Unified Identifier in IPv6 Segment Routing Networks

draft-mirsky-6man-unified-id-sr

Greg Mirsky
Peng Shaofu

Problem statement

• Many OAM functions require identification of the SR tunnel ingress and the path traversed:
  – SRv6 by using SRH complies with the requirement
  – SR-MPLS, as well as Unified SR (SR-MPLS-over-IP), is not

• Scalability of SRv6 may be limiting factor to use strict TE paths in combination with service-based instructions

• Scalability of SR-MPLS may be higher resulting from smaller SID length

• IGP SR extensions may be used to advertise 20 bits-long and 32 bits-long SIDs
Proposed solution

- Make SRH capable to carry SIDs of lengths other than only 128 bits
- No mixing of lengths – one type of SID in SRH
- Add S field in Flags as two-bits long:
  - 0b00 – 128-bits SID
  - 0b01 - 20-bits SID
  - 0b10 - 32-bits SID
  - 0b11 - reserved for future use
- Transit SR nodes operate per Section 5.1 and 5.2 of draft-ietf-6man-segment-routing-header
- Operation of the egress SR node will be specified in the future update
Next steps

• Your comments, suggestions, questions always welcome and greatly appreciated

• Merge with IPv6 Segment Routing Header (SRH) or WG adoption?