

SRV6OPS Working Group
Internet-Draft
Intended status: Informational
Expires: 8 January 2026

G. Mishra
Verizon Inc.
B. McDougall
Cisco Systems
7 July 2025

SRv6 Inter Domain Routing Use Cases
draft-mishra-srv6ops-inter-domain-routing-use-case-01

Abstract

This draft describes the SRv6 Inter Domain routing architecture with IP VPN and EVPN overlays and seamlessly stitching the overlays across inter domain boundaries. This draft analyzes the SRv6 Design and Operational considerations regarding SRv6 Inter Domain routing and the SRv6 forwarding plane. This draft also describes three real world use cases of SRv6 Compression Next CSID and operational considerations with regards to SRv6 inter domain routing.

Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119].

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <https://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on 8 January 2026.

Copyright Notice

Copyright (c) 2025 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to BCP 78 and the IETF Trust's Legal Provisions Relating to IETF Documents (<https://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Revised BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Revised BSD License.

Table of Contents

1. Introduction	2
2. Terminology	5
3. Real World SRv6 Compression use Cases for Inter Domain Routing	5
3.1. IPv6 Host Based Networking	5
3.2. Dual Plane MPLS / IPv6 Core Migration	5
3.3. SRv6 Next SID End to End	6
4. IANA Considerations	6
5. Security Considerations	6
6. Acknowledgments	6
7. References	6
7.1. Normative References	6
7.2. Informative References	11
Appendix A. APPENDIX-A	12
Authors' Addresses	12

1. Introduction

This draft describes the SRv6 Inter Domain routing architecture with IP VPN and EVPN overlays and seamlessly stitching the overlays across inter domain boundaries. This draft analyzes the SRv6 Design and Operational considerations regarding SRv6 Inter Domain routing and the SRv6 forwarding plane. This draft also describes three real world use cases of SRv6 Compression Next CSID and operational considerations with regards to SRv6 inter domain routing.

[RFC4364] describes BGP/MPLS IPv4 VPN and [RFC4659] describes BGP/MPLS IPv6 VPN. [RFC4364] describes BGP/MPLS IPv4 VPN Section 10 (a) describes Inter-AS Options A known as back to back PE-CE style peering, Section (b) Inter-AS Option B BGP-LU with Direct eBGP peering VPN overlay, Section (c) describes Inter-AS Option-C ASBR to ASBR interdomain loopbacks advertised with RR to RR eBGP multihop peering with next-hop unchanged.

With SRv6 MPLS Inter-AS options described in [RFC4364] and [RFC4659] are not applicable. However the knobs and concepts used in overaly stitching are still very applicable and are used with SRv6. SRv6

Service SID refers to the SRv6 specific endpoint behaviors defined in SRv6 Programming [RFC8986]. In this draft we discuss in detail the end to end service stitching of the L2 VPN EVPN and IP VPN SRv6 Service SID endpoint behaviors which includes L2 VPN endpoint behaviors End.DX2, End.DX2V, End.DX2U, End.DX2M and IP VPN endpoint behaviors End.DX4, End.DX6, End.DT4 and End.DT6.

SRv6 inter domain routing L2 VPN EVPN and IP VPN SRv6 service stitching is applicable to SRv6 Programming [RFC8986] 128 bit full SID and SRv6 Compression [I-D.ietf-spring-srv6-srh-compression] C-SID Next C-SID (uSID) endpoint flavor and Replace SID C-SID (G-SID) endpoint flavor.

[RFC9252] describes BGP Overlay services over SRv6 forwarding plane. For SRv6 Best effort (BE) service, the egress PE signals an SRv6 service SID with ingress PE for the BGP service overlay route. The ingress PE encapsulates the payload packet from the CE in an outer IPv6 header where the destination address is the SRv6 Service SID provided by the egress PE. In this case the underlay intermediate nodes only need to support IPv6 data plane. In order to provide SRv6 service with an SLA from ingress PE to egress PE, the ingress PE colors the overlay service route with a color extended community [RFC9012] so the overlay color extended community maps to SR Policy [RFC9012], overlay color to underlay intent mapping. The ingress PE encapsulates the payload packet from the CE in an outer IPv6 header with SR Policy candidate SID list related to the SLA path bound to the forwarding plane with Binding SID (BSID) set with the SRv6 service SID associated with the overlay service route active segment in the SRH for 128 bit Full SID or SRv6 Compression Next SID carrier uN endpoint function to forward along the static SID list or dynamic SID list path end to end steering.

SRv6 Prefix SID attribute [RFC8669] is extended by [RFC9252] to carry the SRv6 L2 VPN and IP VPN Service SIDs and their associated information in BGP NLRI AFI / SAFI. SRv6 L3 Service TLV encodes the service SID information for the SRv6 based L3 services providing the equivalent functionality of MPLS service label when received with a Layer 3 Service route as defined in BGP/MPLS VPN-IPv4 [RFC4364] and BGP/MPLS VPN-IPv6 [RFC4659]. Essentially the SRv6 L3 Service TLV encodes the L3 Service SID for SRv6 based services as an MPLS label for SRv6 Programming [RFC8986] endpoint behaviors End.DX4, End.DX6, End.DT4 and End.DT6. SRv6 L2 Service TLV encodes the service SID information for the SRv6 based L2 services providing the equivalent functionality of MPLS service label for an Ethernet VPN (EVPN) Route Types for L2 services as defined in BGP/MPLS EVPN [RFC7432]. Essentially the SRv6 L2 Service TLV encodes the L2 VPN Service SID for SRv6 based services as an MPLS label for SRv6 Programming [RFC8986] endpoint behaviors End.DX2, End.DX2V, End.DX2U, End.DX2M.

[RFC9252] defines the encoding of the SRv6 SID information. The SRv6 Service SIDs for a BGP service prefix is carried in the SRv6 Service TLVs of the BGP Prefix SID attribute as described above [RFC8669]. BGP services such as IP VPN BGP/MPLS VPN-IPv4 [RFC4364] and BGP/MPLS VPN-IPv6 [RFC4659] where Per VRF SID allocation is used End.DT4 and End.DT6 endpoint behaviors the same SID is shared across multiple NLRI, thus providing efficient packing. However for BGP services such as Ethernet VPN (EVPN) [RFC7432] and VPLS / H-VPLS where per-PW SID allocation is required such as for End.DX2 endpoint behavior, each NLRI would have its own unique SID, resulting in inefficient update packing. [RFC9252] defines an efficient method for update packing for cases such as EVPN NLRI using a transposition scheme, where the SRv6 SID Structure Sub-Sub-TLV describes the sizes of the parts of the SRv6 SID and indicates the offsets such that the common part locator is encoded into the BGP Prefix SID attribute and the variable part Service label encoded into the func / arg field of the SRv6 Service SID is encoded into the NLRI.

This draft describes how to successfully implement end to end inter domain routing over an SRv6 forwarding plane where the L2 VPN EVPN and IP VPN overlay services SRv6 Service SIDs can be stitched end to end.

[RFC9252] BGP Service Overlay Section 2 last 2 paragraphs talk about the SRv6 data plane broken state and the solution. A BGP speaker receiving a route containing the BGP Prefix-SID attribute with one or more SRv6 service TLVs observes the following rules when advertising the received route to other peers:

[RFC9252] Rule-1: BGP Service Overlay Section 2 2nd to last paragraph - Broken state when Next hop is changed. If the BGP Next Hop is changed, the TLVs, Sub TLVs, or Sub-Sub-TLVs SHOULD be updated with the locally allocated SRv6 SID information from the SID Manager. Any received Sub-TLVs and Sub-Sub-TLVs that are unrecognized must be removed. SRv6 summary locators are advertised for all Algo's between domains for reachability inter domain routing. When the next hop changes between the inter-as PE for L2 VPN or L3 VPN service route the inter domain loopback propagated however since the next hop changes on the eBGP peering the next hop is set to the directly connected eBGP subnet and not the Loopback for the service route and has the locally generated SRv6 Service SID resulting in a broken SRv6 Data Plane.

[RFC9252] Rule-2: BGP Service Overlay Section 2 last paragraph - Solution for propagating L2 VPN and L3 VPN SRv6 Service SID end to end If the BGP Next Hop is Unchanged during the advertisement, the SRv6 Service TLVs, including any unrecognized types of Sub-TLVs and Sub-Sub-TLVs, SHOULD be propagated further. In addition, all

Reserved fields in the TLV, Sub-TLV, or Sub-Sub-TLV MUST be propagated Unchanged. When the next hop is unchanged between the inter-as PE for L2 VPN or L3 VPN service route the inter domain Loopback is now propagated and has the SRv6 Service SID propagated resulting in SRv6 Data Plane being intact and working end to end.

2. Terminology

Terminology used in defining the SRv6 Inter Domain Routing specification.

IDR: SRv6 Inter Domain Routing End to End

NH: BGP Next Hop

NHC: BGP Next Hop Changed

NHU: BGP Next Hop Unchanged

NHS: BGP Next Hop Self

Service SID Preserved: Service SID is does not change and is propagated

Service SID Locally Generated: Service SID is locally generated by SRv6 SID Manager

3. Real World SRv6 Compression use Cases for Inter Domain Routing

3.1. IPv6 Host Based Networking

- * Traffic Engineering and Carrier Grade Features are not a requirement in the Data Center
- * Operators can use white box switches and disaggregated hardware and software with Vanilla IPv6 Only DC Fabric blindly passing the IPv6 Next SID packets. Massive bandwidth where Multi Petabits of fiber can be thrown at the DC fabric, with the focus on High Bandwidth packet pushing with Ultra simplified fabric.
- * Steering is initiated from the Data Center host attachment using IGP shortest path leaving the entire fabric 100% Vanilla IPv6.

3.2. Dual Plane MPLS / IPv6 Core Migration

- * Traffic Engineering and Carrier Grade Features are a requirement only in the Data Center.

- * Traffic Engineering capabilities in the Data Center, and the intermediate domains follow IGP shortest path blindly forwarding SRv6 Next SID packets.
- * Massive scale and resiliency with full carrier grade features in the Data Center.
- * Steering is initiated from the Data Center host attachment and follows IGP shortest path along the intermediate domains to the egress Data Center or domain.

3.3. SRv6 Next SID End to End

- * Traffic Engineering and Carrier Grade Features are a requirement end to end across all domains.
- * Full feature richness.
- * Steering is initiated from the Data Center host attachment with SR Policy End to End

4. IANA Considerations

There are not any IANA considerations.

5. Security Considerations

No new extensions are defined in this document. As such, no new security issues are raised beyond those that already exist in BGP-4 and use of MP-BGP for IPv6.

The security features of BGP and corresponding security policy defined in the ISP domain are applicable.

For the inter-AS distribution of IPv6 prefixes according to case (a) of Section 4 of this document, no new security issues are raised beyond those that already exist in the use of eBGP for IPv6 [RFC2545].

6. Acknowledgments

7. References

7.1. Normative References

[I-D.ietf-idr-bgp-sr-segtypes-ext]

Talaulikar, K., Filsfils, C., Previdi, S., Mattes, P., and D. Jain, "Segment Routing Segment Types Extensions for BGP SR Policy", Work in Progress, Internet-Draft, draft-ietf-idr-bgp-sr-segtypes-ext-08, 20 February 2025, <<https://datatracker.ietf.org/doc/html/draft-ietf-idr-bgp-sr-segtypes-ext-08>>.

[I-D.ietf-idr-segment-routing-te-policy]

Previdi, S., Filsfils, C., Talaulikar, K., Mattes, P., and D. Jain, "Advertising Segment Routing Policies in BGP", Work in Progress, Internet-Draft, draft-ietf-idr-segment-routing-te-policy-26, 23 October 2023, <<https://datatracker.ietf.org/doc/html/draft-ietf-idr-segment-routing-te-policy-26>>.

[I-D.ietf-spring-srv6-srh-compression]

Cheng, W., Filsfils, C., Li, Z., Decraene, B., and F. Clad, "Compressed SRv6 Segment List Encoding (CSID)", Work in Progress, Internet-Draft, draft-ietf-spring-srv6-srh-compression-23, 6 February 2025, <<https://datatracker.ietf.org/doc/html/draft-ietf-spring-srv6-srh-compression-23>>.

[RFC1122] Braden, R., Ed., "Requirements for Internet Hosts - Communication Layers", STD 3, RFC 1122, DOI 10.17487/RFC1122, October 1989, <<https://www.rfc-editor.org/info/rfc1122>>.

[RFC1812] Baker, F., Ed., "Requirements for IP Version 4 Routers", RFC 1812, DOI 10.17487/RFC1812, June 1995, <<https://www.rfc-editor.org/info/rfc1812>>.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.

[RFC2460] Deering, S. and R. Hinden, "Internet Protocol, Version 6 (IPv6) Specification", RFC 2460, DOI 10.17487/RFC2460, December 1998, <<https://www.rfc-editor.org/info/rfc2460>>.

[RFC2545] Marques, P. and F. Dupont, "Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing", RFC 2545, DOI 10.17487/RFC2545, March 1999, <<https://www.rfc-editor.org/info/rfc2545>>.

- [RFC3031] Rosen, E., Viswanathan, A., and R. Callon, "Multiprotocol Label Switching Architecture", RFC 3031, DOI 10.17487/RFC3031, January 2001, <<https://www.rfc-editor.org/info/rfc3031>>.
- [RFC3032] Rosen, E., Tappan, D., Fedorkow, G., Rekhter, Y., Farinacci, D., Li, T., and A. Conta, "MPLS Label Stack Encoding", RFC 3032, DOI 10.17487/RFC3032, January 2001, <<https://www.rfc-editor.org/info/rfc3032>>.
- [RFC3036] Andersson, L., Doolan, P., Feldman, N., Fredette, A., and B. Thomas, "LDP Specification", RFC 3036, DOI 10.17487/RFC3036, January 2001, <<https://www.rfc-editor.org/info/rfc3036>>.
- [RFC3107] Rekhter, Y. and E. Rosen, "Carrying Label Information in BGP-4", RFC 3107, DOI 10.17487/RFC3107, May 2001, <<https://www.rfc-editor.org/info/rfc3107>>.
- [RFC3209] Awduche, D., Berger, L., Gan, D., Li, T., Srinivasan, V., and G. Swallow, "RSVP-TE: Extensions to RSVP for LSP Tunnels", RFC 3209, DOI 10.17487/RFC3209, December 2001, <<https://www.rfc-editor.org/info/rfc3209>>.
- [RFC3270] Le Faucheur, F., Ed., Wu, L., Davie, B., Davari, S., Vaananen, P., Krishnan, R., Cheval, P., and J. Heinanen, "Multi-Protocol Label Switching (MPLS) Support of Differentiated Services", RFC 3270, DOI 10.17487/RFC3270, May 2002, <<https://www.rfc-editor.org/info/rfc3270>>.
- [RFC4029] Lind, M., Ksinant, V., Park, S., Baudot, A., and P. Savola, "Scenarios and Analysis for Introducing IPv6 into ISP Networks", RFC 4029, DOI 10.17487/RFC4029, March 2005, <<https://www.rfc-editor.org/info/rfc4029>>.
- [RFC4182] Rosen, E., "Removing a Restriction on the use of MPLS Explicit NULL", RFC 4182, DOI 10.17487/RFC4182, September 2005, <<https://www.rfc-editor.org/info/rfc4182>>.
- [RFC4271] Rekhter, Y., Ed., Li, T., Ed., and S. Hares, Ed., "A Border Gateway Protocol 4 (BGP-4)", RFC 4271, DOI 10.17487/RFC4271, January 2006, <<https://www.rfc-editor.org/info/rfc4271>>.
- [RFC4291] Hinden, R. and S. Deering, "IP Version 6 Addressing Architecture", RFC 4291, DOI 10.17487/RFC4291, February 2006, <<https://www.rfc-editor.org/info/rfc4291>>.

- [RFC4364] Rosen, E. and Y. Rekhter, "BGP/MPLS IP Virtual Private Networks (VPNs)", RFC 4364, DOI 10.17487/RFC4364, February 2006, <<https://www.rfc-editor.org/info/rfc4364>>.
- [RFC4443] Conta, A., Deering, S., and M. Gupta, Ed., "Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification", STD 89, RFC 4443, DOI 10.17487/RFC4443, March 2006, <<https://www.rfc-editor.org/info/rfc4443>>.
- [RFC4760] Bates, T., Chandra, R., Katz, D., and Y. Rekhter, "Multiprotocol Extensions for BGP-4", RFC 4760, DOI 10.17487/RFC4760, January 2007, <<https://www.rfc-editor.org/info/rfc4760>>.
- [RFC5036] Andersson, L., Ed., Minei, I., Ed., and B. Thomas, Ed., "LDP Specification", RFC 5036, DOI 10.17487/RFC5036, October 2007, <<https://www.rfc-editor.org/info/rfc5036>>.
- [RFC5492] Scudder, J. and R. Chandra, "Capabilities Advertisement with BGP-4", RFC 5492, DOI 10.17487/RFC5492, February 2009, <<https://www.rfc-editor.org/info/rfc5492>>.
- [RFC7432] Sajassi, A., Ed., Aggarwal, R., Bitar, N., Isaac, A., Uttaro, J., Drake, J., and W. Henderickx, "BGP MPLS-Based Ethernet VPN", RFC 7432, DOI 10.17487/RFC7432, February 2015, <<https://www.rfc-editor.org/info/rfc7432>>.
- [RFC7938] Lapukhov, P., Premji, A., and J. Mitchell, Ed., "Use of BGP for Routing in Large-Scale Data Centers", RFC 7938, DOI 10.17487/RFC7938, August 2016, <<https://www.rfc-editor.org/info/rfc7938>>.
- [RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/info/rfc8174>>.
- [RFC8200] Deering, S. and R. Hinden, "Internet Protocol, Version 6 (IPv6) Specification", STD 86, RFC 8200, DOI 10.17487/RFC8200, July 2017, <<https://www.rfc-editor.org/info/rfc8200>>.
- [RFC8277] Rosen, E., "Using BGP to Bind MPLS Labels to Address Prefixes", RFC 8277, DOI 10.17487/RFC8277, October 2017, <<https://www.rfc-editor.org/info/rfc8277>>.

- [RFC8402] Filsfils, C., Ed., Previdi, S., Ed., Ginsberg, L., Decraene, B., Litkowski, S., and R. Shakir, "Segment Routing Architecture", RFC 8402, DOI 10.17487/RFC8402, July 2018, <<https://www.rfc-editor.org/info/rfc8402>>.
- [RFC8660] Bashandy, A., Ed., Filsfils, C., Ed., Previdi, S., Decraene, B., Litkowski, S., and R. Shakir, "Segment Routing with the MPLS Data Plane", RFC 8660, DOI 10.17487/RFC8660, December 2019, <<https://www.rfc-editor.org/info/rfc8660>>.
- [RFC8669] Previdi, S., Filsfils, C., Lindem, A., Ed., Sreekantiah, A., and H. Gredler, "Segment Routing Prefix Segment Identifier Extensions for BGP", RFC 8669, DOI 10.17487/RFC8669, December 2019, <<https://www.rfc-editor.org/info/rfc8669>>.
- [RFC8754] Filsfils, C., Ed., Dukes, D., Ed., Previdi, S., Leddy, J., Matsushima, S., and D. Voyer, "IPv6 Segment Routing Header (SRH)", RFC 8754, DOI 10.17487/RFC8754, March 2020, <<https://www.rfc-editor.org/info/rfc8754>>.
- [RFC8950] Litkowski, S., Agrawal, S., Ananthamurthy, K., and K. Patel, "Advertising IPv4 Network Layer Reachability Information (NLRI) with an IPv6 Next Hop", RFC 8950, DOI 10.17487/RFC8950, November 2020, <<https://www.rfc-editor.org/info/rfc8950>>.
- [RFC8986] Filsfils, C., Ed., Camarillo, P., Ed., Leddy, J., Voyer, D., Matsushima, S., and Z. Li, "Segment Routing over IPv6 (SRv6) Network Programming", RFC 8986, DOI 10.17487/RFC8986, February 2021, <<https://www.rfc-editor.org/info/rfc8986>>.
- [RFC9012] Patel, K., Van de Velde, G., Sangli, S., and J. Scudder, "The BGP Tunnel Encapsulation Attribute", RFC 9012, DOI 10.17487/RFC9012, April 2021, <<https://www.rfc-editor.org/info/rfc9012>>.
- [RFC9252] Dawra, G., Ed., Talaulikar, K., Ed., Raszuk, R., Decraene, B., Zhuang, S., and J. Rabadan, "BGP Overlay Services Based on Segment Routing over IPv6 (SRv6)", RFC 9252, DOI 10.17487/RFC9252, July 2022, <<https://www.rfc-editor.org/info/rfc9252>>.

- [RFC9256] Filssils, C., Talaulikar, K., Ed., Voyer, D., Bogdanov, A., and P. Mattes, "Segment Routing Policy Architecture", RFC 9256, DOI 10.17487/RFC9256, July 2022, <<https://www.rfc-editor.org/info/rfc9256>>.
- [RFC9313] Lencse, G., Palet Martinez, J., Howard, L., Patterson, R., and I. Farrer, "Pros and Cons of IPv6 Transition Technologies for IPv4-as-a-Service (IPv4aaS)", RFC 9313, DOI 10.17487/RFC9313, October 2022, <<https://www.rfc-editor.org/info/rfc9313>>.

7.2. Informative References

- [I-D.ietf-idr-dynamic-cap]
Chen, E. and S. R. Sangli, "Dynamic Capability for BGP-4", Work in Progress, Internet-Draft, draft-ietf-idr-dynamic-cap-17, 6 July 2025, <<https://datatracker.ietf.org/doc/html/draft-ietf-idr-dynamic-cap-17>>.
- [I-D.mapathak-interas-ab]
Pathak, M., Patel, K., and A. Sreekantiah, "Inter-AS Option D for BGP/MPLS IP VPN", Work in Progress, Internet-Draft, draft-mapathak-interas-ab-02, 28 May 2015, <<https://datatracker.ietf.org/doc/html/draft-mapathak-interas-ab-02>>.
- [RFC4659] De Clercq, J., Ooms, D., Carugi, M., and F. Le Faucheur, "BGP/MPLS IP Virtual Private Network (VPN) Extension for IPv6 VPN", RFC 4659, DOI 10.17487/RFC4659, September 2006, <<https://www.rfc-editor.org/info/rfc4659>>.
- [RFC4684] Marques, P., Bonica, R., Fang, L., Martini, L., Raszuk, R., Patel, K., and J. Guichard, "Constrained Route Distribution for Border Gateway Protocol/MultiProtocol Label Switching (BGP/MPLS) Internet Protocol (IP) Virtual Private Networks (VPNs)", RFC 4684, DOI 10.17487/RFC4684, November 2006, <<https://www.rfc-editor.org/info/rfc4684>>.
- [RFC4798] De Clercq, J., Ooms, D., Prevost, S., and F. Le Faucheur, "Connecting IPv6 Islands over IPv4 MPLS Using IPv6 Provider Edge Routers (6PE)", RFC 4798, DOI 10.17487/RFC4798, February 2007, <<https://www.rfc-editor.org/info/rfc4798>>.

- [RFC4925] Li, X., Ed., Dawkins, S., Ed., Ward, D., Ed., and A. Durand, Ed., "Softwire Problem Statement", RFC 4925, DOI 10.17487/RFC4925, July 2007, <<https://www.rfc-editor.org/info/rfc4925>>.
- [RFC5549] Le Faucheur, F. and E. Rosen, "Advertising IPv4 Network Layer Reachability Information with an IPv6 Next Hop", RFC 5549, DOI 10.17487/RFC5549, May 2009, <<https://www.rfc-editor.org/info/rfc5549>>.
- [RFC5565] Wu, J., Cui, Y., Metz, C., and E. Rosen, "Softwire Mesh Framework", RFC 5565, DOI 10.17487/RFC5565, June 2009, <<https://www.rfc-editor.org/info/rfc5565>>.
- [RFC6074] Rosen, E., Davie, B., Radoaca, V., and W. Luo, "Provisioning, Auto-Discovery, and Signaling in Layer 2 Virtual Private Networks (L2VPNs)", RFC 6074, DOI 10.17487/RFC6074, January 2011, <<https://www.rfc-editor.org/info/rfc6074>>.
- [RFC6513] Rosen, E., Ed. and R. Aggarwal, Ed., "Multicast in MPLS/BGP IP VPNs", RFC 6513, DOI 10.17487/RFC6513, February 2012, <<https://www.rfc-editor.org/info/rfc6513>>.
- [RFC6514] Aggarwal, R., Rosen, E., Morin, T., and Y. Rekhter, "BGP Encodings and Procedures for Multicast in MPLS/BGP IP VPNs", RFC 6514, DOI 10.17487/RFC6514, February 2012, <<https://www.rfc-editor.org/info/rfc6514>>.
- [RFC8126] Cotton, M., Leiba, B., and T. Narten, "Guidelines for Writing an IANA Considerations Section in RFCs", BCP 26, RFC 8126, DOI 10.17487/RFC8126, June 2017, <<https://www.rfc-editor.org/info/rfc8126>>.

Appendix A. APPENDIX-A

SRv6 Compression [I-D.ietf-spring-srv6-srh-compression] C-SID Next C-SID (uSID) endpoint flavor Inter Domain Routing development work is all contained in GitHub link below.

<https://github.com/segmentrouting/srv6-labs/tree/main/3-srv6-dc-case-studies>

Authors' Addresses

Gyan Mishra
Verizon Inc.
Email: gyan.s.mishra@verizon.com

Bruce McDougall
Cisco Systems
Email: brmcdoug@cisco.com