Controlled ID Extension Discussion

draft-ietf-pce-controlled-id-00

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Agenda

• Introduction and Background
• Issues Received in the WG Adoption Call
• Discussion of Encoding Design
Introduction and Background

- This document describes a mechanism for a PCC to inform the PCE of the identifier space set for the PCE control via PCEP.
- The identifier could be an MPLS label, a SID, or any other to-be-defined identifier that can be allocated and managed by the PCE.
- Use cases:
  - BINDING SID Allocation
  - PCE-based Central Control
    - SRGB/SRLB
    - GIB/LIB
    - etc.
- Using OPEN MSG to carry the info.
  - Open Object
    - LABEL-CONTROL-SPACE TLV
    - FUNCT-ID-CONTROL-SPACE TLV
- The draft had been adopted as a WG draft, but comments need to be addressed.
Discussion of Encoding Design

• We are facing two main issues
  • Where should the info be encoded? Open MSG seems not inappropriate
  • Format of TLVs may need some discussion. Put all the info into a TLV by adding the type field? Or separate each controlled ID space into specific sub-TLVs. (Personally prefer to separate them)

• Which Message is appropriate is the most important issue. Several Options are proposed.
  • Open Message
  • PCEP-LS LS Object
  • Notification message
  • New PCEP Object in PCRpt message
  • New PCEP Message
  • Combination of Open message and Notification message

• Each option has its Pros and Cons, see the table in the next page.

• A online discussion is recorded: https://notes.ietf.org/draft-ietf-pce-controlled-id-space?view welcome to note down your comments.
## Comparison of Encoding Design

<table>
<thead>
<tr>
<th>NO.</th>
<th>Option</th>
<th>Pros</th>
<th>Cons</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open Message</td>
<td>Easy and straightforward</td>
<td>Needs session reset to add a new block</td>
<td>Original solution</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Size of open message in case of multiple blocks</td>
<td></td>
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<tr>
<td>2</td>
<td>PCEP-LS LS Object</td>
<td>It makes sense to consider controlled ID-Space as Node attributes</td>
<td>Tight coupling with the fate of PCEP-LS and the PCEP speaker must support PCEP-LS to use this feature.</td>
<td>Quan and Dhruv prefer</td>
</tr>
<tr>
<td>3</td>
<td>Notification message</td>
<td>Easy to implement and support</td>
<td>Feels like a misuse of notification</td>
<td>Samul prefers</td>
</tr>
<tr>
<td>4</td>
<td>New PCEP Object in PCRpt message</td>
<td>Complex???</td>
<td>Feels like a misuse of PCRpt</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Very confusing RBNF</td>
<td></td>
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<tr>
<td>5</td>
<td>New PCEP Message</td>
<td>Clean Solution</td>
<td>Use of a new message for an experiment</td>
<td>Samul prefers</td>
</tr>
<tr>
<td>6</td>
<td>Combination of Open message and Notification message</td>
<td>Open msg is used for initial report, straightforward. Notification msg is used for modification. Appropriate usage of messages.</td>
<td>Complicated. Need to support it in Open and Notification messages.</td>
<td>Cheng, Samul and Andrew prefer</td>
</tr>
</tbody>
</table>
Next Steps

- Address the pending issues:
  - Which message?
  - What format of TLVs
  - ...

- Seek for more reviewers