>
<td>Function Code</td>
<td></td>
</tr>
<tr>
<td>SID-size</td>
<td>SID (variable) ...</td>
<td></td>
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</tr>
<tr>
<td>Sub-TLVs (variable) ...</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Function-Flags: 8-bit**
- ISIS: I-D.bashandy-isis-srv6-extensions or OSPFv3: I-D.li-ospf-ospfv3-srv6-extensions

**Function Code: 16-bit**
- Defined in I-D.filsfils-spring-srv6-network-programming
SRv6 Peer Set END.X SID TLV

- Advertise the BGP Peer Node SID for SRv6 (Similar to SR-MPLS in I-D.ietf-idr-bGPLS-segment-routing-epe).
- END.X SRv6 SID for PeerSet indicates forwarding towards the group of BGP Session Peer(s).

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Draft: Next Steps

• Seeking WG input and feedback
• Suggestions/comments are welcome!!