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

```
Value Meaning
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    1 Do not reply
    2 Reply via an IPv4/IPv6 UDP packet
    3 Reply via an IPv4/IPv6 UDP packet with Router Alert
    4 Reply via application level control channel
```

- [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

```
Value Meaning
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 TBA1 Reply via reverse LSP
 TBA2 Reply via pre-defined preference
```

- 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?