SRv6 Network Programming

draft-ietf-spring-srv6-network-programming-01

Clarence Filsfils
Pablo Camarillo
John Leddy
Daniel Voyer

Satoru
Matsushima
Zhenbin Li

Daniel Bernier
Dirk Steinberg
Robert Raszuk
Bruno Decraene
Bart Peirens
Hani Elmalky
Prem Jonnalagadda

Milad Sharif
David Lebrun
Stefano Salsano
Ahmed AbdelSalam
Gaurav Naik
Arthi Ayyangar
Satish Mynam

Wim Henerickx
Shaowen Ma
Ahmed Bashandy
Francois Clad
Kamran Raza
Darren Dukes
Patrice Brissete
Zafar Ali

Draft update

- draft-filsfils-spring-srv6-network-programming-07:
  - Split the illustrations into a separate document:
    - draft-filsfils-srv6-net-pgm-illustration-00
  - Draft adopted as the WG document last IETF:
    - draft-ietf-spring-srv6-network-programming-00

Draft update   (2)

- draft-ietf-spring-srv6-network-programming-01:
  - Representation of SRv6 Locator as B:N
  - Added normative reference to SRH insertion draft
  - Clarified the use of "No Next Header for IPv6"
  - Updated the Registration procedures for the "SRv6 Endpoint Behaviors" IANA registry:
    - From "IETF Review" to "Specification required"
      - RFC5226: "..Values and their meanings must be documented in a permanent and readily available public specification"
  - Editorial updates

Future Revision

- Alignment with SRH draft (draft-ietf-6man-segment-routing-header)
  - Update SRv6 behavior pseudocodes
- It will be a large editorial change

Open issue 1: Definition of ENH

- Will be addressed automatically in next revision as/when we align with SRH draft (pseudo-codes etc.)

Open issue 2: Use of NH=59 ("No Next Header for IPv6")

- Reasoning:
  - The SID identifies the packet processing on the egress node
  - The "No Next Header for IPv6" identifies that there is no further "IP" header to be processed in the packet
- Discussions on WG mailers (spring, 6man) without any clear consensus.
- Some suggestions:
  - Use NH=97 (EtherIP)
    - Requires RFC3378 compliance (EtherIP Header)
  - Allocate a new protocol value in "Internet Protocol Numbers" registry for NH=Ethernet
  - Redefine the meaning of "59"
  - Keep the current use (NH=59)

Open issue 2: Use of NH=59 ("No Next Header for IPv6")   (2)

- Additionally:
  - No solutions were given to satisfy requirements (used for encapsulating <u>ethernet frames</u> and <u>unstructured PDUs</u>)
  - Does not seem reasonable to allocate a new Next Header value for "No Next Internet Protocol header to be processed in the packet" given the existence of "No Next Header"

Thanks!

- Comments ? Questions?