

BIER Encapsulation for IOAM Data

draft-xzlnp-bier-ioam-07

Xiao Min	ZTE Corp.
Sandy Zhang	ZTE Corp.
Yisong Liu	China Mobile
Nagendra Kumar Nainar	Cisco System
Carlos Pignataro	North Carolina State University

Intention of this draft

- Provides the encapsulation for IOAM over BIER
 - Option 1: BIER + BIER OAM + IOAM + Payload
 - Option 2: BIER + IOAM + Payload
 - Option 3: BIER + IOAM as BIER Extension Headers + Payload (selected)

Note: BIER Extension Header is defined in draft-zzhang-bier-extension-headers

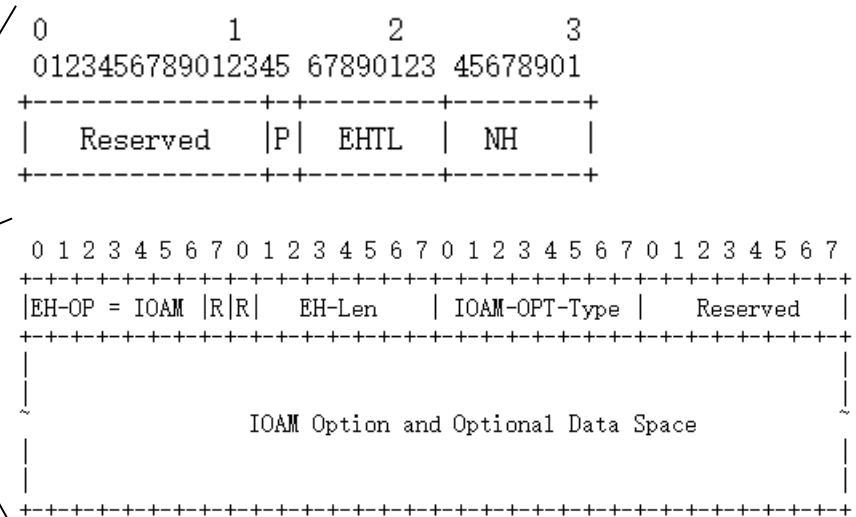
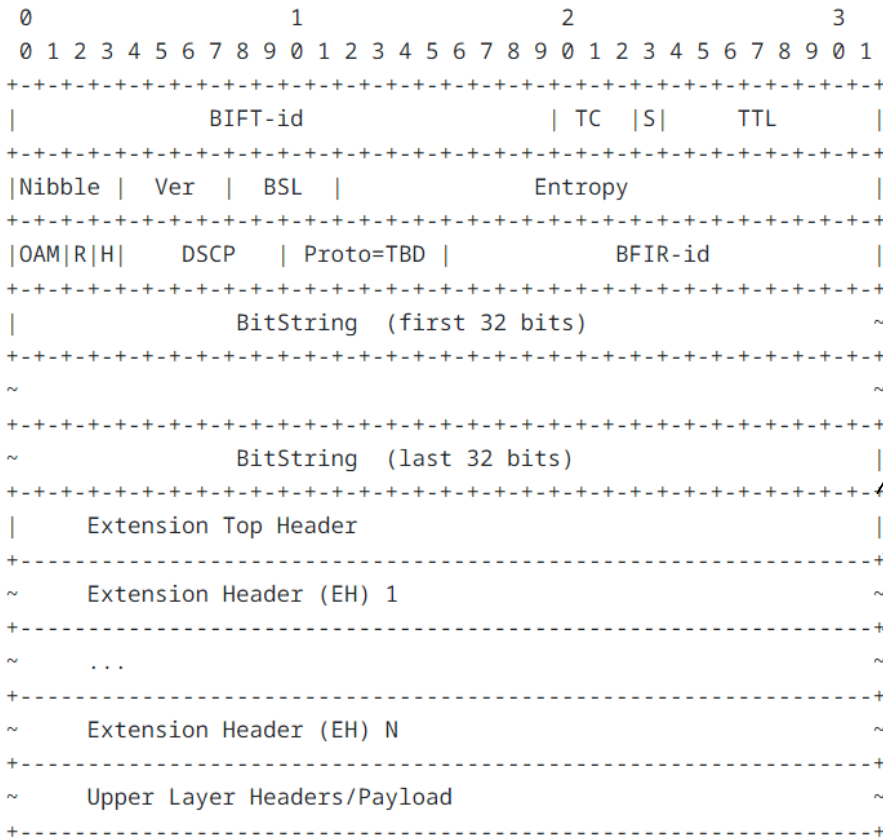
Published IOAM Options and Encapsulations Docs

- RFC 9197: Data Fields for IOAM
 - IOAM Trace, PoT, and E2E Options are defined
- RFC 9326: IOAM Direct Exporting
 - IOAM DEX Option is defined
- RFC 9452: NSH Encapsulation for IOAM Data
 - IOAM over NSH encapsulation is defined
- RFC 9486: IPv6 Options for IOAM
 - IOAM over IPv6 encapsulation is defined

Requirements on IOAM over BIER

- It's deemed necessary to carry IOAM Data in BIER
 - Some multicast flows, such as live video and real-time meeting, are sensitive to packet loss, delay and other factors
 - IOAM provides a way to achieve on-path telemetry information collection, which is necessary for the BIER network operator

IOAM over BIER Encapsulation



- This is a future-proof encapsulation for IOAM over BIER
 - Each IOAM Option is treated as a BIER extension header
 - IOAM and other BIER extension headers can be skipped once for all

Next steps

- Ask for WG adoption of draft-zzhang-bier-extension-headers
- Revise draft-xzlnp-bier-ioam to encapsulate IOAM as a BIER extension header
- Ask for WG adoption of draft-xzlnp-bier-ioam

Thank you!