IOAM (IPv6) in Linux kernel

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Summary

Patch is online:
• https://github.com/iurmanj/kernel_ipv6_ioam

Based on drafts:
• In-situ OAM IPv6 Options (draft-iometal-ippm-6man-ioam-ipv6-options-02)
• Data Fields for In-situ OAM (draft-ietf-ippm-ioam-data-05)
Implementation

✓ Zero-allocation during packet processing
✓ User space API (node registration)
✓ Enhancement of EH parsing
  - IOAM Encap
  - IOAM Decap
Early results
Early results
Discussion

• Opaque State Snapshot

• Incremental Trace

• RFC 8200 compliant → IPv6-in-IPv6
  – IOAM data leak (overlapping tunnels)
  – IOAM data not inserted (nested tunnels)
  – Dynamic tunnel output resolution
Thanks!

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