Extensions to RSVP-TE to Support Route Exclusion Using Path Key Subobject

PCE WG, IETF 88th, Vancouver, Canada
draft-zhang-ccamp-route-exclusion-pathkey-00.txt

Xian Zhang (zhang.xian@huawei.com)
Fatai Zhang (zhangfatai@huawei.com)
Oscar Gonzalez de Dios(ogondio@tid.es)
Igor Bryskin(ibryskin@advaoptical.com)
Problem Statement

**Problem**: how to specify the diversity constraints during signaling?

**Current Solutions and potential issues:**

- Using node/link/SRLG list in XRO, may be stripped; 😞
- Using LSP identifier (5-tuple) in XRO, may not be functional without a stateful PCE; 😞
Proposed Extensions

Core idea: taking advantage of RFC5553 (Path Key subobject in ERO), propose feasible *AND* minimal extensions.

Extensions: putting Path Key Subobject (PKS) in XRO and ERO EXRS.

Subobject format (IPv4 example) as below:

<table>
<thead>
<tr>
<th>L</th>
<th>Type</th>
<th>Length</th>
<th>Path Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>PK-owner-ID (4 bytes)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: the Path key-based solution does not enforce the implementation of full PCE functions but rather only the Path Key resolution capability.
Next Step

• This is a straightforward extension and well received in the mailing list ahead of meeting;
• The authors would like to ask for WG adoption;