Deprecating the Use of Router Alert in LSP Ping

draft-kompella-mpls-lspping-norao-00

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Proposal

• Remove the IPv4 and IPv6 Router Alert Options (RAO) from LSP Ping
  • Reclassify RFC 7506 to Historic
  • Update RFC 8029

• Rationale
  • RAO Security Considerations (RFC 6398)
  • Give additional degrees of freedom to the 6man effort to rethink the IPv6 Hop-by-hop Options header (draft-ietf-6man-hbh-processing)
  • Motivation for including the RAO in LSP Ping is questionable
# LSP Ping Echo Request

<table>
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<th>MPLS Echo Request</th>
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LSP Ping Echo Reply

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Motivation for RAO in Echo Request

• The Echo Request message must not be forwarded beyond the egress LSR
• Mandatory protection mechanisms
  • Destination address must be chosen from 127/8 (IPv4) or 0:0:0:0:FFFF:7F00:0/104 (IPv6)
  • IPv4 TTL or IPv6 hop count must be set to 1
  • RAO
• Two levels of protection are sufficient to prevent forwarding beyond egress
• This document recommends that the RAO be omitted
Motivation for RAO in Echo Reply

• LSP Ping has the following reply modes
  1. Do not reply
  2. Reply via an IPv4/IPv6 UDP packet
  4. Reply via application-level control channel

• Motivation for third reasons third type is questionable
  • According to RFC 8029, "If the normal IP return path is deemed unreliable, one may use 3 (Reply via an IPv4/IPv6 UDP packet with Router Alert).
  • Huh?
Next Steps

- WG Review
- Call for adoption