Clarifying SRv6 SID List Processing

draft-ietf-6man-sidlist-clarification

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The Issue

- SRv6 processing is defined as copying an entry from the SRH SID List to the IPv6 Destination Address field
  - Thus, entries in the SID List are asserted to be IPv6 addresses
- SID List compression (draft-ietf-spring-srv6-srh-compression) has a variation
  - The SID List entry for a REPLACE-CSID is not an IPv6 address
  - The REPLACE-CSID is operated on by a function to generate the next DA
- The ADs spotted this discrepancy during IESG evaluation
  - They asked that draft-ietf-spring-srv6-srh-compression Update RFC 8754
    - The text mentions REPLACE-CSID as a specific exception
  - They suggested that a clarification of SRv6 processing is needed

Important Note - This draft

- The aim is to make a clarification
  - SID Lists do not have to contain IPv6 addresses
  - The DA is derived by applying a function to the SID List entries
    - That function may be a direct copy
    - The function could be more complex as with REPLACE-CSID
    - No limit to the function provided it is clearly known from the definition of the SID Type
    - Note new I-D draft-du-spring-srv6-function-encryption proposes encrypting the FUNC/ARG
- The aim is NOT TO CHANGE the SRv6 architecture
- There is NO CHANGE to the SRH encoding
- This enables future use cases without each having to make a specific update to 8754
  - If this draft had already existed, draft-ietf-spring-srv6-srh-compression might have sailed through IESG evaluation

Impact of changes

- Generically, fix text so that

  OLD

  A SID list is a sequence of IPv6 addresses

  NEW

  Entries in a SID list are mapped to IPv6 addresses

  END

  - Mapping may be a “copy to the Destination Address field”
  - Mapping may be any form of processing that generates a value to place in the Destination Address field.
- Text changes are presented as OLD/NEW
- This document Updates RFC 8754 which came out of 6man

Status and Actions for the Authors

- This draft was recently adopted by 6man
  - SPRING was notified of adoption poll
  - As far as the authors can tell, there were no objections
  - Minor comments (thanks, Brian) have been included in -00
- The authors:
  - Always welcome further comments and opinions
  - Believe that there is no more work needed on this document
  - Think that progressing to working group last call would be appropriate