BFD for BIER

Fangwei Hu (ZTE)
Greg Mirsky(ZTE)
Chang Liu(Cina Unicom)

IETF BIER, November 2017, Singapore

Motivation

- BIER BFD is used to provide verification of multipoint or multicast co nnectivity between a sender(head) and a set of one or more receives (tails).
  - The head(the sender) is BFIR, and the tails(the receivers) are BFERs in BIER

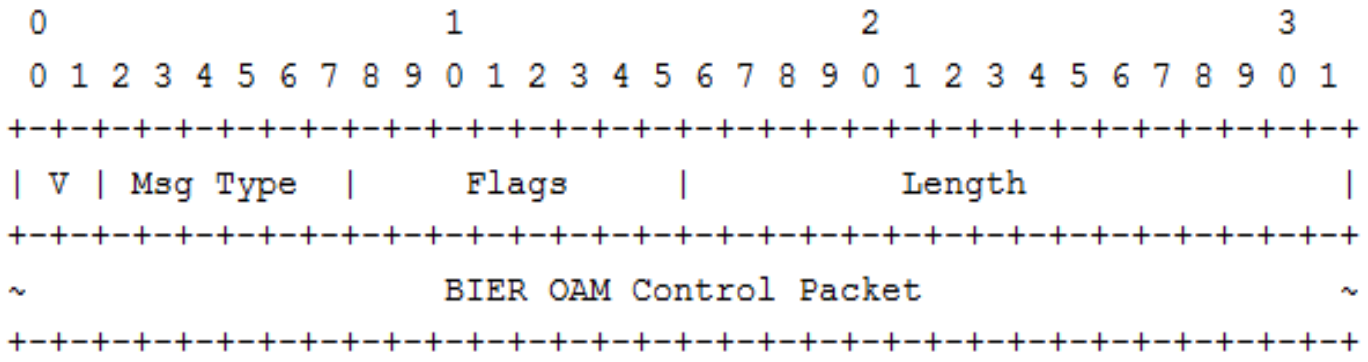
BIER BFD

- BIER BFD is based on draft-ietf-bfd-multipoint
  - Uses Demand mode(defined in RFC 5880) – no three-way handshake

- BFERs use source address and My discriminator to demultiplex BFD s essions
  - Source address:
    - BFIR-id and BIER MPLS Label(MPLS network)
    - BFIR-id and BIFT-id(Non-MPLS network)

BIER BFD Encapsulation

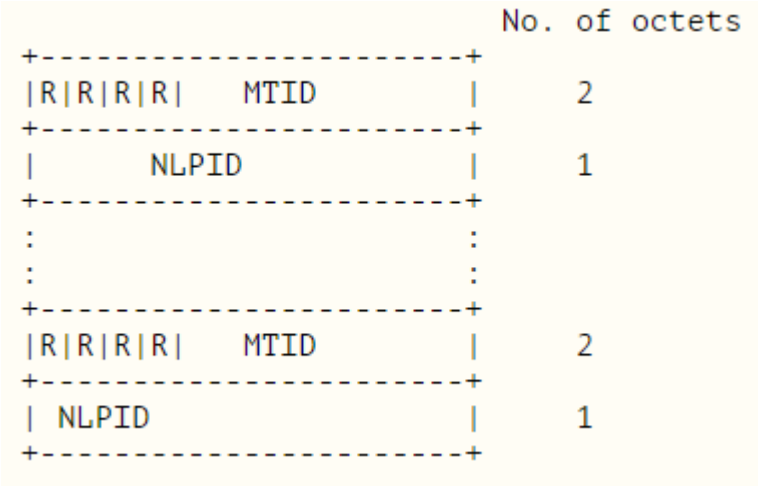
- BIER encapsulation is specified in draft-ietf-bier-mpls-encapsulation, If the proto fi eld is 5, the payload is OAM packet
- We defines the BIER OAM packet format in this document.
- BIER OAM header is used to demultiplex BIER OAM protocol(Msg type), and Mul tipointTail do not need the IP/UDP port to identify the BIER BFD packet.



V: version
Msg Type: identifies OAM protocol , if it is BFD, the BIER OAM control packet field is BIER BFD packet capability.

Bootstrapping BIER BFD session

- One-hop Bootstrapping
  - Uses ISIS BFD-Enable TLV [RFC6213]
  - MTID: BIER multi-topology identify
  - NLPID : a Network Layer Protocol ID [RFC6328], sugg esting 0XC2(To be assigned) for BIER



BFD-Enable TLV

- Multi-hop Bootstrapping
  - Use BIER OAM ping [I-D.ietf-bier-ping]

Comments

- Your comments, suggestions, questions always welcome and greatly appreciated.
- WG adoption?

Thank you