Echo Request/Reply for Enabled In-situ OAM Capabilities

draft-xiao-ippm-ioam-conf-state-07

Xiao Min xiao.min2@zte.com.cn
Greg Mirsky gregimirsky@gmail.com
Lei Bo leibo.bri@chinatelecom.cn
Intention of this draft

• Provides a method for the IOAM encapsulating node to discover the Enabled IOAM capabilities of the downstream nodes
  – The assumption is that In-situ OAM can be deployed in an environment where NO centralized controller being used, i.e., the IOAM encapsulating node can’t construct the IOAM header by querying the centralized controller
  – The method is a complementary IOAM tool, it may not cover all IOAM deployment scenarios, but it makes IOAM deployment more flexible
Updates since v.01

• Adjust the title and scope to make the intention more apparent and more accurate:
  – Changed from “IOAM Configuration Data” to “Enabled IOAM Capabilities” since the former is too associated with NETCONF/YANG

  – Identified three use case environments: IPv6, MPLS, and SFC. This method is potentially restricted to Explicit Path (strict or loose)

  – The defined TLVs/Sub-TLVs aim to extend ICMPv6, LSP-Ping, or SFC-Ping, for which specific IANA requests can be included in this draft or separate drafts
Updates since v.01 (cont.)

- The defined TLVs/Sub-TLVs are reclassified, and the relevant TLV/Sub-TLV definition adjusted:
  - TLVs in Echo Request and Echo Reply are divided into two separate sections
  - “List of Sub-TLVs” removed from the TLV in Echo Request
  - Tracing Capabilities sub-TLV is divided into Pre-allocated Tracing Capabilities sub-TLV and Incremental Tracing Capabilities sub-TLV
  - F bit removed from Tracing Capabilities sub-TLV
  - The Egress_MTU field extended from 14bits to 16bits
Updates since v.01 (cont.)

- Some technical changes following updated draft-ietf-ippm-ioam-data, and enhanced operational guide:
  - Add the “List of Namespace-IDs” field into TLV in Echo Request. Add respective Namespace-ID into respective sub-TLV in Echo Reply
  - IOAM-Trace-Type field extended from 16bits to 24 bits
  - In the Operational Guide section, add one alternative for the IOAM encapsulating node to send an echo request to each IOAM transit/decapsulating node directly, without TTL expiration
Updates since v.01 (cont.)

• An IOAM DEX Capabilities sub-TLV is added, following newly adopted draft-ietf-ippm-ioam-direct-export:

  – IOAM-Trace-Type field has the same definition as what's specified in section 3.2 of [I-D.ietf-ippm-ioam-direct-export].

  – Namespace-ID field has the same definition as what's specified in section 3.2 of [I-D.ietf-ippm-ioam-direct-export]
Next steps

- In Call for Adoption
- Looking forward to the conclusion