

# Echo Request/Reply for Enabled In-situ OAM Capabilities

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

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# 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