

Report on MPLS Network Actions (MNA) Open Interim Calls

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IETF117 – San Francisco



MNA Open Interim Calls Overview

- Joint activity between three working groups MPLS, PALS and DETNET
 - The chairs from the three WGs coordinate agendas and decisions
- Open MNA Interim meetings:
 - Scheduled weekly every Thursday (11:00 AM ET) - eight interims were prescheduled prior to IETF117
 - The WG met for 7 out of the 8 prescheduled interims (one meeting got cancelled)
 - Meeting materials for every interim is available online – visit <https://datatracker.ietf.org/meeting/interim-2023-mpls-0X/session/mpls>
 - All meetings are recorded and available on IETF YouTube channel – accessible from link above
- Open MNA calls chairs coordination meetings:
 - Weekly every Tuesday (1:00PM ET)
 - The chairs may decide to cancel an interim meeting if no agenda requests are received

Update/Highlight

#1

Poll on use of first nibble for MNA PSD

- When MNA Post Stack Data (PSD) is present in an MPLS packet, what should be set in the first nibble of the PSD data? Three cases were discussed:
 1. Set the First Nibble to a unique value for MNA PSD, set when sent and check on receipt
 2. Set the First Nibble to zero for MNA PSD, set when sent and check on receipt
 3. Set the value to a defined value when sent and ignore on receipt
- Reliably identifying packet payload based on the MPLS First Nibble only
 - In the first nibble draft

Update/Highlight

#2

Setting of MNA action on a transit LSR

Following points were discussed:

- When adding a new MNA action, clarify cases when a new ISD substack is added and when an existing MNA ISD substack is modified
- Clarify whether MPLS hardware capability allows performing write operations on labels below the top of the label stack in order to add/modify existing MNA ISD

Update/Highlight

#3

Update on carrying MNA data in PSD

- A discussion was started on whether to use PSD or not in the MNA solution, specifically the chairs were looking for answers to the following questions:
 - Are there sufficient use cases to motivate PSD?
 - Is the PSD use case / solution compellingly less complex than ISD?
 - Do some use cases for ISD prohibitively increase the stack depth?
 - Are the use cases motivating PSD required urgently/immediately?
 - Are there compatibility issues with PSD?
- Rakesh Gandhi presented “MPLS Data Plane Encapsulation for In Situ OAM”, (in I-D draft-gandhi-mpls-ioam) as a potential usecase for MNA PSD
- Jie Dong presented a number of “Limitations of the MNA ISD Solutions” and suggested that MNA PSD addresses those limitations

Update/Highlight

Carrying NFFRR action in MNA

#4

- No Further FastReRoute (NFFRR) is an action that can be set by a MPLS PLR after rerouting protected traffic to avoid further reroutes after the first repair
- A presentation was given on the need for NFFRR stickiness all way to destination
- A new I-D will be published on this

Update/Highlight

Cross-domain Interworking for iOAM

#5

- Haoyu Song presented a review of multiple choices for “On-path Telemetry Techniques”, including postcard and passport options
- A proposal was made to evaluate the postcard approach for IOAM when crossing different dataplane domains (e.g., IP-to-MPLS) by carrying MNA PSD
- The feedback was for cross-domain IOAM, the passport approach may be more suitable

Update/Highlight

MNA from a DetNet perspective

#6

- The MNA WG chairs reached out to DETNET to hear a view on MNA from a DetNet perspective
 - To identify issues, and/or any missed requirements
- Greg Mirsky presented an overview of DETNET over MPLS and potential intersection with MNA
 - Highlighted the need for closer coordination with DETNET WG when defining MNA solution
- The MNA WG chairs may reach out to BIER WG to do a similar exercise