

Signaling Flow-ID Label Capability and Flow-ID Readable Label Depth Using IGP and BGP-LS

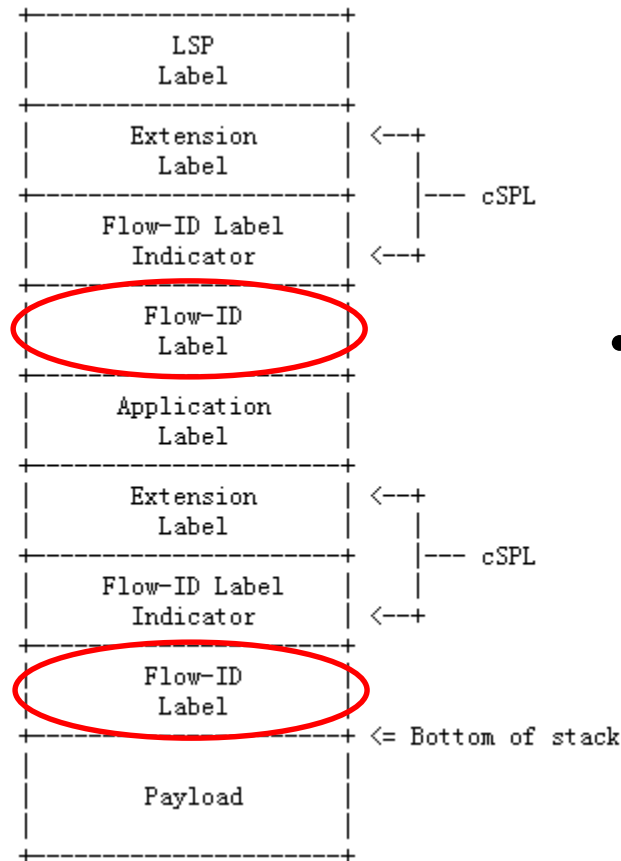
draft-xzc-lsr-mpls-flc-flrd-01

Xiao Min	ZTE
Sandy Zhang	ZTE
Weiqiang Cheng	China Mobile

Intention of this draft

- Defines a mechanism to signal the FLC and the FRLD using IGP and BGP-LS
 - FLC stands for Flow-ID Label Capability, which is the ability to process Flow-ID labels
 - FRLD stands for Flow-ID Readable Label Depth, which is the capability of reading the maximum MPLS label stack depth and performing Flow-ID Label based performance measurement

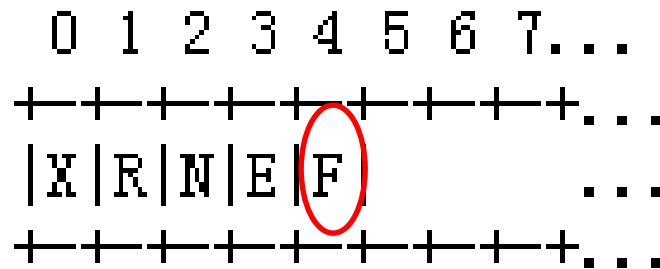
Flow-ID Label's Position



- Refers to **draft-ietf-mpls-inband-pm-encapsulation**

- In this example, Flow-ID Label is present twice within the label stack, each FL follows a cSPL (may be changed to bSPL or bSPL+Bitmap in later revision)

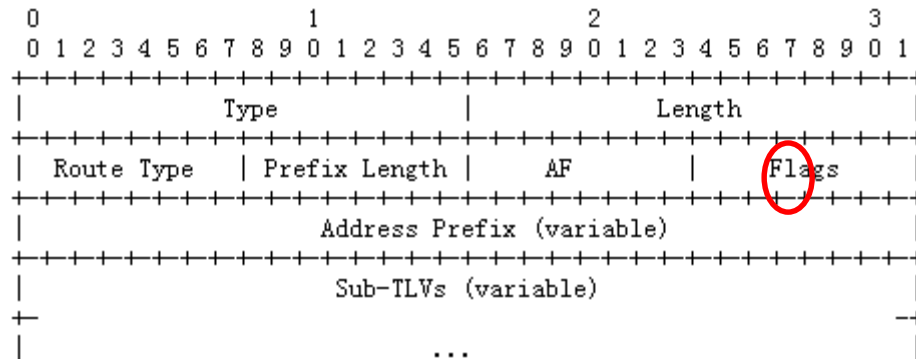
Advertising FLC by IS-IS



Prefix Attribute Flags defined in RFC 7794

- 1-bit FLC Flag is borrowed from the Prefix Attribute Flags
 - FLC Flag is Bit 4, which is next to the ELC (Entropy Label Capability) Flag defined in Section 3 of RFC 9088

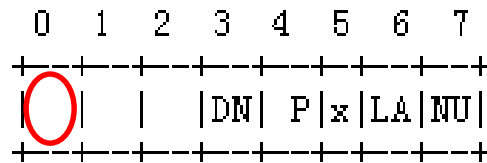
Advertising FLC by OSPFv2



OSPFv2 Extended Prefix TLV defined in RFC 7684

- 1-bit FLC Flag is borrowed from the Flags field of OSPFv2 Extended Prefix TLV
 - FLC Flag is Bit 3, which is next to the ELC (Entropy Label Capability) Flag defined in Section 3.1 of RFC 9089

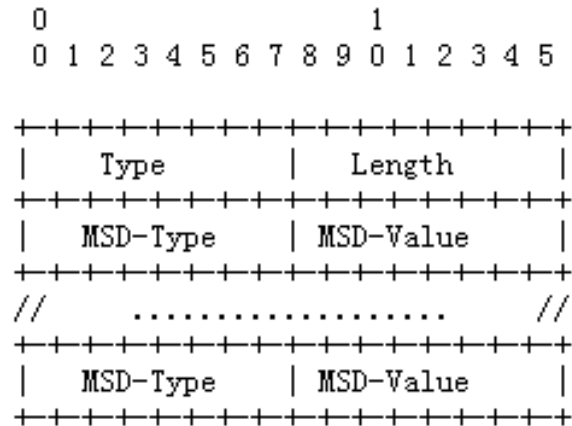
Advertising FLC by OSPFv3



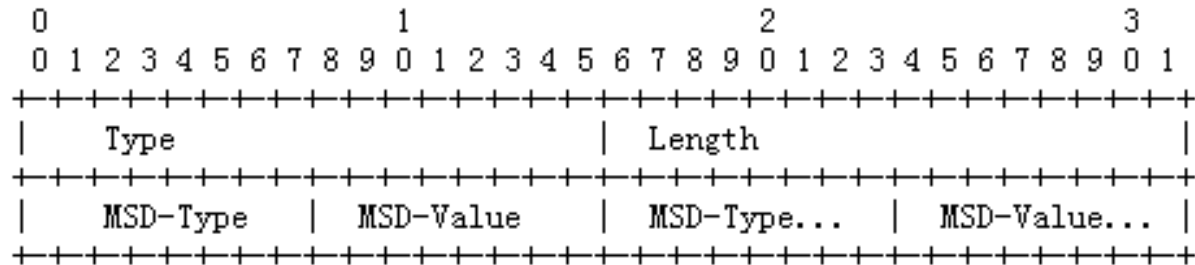
OSPFv3 PrefixOptions field defined in RFC 5340

- 1-bit FLC Flag is borrowed from OSPFv3 PrefixOptions field
 - FLC Flag is Bit 0, which is next to the ELC (Entropy Label Capability) Flag defined in Section 3.2 of RFC 9089

Advertising FRLD by IGP

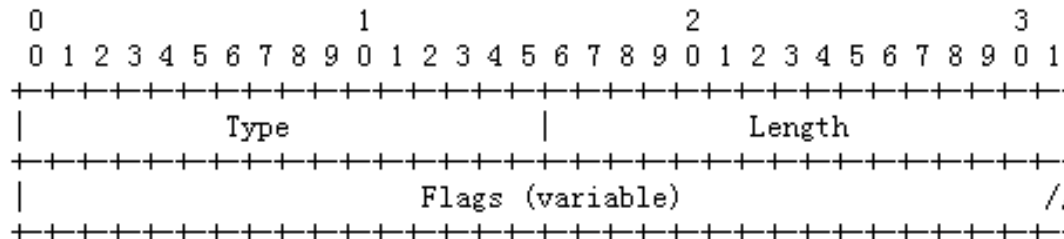


For IS-IS, request a new MSD-Type of Node MSD Sub-TLV defined in RFC 8491

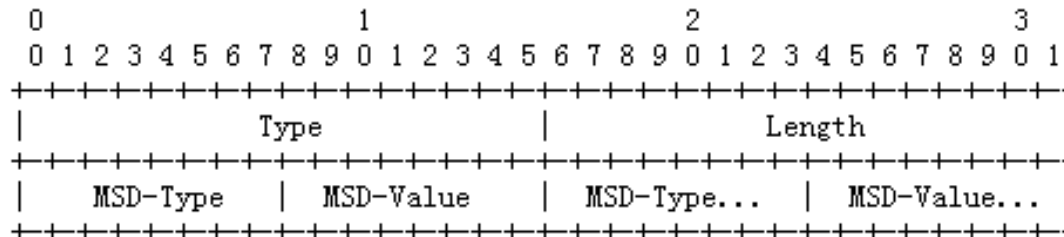


For OSPF v2/v3, request a new MSD-Type of Node MSD TLV defined in RFC 8476

Signaling FLC and FRLD in BGP-LS



FLC is signaled by Prefix Attribute Flags TLV defined in RFC 9085



FRLD is signaled by Node MSD TLV defined in RFC 8814

Next steps

- Ask for more reviews and comments
- Revise this draft to improve it
- Ask for WG adoption

Thank you!