Flag-based MPLS On Path Telemetry Network Actions

draft-song-mpls-flag-based-opt-01

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On-Path Telemetry Technologies

IOAM Trace (RFC9197)

Passport Mode

On Path Flow Telemetry

IOAM DEX (RFC9326)

Instruction-based

Postcard Mode

Marking-based

PBT-M (draft-song-ippm-postcard-based-telemetry)
On-Path Performance Measurements

- RFC9341 Alternate-Marking Method
  - Using one or two bits with controlled pattern alternating to measure packet loss, delay, and jitter on live traffic
  - The method has been widely used in different types of networks (e.g., IPv6, SRv6, etc.)
MPLS MNA for LSP OAM

• Requirements
  • On-path per-node measurement for live traffic
  • Small overhead without bloating the label stack

• Proposal
  • Using flag-based actions as specified in [I-D.ietf-mpls-mna-hdr] to support PBT-M and AM
  • The scope of actions is carried in the IHS field for Ingress-To-Egress (I2E), Hop-By-Hop (HBH) or Select.
Summary and Next Steps

- Provide two use cases for using MNA to support MPLS LSP OAM
- Complete the document with configuration, deployment, and security considerations
- Seek feedbacks and collaboration from the WG
- Request for WG adoption