IGP Extensions for Link MTU

draft-cheng-rtgwg-srv6-multihome-egress-protection-03

Presenter: Zhibo Hu

Co-authors: Zhibo Hu, Shuping Peng, Xingxi

IETF-116

Introduction

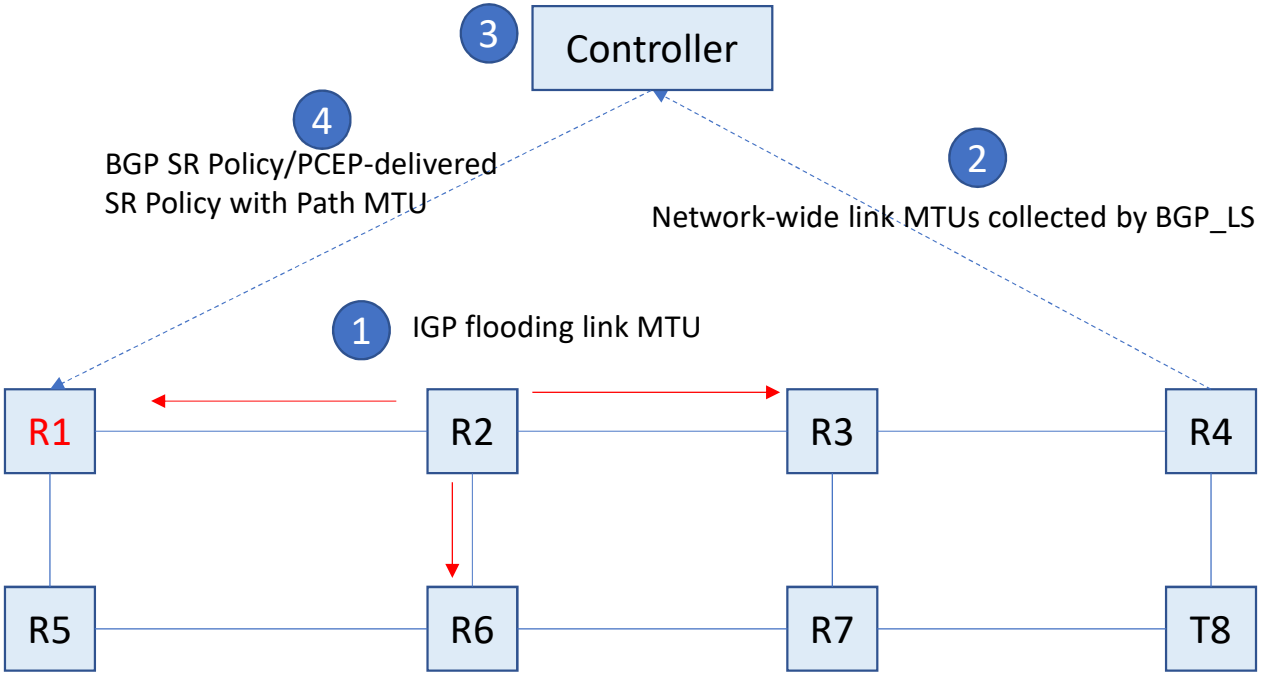
- Collect the link MTU information of the entire network by using the IGP extension link MTU
- Automatically calculating the path MTU of SR Path

IGP link MTU background

- Traditional MPLS protocols like RSVP-TE/LDP support the path MTU through the specific path construction signaling.
- Segment Routing specifies paths only at the headend, without the path construction signaling. A new mechanism is required to implement Path MTU.
- This document defines a mechanism for collecting network-wide link MTUs through an IGP, advertising them to the SR PCE, and calculating the path MTUs of SR paths.

SR Path MTU Scenario

The SR PCE calculates the SR path and the minimum link MTU as the path MTU, and considers the length of the SR encapsulation header.



Other related drafts:

- draft-ietf-idr-bgp-ls-link-mtu-04
- draft-ietf-idr-sr-policy-path-mtu-06.
- draft-ietf-pce-pcep-pmtu-03.

IGP Extensions for Link MTU

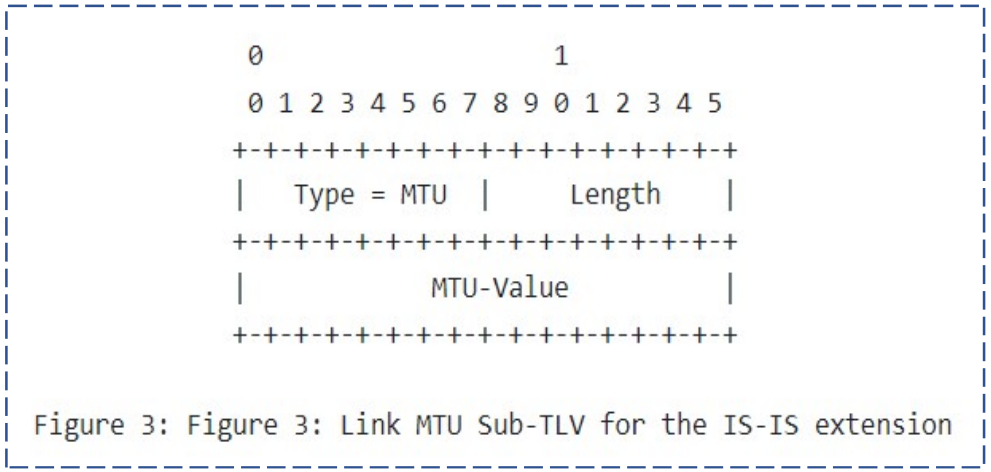


Figure 3: Figure 3: Link MTU Sub-TLV for the IS-IS extension

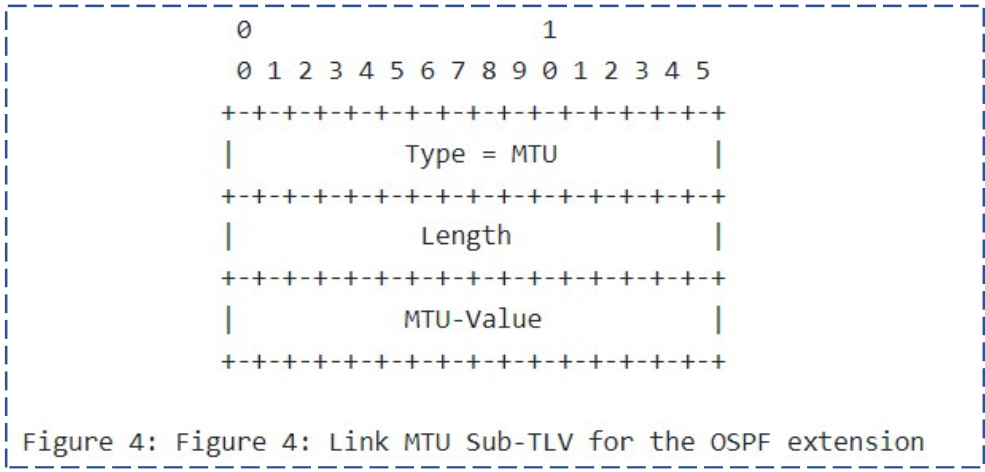


Figure 4: Figure 4: Link MTU Sub-TLV for the OSPF extension

IGP Extensions for Link MTU：

- Define A new sub-TLV called link MTU sub-TLV is defined for TLVs 22, 23, 25, 141, 222, 223.（ The MTU Sub-TLV defined in RFC 7176 is used for the largest TRILL Prob-MTU. Therefore, It is not reused this Sub-TLV. ）
- Define A new sub-TLV called link MTU sub-TLV is defined in the corresponding LSA as specified for OSPFv2 and OSPFv3.

Next Steps

- Any questions or comments ?