

BGP extensions for SRv6-VPN

draft-dawra-idr-srv6-vpn-00

Authors :

Gaurav Dawra, Cisco Systems
Clarence Filsfils, Cisco Systems
Darren Dukes, Cisco Systems
Patrice Brissette, Cisco Systems
Pablo Camarilo, Cisco Systems
John Leddy, Comcast
Daniel Voyer, Daniel Bernier, Bell Canada
Dirk Steinberg, Steinberg Consulting
Robert Raszuk, Bloomberg LP
Bruno Decraene, Orange
Satoru Matsushima, Softbank

Presenter :

Gaurav Dawra

IETF98, Mar/2017

Chicago, USA



Agenda

- Problem
- Solution



MUST READ !!!!!!!

[draft-filsfils-spring-srv6-network-programming](#)

Also Read

[draft-ietf-6man-segment-routing-header](#)

[draft-ietf-idr-bgp-prefix-sid-04](#)



Agenda

- Problem
- Solution



What we want to do

- Enable segment routing over IPv6 Dataplane
- Advertise segments IDs (SIDs) and associated functions
- Reduce overhead in migration of brownfield deployments.



Agenda

- Problem
- Solution

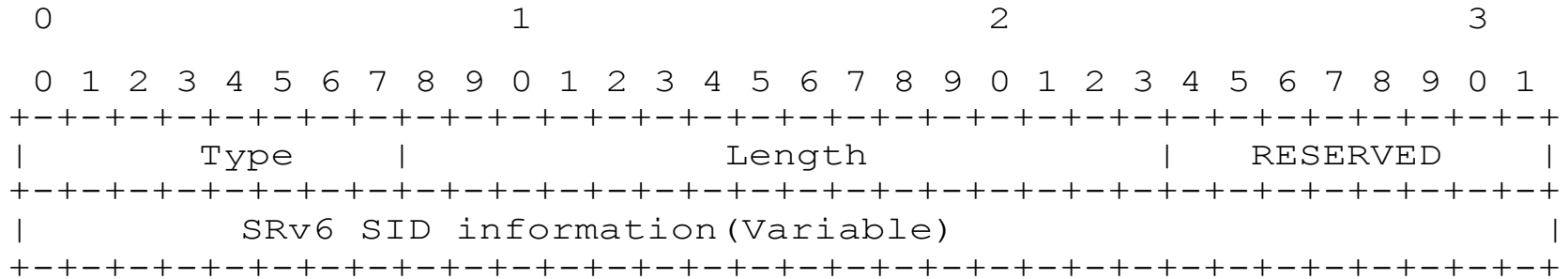


Proposed BGP Extensions

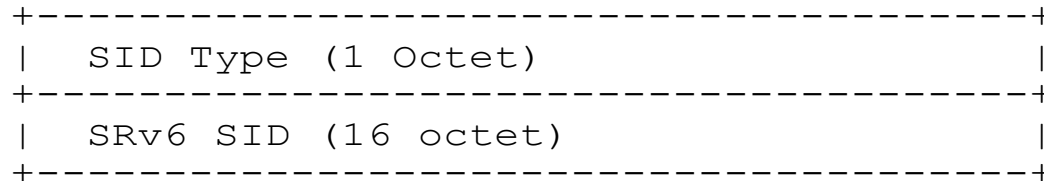
- Extend Prefix-SID Attribute with new SRv6-VPN TLV



SRv6-VPN TLV



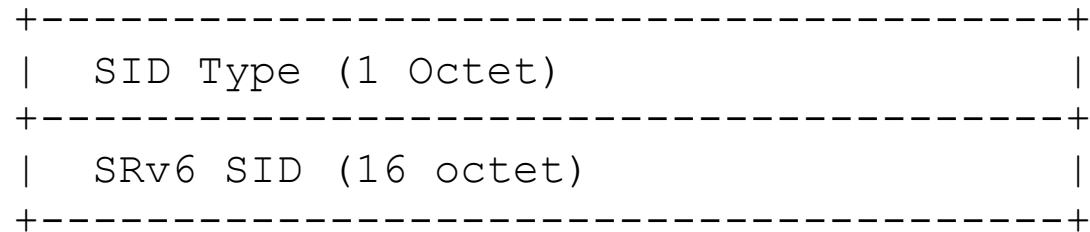
SRv6 SID information is encoded as follows:



- Type is **TBD**
- Length: 16bit field. The total length of the value portion of theTLV.
- RESERVED: 8 bit field. SHOULD be 0 on transmission and MUST be ignored on reception.

L3VPN SID encoding in SRv6-VPN TLV

SRv6 SID information is encoded as follows:



- **Type-1** - corresponds to the equivalent functionality provided by an VPN Label attribute when received with a route containing a label[RFC4364].
 - Container for advertising SRv6 function associated with a SID.
 - VPN Label is encoded as SRv6 SID function parameter
 - Used to advertise SRv6 SIDs associated with VPN (details in SRv6 network programming document)
- End.DX4/DT4
End.DX6/DT6



Draft: Next Steps

- Seeking WG input and feedback
- Suggestions/comments are welcome!!

