Deprecation Of The IPv6 Router Alert Option

draft-ietf-6man-deprecate-router-alert-00
Goal

• Deprecate the IPv6 Router Alert Option
• Protocols that use the Router Alert Option may continue to do so
  • Even in future versions
• Protocols standardized in the future MUST NOT use the Router Alert Option
Motivation

- Migrate towards an architecture in which all HBH Options are processed on the forwarding plane
  - Reduce HBH access to the control plane
- Reduce operator motivation to discard all packets containing HBH Options
Can All Router Alert Use-Cases Be Addressed By Other Means?
RSVP-TE Use Case

• Send a PDU from an MPLS ingress node to an MPLS egress node
• Cause every node along the delivery path to process the message
RSVP-TE Alternative to Router Alert

- Ingress node encodes the MPLS egress address in the message body
- Ingress node sends a message addressed to the first node along the delivery path
  - First node processes the message
  - First node sends a message addressed to the next node along the delivery path
  - Repeat
- Solution is widely deployed
MLDv2 Use Case

• Send an MLDv2 message addressed to an IPv6 multicast address
• Cause every router on the segment to examine and process the message, even if it has no interest in that IPv6 multicast address
MLDv3 Alternative to Router Alert

• Encode the IPv6 Multicast Address in an MLDv2 message
• Send the message to a well-known IPv6 Multicast Address
  • Example: ALL-MLDv2-Routers
• Solution is not standardized, implemented or deployed
Next Steps

• WG Last Call