Report on MPLS Network Actions (MNA) Open Interim Calls

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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
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 Fist 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
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.
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 Ghandhi presented “MPLS Data Plane Encapsulation for In Situ OAM”, (in I-D draft-gandhi-mpls-ioam) as a potential use case for MNA PSD.

Jie Dong presented a number of “Limitations of the MNA ISD Solutions” and suggested that MNA PSD addresses those limitations.
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 the way to destination.

A new I-D will be published on this.
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.
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