IPv6 Query for Enabled In-situ OAM Capabilities

draft-ietf-6man-icmpv6-ioam-conf-state-01

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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 RFC 9359
  - IPv6 Node IOAM Information Query mechanism
  - For this Query mechanism, five IOAM Capabilities Objects are defined in this draft:
    - IOAM Tracing Capabilities Object
    - IOAM Proof of Transit Capabilities Object
    - IOAM Edge-to-Edge Capabilities Object
    - IOAM DEX Capabilities Object
    - IOAM End-of-Domain Object

Update since IETF 115

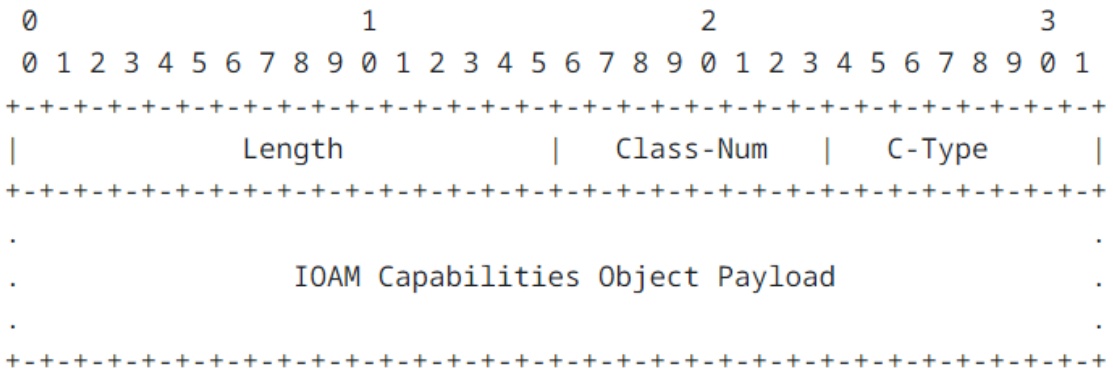
- This draft was presented at IETF 112&114&115, some good discussions happened there

- After IETF 115, this draft was adopted as a wg draft. A big thank to the wg chairs and all folks reviewing this draft

- The main differences between -00 and -01
  - Removed the IOAM Incremental Tracing Capabilities Object
  - Added two examples of the Node IOAM Information Query
  - Clarified how this mechanism works in an ECMP scenario

Update since IETF 115 (Cont.1)

- The format of IOAM Capabilities Object:



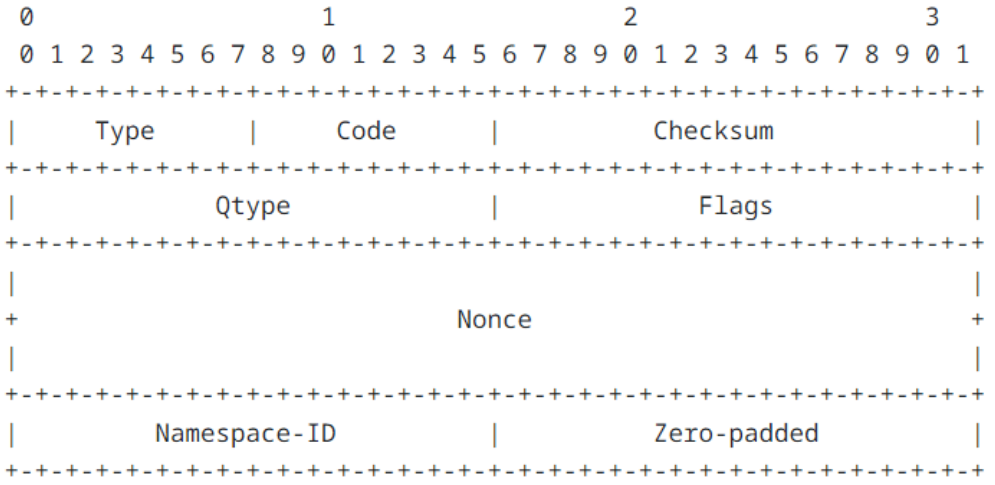
* C-Type Values are listed as the following:

Class-Num	C-Type	C-Type Name
TBD5	0	Reserved
	1	Pre-allocated Tracing
	~~2~~	~~Incremental Tracing~~
	(aligned with draft-ietf-ippm-ioam-ipv6-options)	
TBD6	0	Reserved
TBD7	0	Reserved
TBD8	0	Reserved
TBD9	0	Reserved

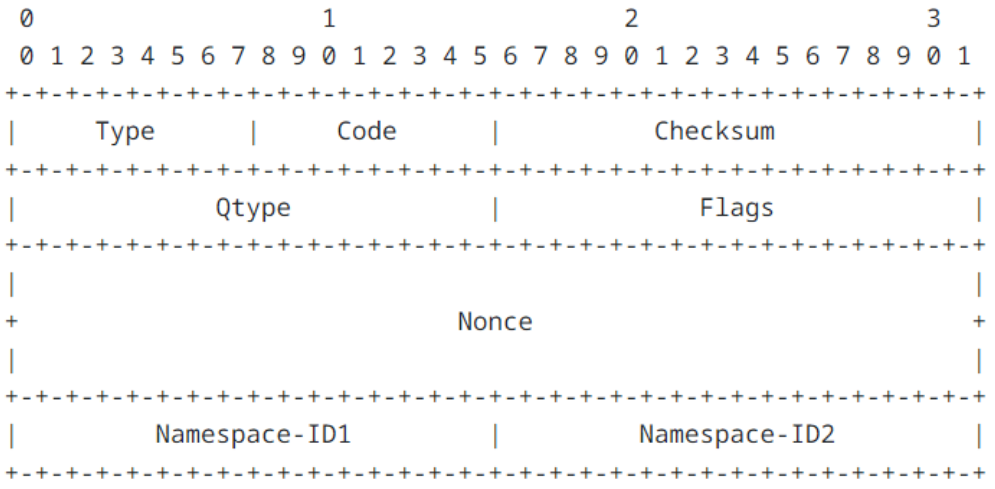
Update since IETF 115 (Cont.2)

- Two examples of the Node IOAM Information Query :

Example1: Query the Default Namespace-ID

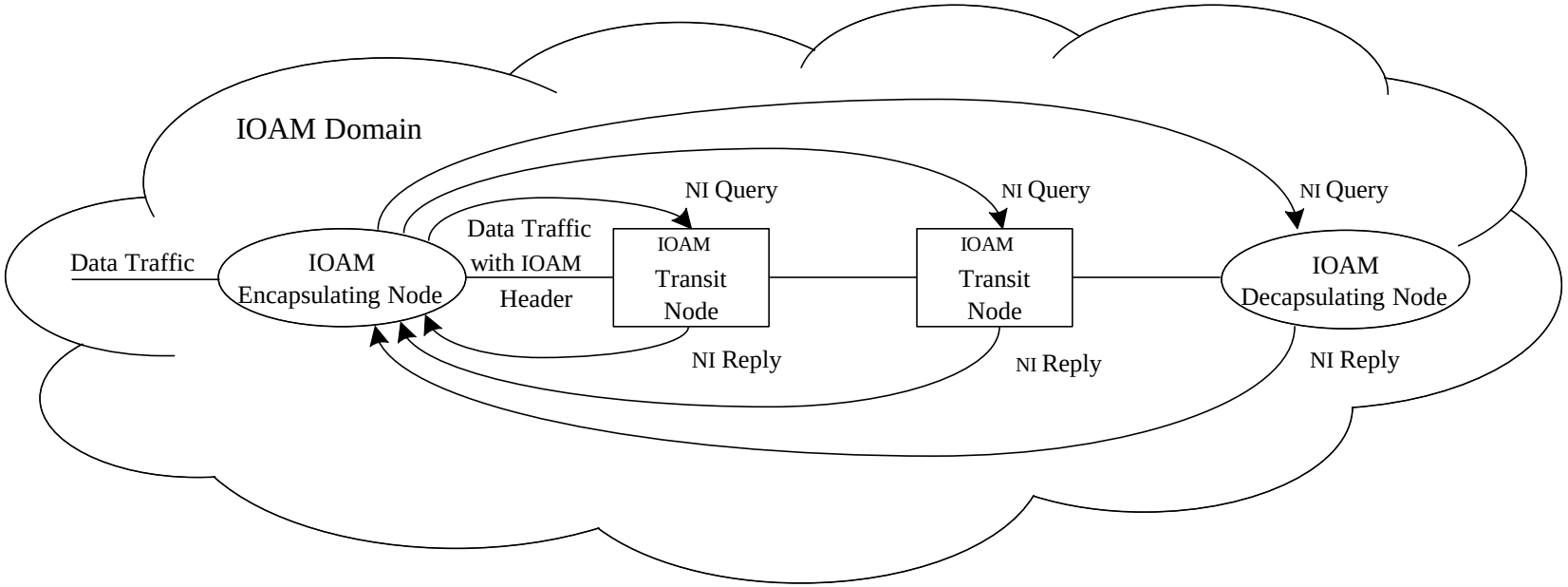


Example2: Query the two provisioned Namespace-IDs



Update since IETF 115 (Cont.3)

- How this mechanism works in an ECMP scenario:



In an ECMP scenario, intended for the fate sharing between the NI Query and the IOAM data packets, the same value(s) in any ECMP affecting fields of the IOAM data packets MUST be populated in the NI Query packets.

Open Question

- RFC 4620 is an Experimental RFC, while RFC 9359 is a Standards Track RFC, then what category does this draft belong to?
  - Experimental?
  - Standards Track?
  - Others?

- This question was first raised at IETF 115, and it's thought too early at that time. At present this draft is a wg draft, it may be time to consider this question

Next steps

- Ask for more reviews and comments
- Revise this draft to improve it
- WGLC on it

Thank you!