DetNet OAM Functions for The Service Sub-Layer

• Intended status:
  • Informational
• Actual version:
  • draft-varga-detnet-service-sub-layer-oam-00

• Abstract:
  • Operation, Administration, and Maintenance (OAM) tools are essential for a deterministic network. The DetNet architecture [RFC8655] has defined two sub-layers: (1) DetNet service sub-layer and (2) DetNet forwarding sub-layer. OAM mechanisms exist for the DetNet forwarding sub-layer, nonetheless, OAM for the service sub-layer requires a new mechanism. This draft introduces OAM related procedures for the DetNet service sub-layer functions.

This draft has been submitted as an individual contribution to OAM discussions, in particular, to kick-off Working Group discussions on introducing OAM functions for the DetNet service sub-layer. It is also up to the Working Group discussions to which draft parts of this contribution may go, if any.
OAM for The Service Sub-Layer

draft-varga-detnet-service-sub-layer-oam

• Requirements on OAM for DetNet Service Sub-layer
  • Discover DetNet relay nodes in a DetNet network.
  • Collect DetNet service sub-layer specific information from DetNet relay nodes, e.g.: configuration/operation/status
  • Applicable to both DetNet data planes: (i) MPLS and (ii) IP.

• DetNet PING
  • Two types of OAM packets: (1) DetNet-Echo-Request and (2) DetNet-Echo-Reply
  • Relay node roles:
    • DetNet PING originator node,
    • Intermediate DetNet service sub-layer node,
    • DetNet PING targeted node.
  • OAM processing defined at the DetNet service sub-layer
    • PRF, PEF, POF, relay node without PREOF

Main challenge for e2e OAM: forwarding sub-layer segments are terminated at relay nodes providing service sub-layer functions.
Summary – Next Steps

• Discussion on the list / bi-weekly OAM calls:
  • Proposed changes/clarifications (thanks!)
  • Update/move section “Requirements” to OAM-framework

• Next Steps
  • Looking for further comments, discussions
Thanks ...