

SRv6 Network Programming

draft-ietf-spring-srv6-network-programming-05

Pablo Camarillo

Authors:

C. Filsfils (Cisco Systems, Inc.)
P. Camarillo (Cisco Systems, Inc.)
J. Leddy
D. Voyer (Bell Canada)
S. Matsushima (SoftBank)
Z. Li (Huawei Technologies)

Contributors:

D. Bernier (Bell Canada)
D. Steinberg (Lapishills Consulting Ltd.)
Robert Raszuk (Bloomberg LP)
Bruno Decraene (Orange)
Bart Peirens (Proximus)
Hani Elmalky (Ericsson)
Prem Jonnalagadda (Barefoot)
Milad Sharif (Barefoot)
David Lebrun (Google)
Stefano Salsano (Universita di Roma)
Ahmed AbdelSalam (Gran Sasso Science Institute)
Gaurav Naik (Drexel University)
Arthi Ayyangar (Arista)
Satish Mynam (Innovium Inc.)
Wim Henderickx (Nokia)
Shaowen Ma
Ahmed Bashandy (Arcus Networks)
Francois Clad (Cisco Systems, Inc.)
Kamran Raza (Cisco Systems, Inc.)
Darren Dukes (Cisco Systems, Inc.)
Patrice Brissete (Cisco Systems, Inc.)
Zafar Ali (Cisco Systems, Inc.)
Ketan Talaulikar (Cisco Systems, Inc.)

Draft history

- First revision published in March 2017
- 8 revisions as an individual draft
- 6 revisions as a WG document
- Stable and minor changes

Rev 02:

- Editorial updates to align with SRH draft
 - Section 3 replaced text for references to SRH draft
 - Section 4 pseudocodes follow same format as SRH
- Removed End.S
- Removed SR-Aware apps and Non-SR Aware apps
 - Covered in draft-ietf-spring-service-programming
 - Avoids overlapping

Rev 03:

- Moved Transit behaviors that relied on SRH insertion to a separate draft
 - draft-filsfils-spring-srv6-net-pgm-insertion-00
- Moved End.B6.Insert behaviors to insertion draft as well

Rev 04:

- Clarified SRv6 SID function vs SR segment behavior
- Modified the L2 frame encapsulation next header
 - Formerly IPv6 No Next Header (59)
 - Now request allocation of a new value for “Ethernet”
- Replaced security considerations on intra-domain deployment for reference to SRH

Rev 05:

- Minor editorial updates to the text
- Fixed typo on USD flavor
 - It can be used to decapsulate IPv4 and IPv6 payloads
- Clarified on Ethernet
 - Preamble and Frame Check Sequence are stripped from ingress frame upon encaps

Feedback since IETF105

- Discussion on NH=59
 - Discussed at the mailer and updated draft accordingly
- Extension header insertion
 - Moved to separate draft as to progress with the WG milestones
- Address space examples
 - Removed.
- Definition of ENH
 - Replaced for “Upper Layer Header” as in SRH draft

Industry status

- 8 open-source implementations
 - 3 packet processing stacks
 - 5 open-source applications
- 18 hardware implementations
 - Including merchant silicon
 - 8 different vendors
- Public interop events
 - SIGCOMM 2017, EANTC 2018, EANTC 2019
- 7 deployments in production networks
 - Softbank, China Telecom, Iliad, LINE Corporation, China Unicom, CERNET2, MTN Uganda
 - More deployments not publicly disclosed

Ready for WG Last Call

Thank you.