An In Situ Operations, Administration, and Maintenance (IOAM) Multi-path Flag

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Background

• IOAM collects OAM information within the packet while the packet traverses a particular network domain.

• [RFC9322] provides three kinds of active measurements using IOAM, and defines a Active flag to indicate that a packet is used for active measurement.

• [I-D.gandhi-ippm-stamp-ext-hdr] extends STAMP to reflect any IPv6 options (including IOAM data fields) and MPLS Network Action Sub-Stacks for hop-by-hop and edge-to-edge active measurements.

• However, active measurements are typically for a specific path, it can’t collect all the path’s information on the same time when there are multiple paths.
IOAM Extension & Examples

- Define a new Flag in the Pre-allocated and Incremental Trace option header:

  ![Diagram showing active measurement packet with multipath flag set](image)

  **New Flag: Multipath flag**

  Indicate this active measurement packet should be copied to each path.

- Example of multi-path active measurement with IOAM

- Similarly, this extension can also be used with STAMP
Any comments and opinions are welcome!

Thank You