IPv6 Query for Enabled In-situ OAM Capabilities

draft-xiao-6man-icmpv6-ioam-conf-state-02

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Recap of this draft

- This draft defines ICMPv6 extensions to achieve IOAM Capabilities Discovery in IPv6 networks
  - A companion document of draft-ietf-ippm-ioam-conf-state
  - IPv6 Node IOAM Information Query mechanism is defined
  - For this Query mechanism, six IOAM Capabilities Objects are defined as follows:
    - IOAM Pre-allocated Tracing Capabilities Object
    - IOAM Incremental Tracing Capabilities Object
    - IOAM Proof-of-Transit Capabilities Object
    - IOAM Edge-to-Edge Capabilities Object
    - IOAM DEX Capabilities Object
    - IOAM End-of-Domain Object

Status of draft-ietf-ippm-ioam-conf-state

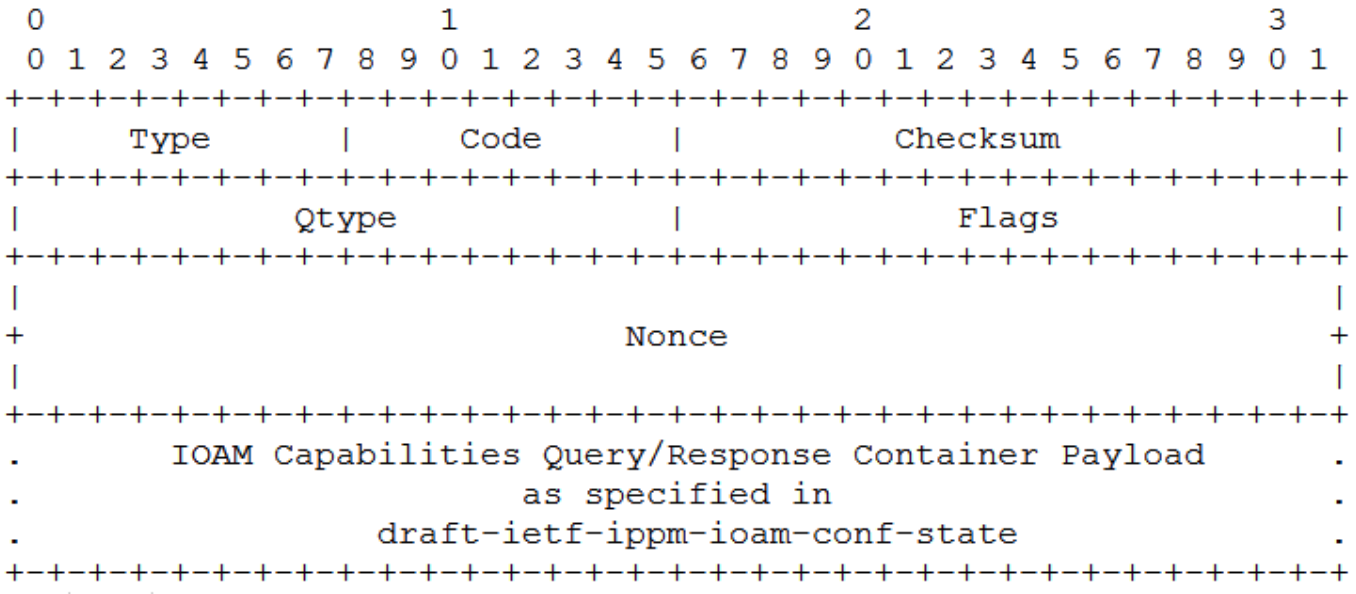
- An IPPM document draft-ietf-ippm-ioam-conf-state describes a generic format for use in echo request/reply mechanisms, which can be used within an IOAM domain, allowing the IOAM encapsulating node to discover the enabled IOAM capabilities of each IOAM transit and IOAM decapsulating node
  - The generic format can be applied in IPv6, MPLS, SFC and BIER
  - The IPPM document is in IESG Evaluation

Update since IETF 114

- This draft was presented at IETF 112&114, some good discussions happened there
- A great suggestion to use RFC4620 was accepted after 114, resulting in the latest -02 revision
- The main difference between -01 and -02
  - ICMPv6 types for IPv6 Node Information messages would be reused, no any new types need to be defined

Update since IETF 114 (Cont.1)

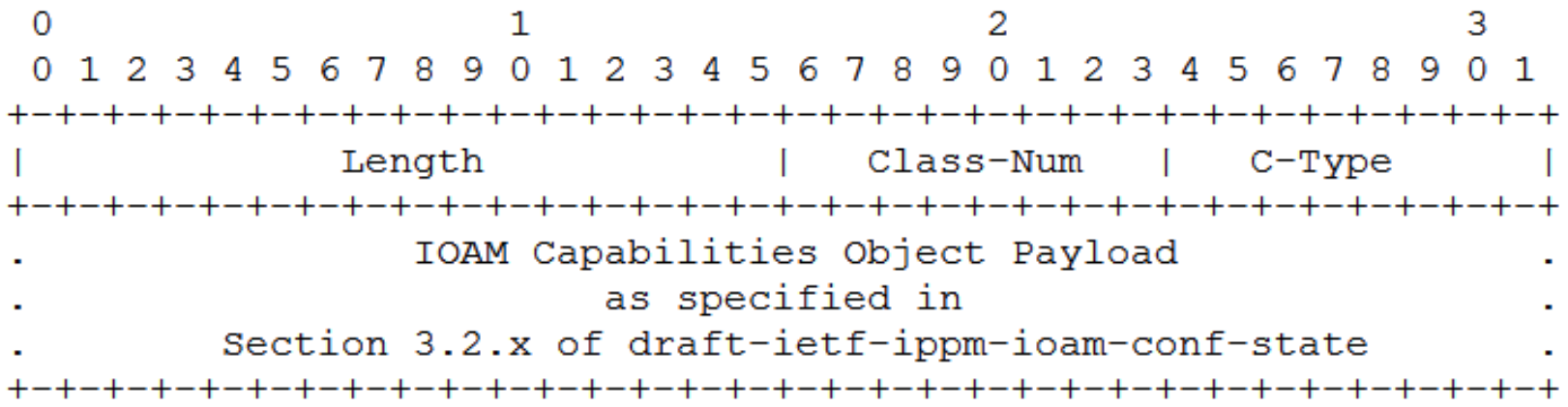
- The updated ICMPv6 format is as below:



  - New Qtype defined; New Codes defined
  - Data field reuses what's defined in the companion IPPM document
  - For an IPv6 NI Reply, the Data field reuses ICMP extension structure defined in RFC 4884 to carry the IOAM Capabilities Objects

Update since IETF 114 (Cont.2)

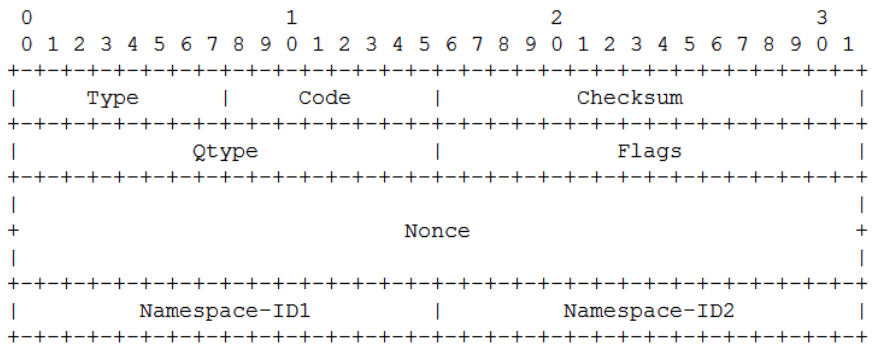
- IOAM Capabilities Object in Data field is as below:



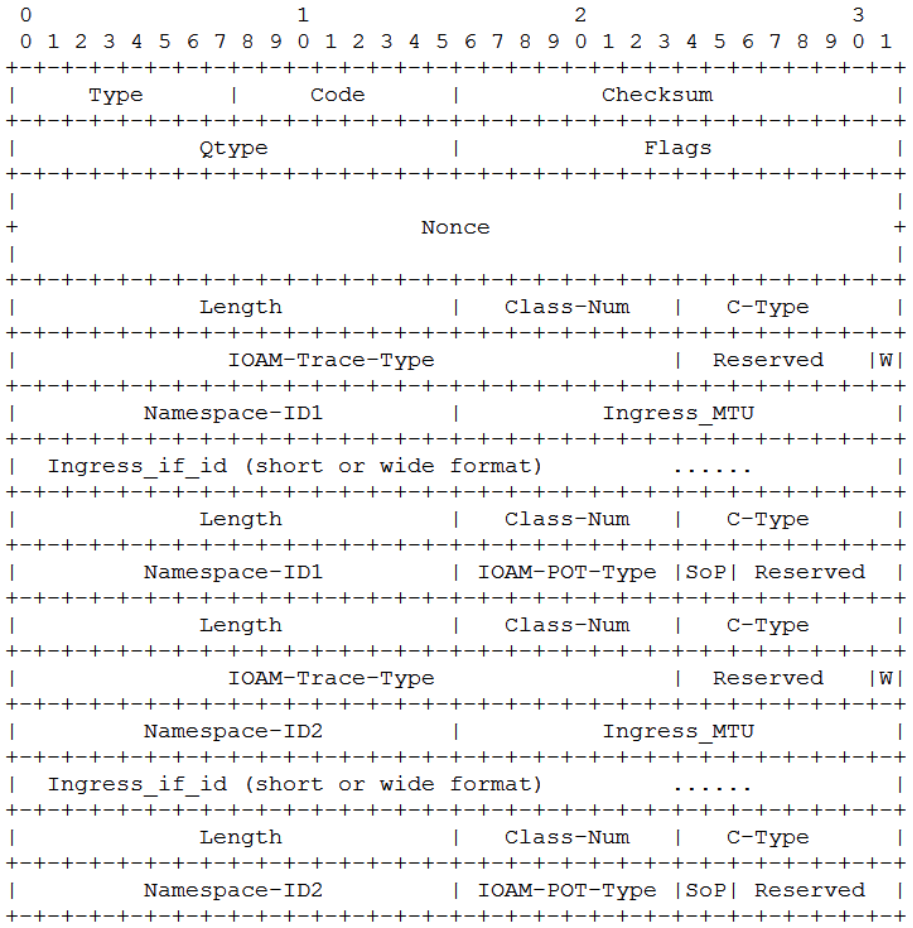
  - [Class-Num + C-Type] is used to identify the six IOAM Capabilities Objects

Update since IETF 114 (Cont.3)

- IPv6 Node IOAM Information Query/Reply example:



IPv6 NI Query



IPv6 NI Reply

Open Question

- Considering RFC 4620 is an Experimental RFC, what category does this draft belong to?
  - Experimental?
  - Standards Track?
  - Others?
- The question can be answered after wg adoption if this wg would like to adopt this draft

Next step

- WG adoption?

Thank you!