draft-ietf-6man-spring-srv6-oam-01.txt

SRv6 OAM

Zafar Ali - Cisco Systems (zali@cisco.com) - Presenter
Clarence Filsfils - Cisco Systems (cfilsfil@cisco.com)
Satoru Matsushima – Softbank (satoru.matsushima@g.softbank.co.jp)
Daniel Voyer - Bell Canada (daniel.voyer@bell.ca)
Mach Chen – Huawei (mach.chen@huawei.com)
List of Contributors

• Nagendra Kumar (naikumar@cisco.com)
• Carlos Pignataro (cpignata@cisco.com)
• Rakesh Gandhi (rgandhi@cisco.com)
• Darren Dukes (ddukes@cisco.com)
• Frank Brockners (fbrockne@cisco.com)
• Cheng Li (chengli13@huawei.com)
• John Leddy - Individual (john@leddy.net)
• Robert Raszuk - Bloomberg LP (robert@raszuk.net)
• Gaurav Dawra – LinkedIn (gdawra.ietf@gmail.com)
• Bart Peirens – Proximus (bart.peirens@proximus.com)
• Faisal Iqbal – Individual (faisal.ietf@gmail.com)
History of the Draft

• The first revision was posted in July 2017.
• 8 revisions since the individual draft submission.
• Actively discussed on the mailing list
  – Before and after adoption.
• Addressed all comments received.
Draft Summary

- The document describes how existing ICMP mechanisms can be used in SRv6 Network.
- The document defines SRH.Flags.O-bit
  - The O-bit is used to implement “timestamp, punt and forward” behavior.
- The document defines two OAM SIDs:
  - END.OP (OAM Endpoint with Punt)
  - END.OTP (OAM Endpoint with Timestamp and Punt)
Addressed Feedback Received Since IETF105

- Clarified processing of the O-Flag when SL = 0.
- Clarified ICMP Error handling.
- Editorial Changes
Summary of the Diffs

Clarified O-Flag processing when SL = 0 by making editorial changes to the pseudo code for O-bit processing.

Rest of the changes are also mainly editorial.

When N receives a packet whose IPv6 DA is S and S is a local SID, N executes the following pseudo-code, before the execution of the local SID S. Specifically:

S01.1. IF SRH.Flags.O-flag is one and local configuration permits THEN

   a. Make a copy of the packet.

   b. Send the copied packet, along with an accurate timestamp to the OAM process.
Deployment Status

• 6 deployments of the draft in the production networks
  – Softbank, China Telecom, Iliad, China Unicom, CERNET2, MTN Uganda

• More deployments not publicly disclosed.

Source: draft-matsushima-spring-srv6-deployment-status
Implementation Status

• Supported by at least 12 platforms with shipping implementation.
• Additional known implementations.

Source: draft-matsushima-spring-srv6-deployment-status
Interoperability Status

• In March 2019, the European Advanced Networking Test Center (EANTC) successfully validated multiple implementations of the drafts.

• Results for Multi-vendor Interoperability Testing was showcased at MPLS World congress in April 2019.

• Authors are aware of additional private interoperability testing between different vendors.

Source: draft-matsushima-spring-srv6-deployment-status
Next Steps

• Draft has been deployed in multiple production networks.
• Multiple interoperable implementations exist.
• Draft has been stable for quite sometime.
• The authors like to request the WG for the last call.