SRv6 based BGP services
draft-ietf-bess-srv6-services-02

Author(s) :

Gaurav Dawra, LinkedIn

Clarence Filsfils, Cisco Systems

Robert Raszuk, Bloomberg LP

Bruno Decraene, Orange

S. Zhuang, Huawei Technologies

J. Rabadan, Nokia

Presenter :

Gaurav Dawra, LinkedIn

April 2020

Interim Meeting

I E T F

Overview

The draft specifies the BGP extensions for signaling of services over SRv6

- L3VPN for IPv4 and IPv6
- Global IPv4 and IPv6
- EVPN

Draft Progress

- First presented SRv6 based L3VPN services in IDR at IETF98
- Further introduction of SRv6 based EVPN and Global services in IDR at IETF101
- Presented SRv6 Services Draft in BESS at IETF104
- Presented update packing optimizations in BESS at IETF105
- Adopted as WG document just before IETF106

Clarifications on Encoding & Signaling

- Handling of multiple SID signaling for the same route

- Clarifications for the Transposition Scheme

- Clarifications on next-hop and SID reachability

- Treat-as-withdraw error handling for TLV errors is clarified

EVPN Signaling Updates

- Clarifications on EVPN route type 3 signaling

- Inclusion of local-bias method support for SRv6

Editorial Changes

- Editorial changes and re-ordering of some sections and content for improving the document flow
- TLV encoding is now described before the services signaling section
- Updated reference from RFC5549 to draft-ietf-bess-rfc5549revision
- Removed redundant text and updated with references to appropriate base specifications

IANA Early Allocation

- Authors requested WG for early allocations on 03 Mar, 2020
- Approved IANA Allocation by DE on April 27, 2020.
- Multiple implementations using the following codepoints

Allocations to be made from BGP Prefix SID TLV types as below

```
Value               Type                    Reference
-----------------------------------------------------------
4                   Deprecated              <this document>
5 (suggested)       SRv6 L3 Service TLV     <this document>
6 (suggested)       SRv6 L2 Service TLV     <this document>
```

- Request for the formalization of allocations at the earliest

Implementation & Deployment Status

- Implementations shipping & in production from Cisco, Huawei and other vendors
- Open source implementations in Linux kernel, fd.io
- Deployments in production at Softbank, China Telecom, Iliad, LINE Corp, China Unicom, MTN Uganda, etc.
- Multi-vendor interop at EANTC since 2018

- More details in: **draft-matsushima-spring-srv6-deployment-status**

Next Steps

- Given the implementations and deployments, authors are preparing the document for WGLC around IETF108

- Request WG for review and comments