BIER Encapsulation for IOAM Data

draft-xzlnp-bier-ioam-00

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IETF-108  Jul 2020, Online
Intention of this draft

• Provides the encap for IOAM over BIER
  – Option 1 is BIER + BIER OAM + IOAM + Payload
  – Option 2 is BIER + IOAM + Payload
  – Selects Option 2 as the standardized one
Requirements on IOAM

• It’s deemed necessary to carry IOAM Data in BIER
  
  – Some multicast flows are sensitive for packet loss, delay and other factors, such as live video, real-time meeting. The operator wants to know the real-time statistics for these flows
  
  – In-situ OAM provides a way to achieve on-path telemetry information collection
Option 1 for IOAM over BIER Encap

- BIER Header defined in RFC 8296
  - + BIER OAM Header, defined in draft-ietf-bier-ping
  - + IOAM Header, containing IOAM Data defined in draft-ietf-ippm-ioam-data

- New BIER OAM Message Type TBA for IOAM

- OAM Message Length is used to decide the border
  - No new Proto needed
Option 2 for IOAM over BIER Encap

- **BIER Header defined in RFC 8296**
  - + IOAM Header, containing IOAM Data defined in draft-ietf-ippm-ioam-data

- **New BIER Proto Type**
  - TBD for IOAM

- **IOAM Next Proto follows the definition of BIER Proto, including the new value TBD**
Some Considerations

• Encap Option 2 is selected in this document
  – Both Option 1 and Option 2 are feasible
  – Option 2 is more concise than Option 1, with less overhead
  – Option 2 is a relatively common method for IOAM over foo

• BIER PM and BIER IOAM
  – Two OAM bits within BIER header are defined as BIER PM Marking bits, it’s orthogonal to BIER IOAM
Next steps

• Revise this draft based on received comments
• Ask for WG adoption