draft-akiya-mpls-lsp-ping-reply-mode-simple

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Motivation #1

- Echo request carries **Reply Mode** field [RFC4379] which instructs how echo reply is to be sent
  
<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do not reply</td>
</tr>
<tr>
<td>2</td>
<td>Reply via an IPv4/IPv6 UDP packet</td>
</tr>
<tr>
<td>3</td>
<td>Reply via an IPv4/IPv6 UDP packet with Router Alert</td>
</tr>
<tr>
<td>4</td>
<td>Reply via application level control channel</td>
</tr>
</tbody>
</table>

- [draft-ietf-mpls-return-path-specified-lsp-ping] allows carrying of TLV describing specific LSP, for responder to send echo reply on

- For many bi-dir cases, echo request sender wants echo reply to be sent on **reverse LSP**
Motivation #2

• Available Reply Mode(s) at responder?
• It **depends** ...
  – Modes: ping, traceroute, ping w/ specific TTL
  – LSP Types:
    • Control-channel?
    • Reverse LSP: co-routed, partially co-routed or non-co-routed?
    • IP path or no?
  – Echo request falsely terminating on wrong node
• Today, echo request sender need to compute (or **guess**) available return path for each operation ...
Intent of Reply Mode Simplification

• Preserve the ability for users to specify any Reply Mode in echo requests, but ...
• Introduce a single Reply Mode that:
  – “works” in most cases
  – can be implemented as default ... why?
    • simplicity in implementations
    • consistency in behaviors across products/vendors
Extensions

• Two new Reply Modes

<table>
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<tr>
<th>Value</th>
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<tbody>
<tr>
<td>TBA1</td>
<td>Reply via reverse LSP</td>
</tr>
<tr>
<td>TBA2</td>
<td>Reply via predefined preference</td>
</tr>
</tbody>
</table>

• Reply Mode TBA2:
  – Responder to use draft predefined preference:
    1. Reply Mode 4 (control-channel)
    2. Reply Mode TBA1 (reverse LSP)
    3. Reply Mode 2 (IPv4/IPv6 UDP)
  – The new optional Reply Mode Order TLV can be used to override the predefined preference

• Responder sets used Reply Mode in echo reply
Thank you!

Questions/Comments?