

IPv6 Query for Enabled In-situ OAM Capabilities

draft-ietf-6man-icmpv6-ioam-conf-state-06

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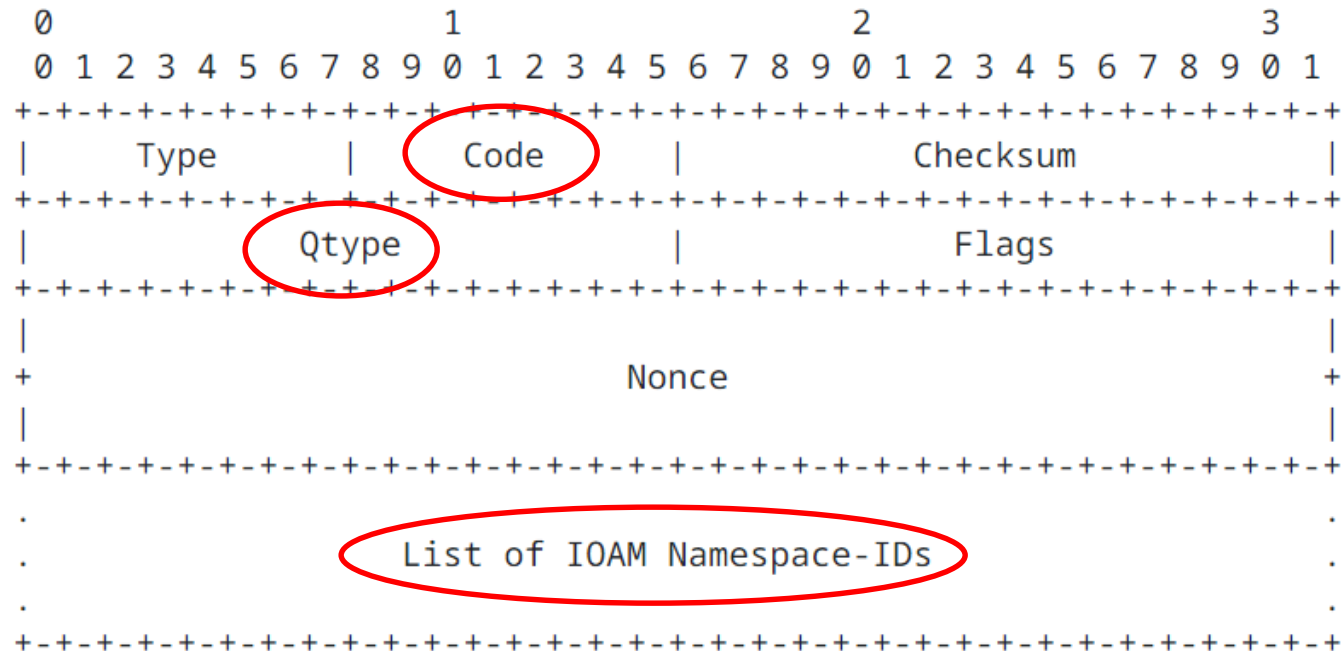
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Recap of this draft

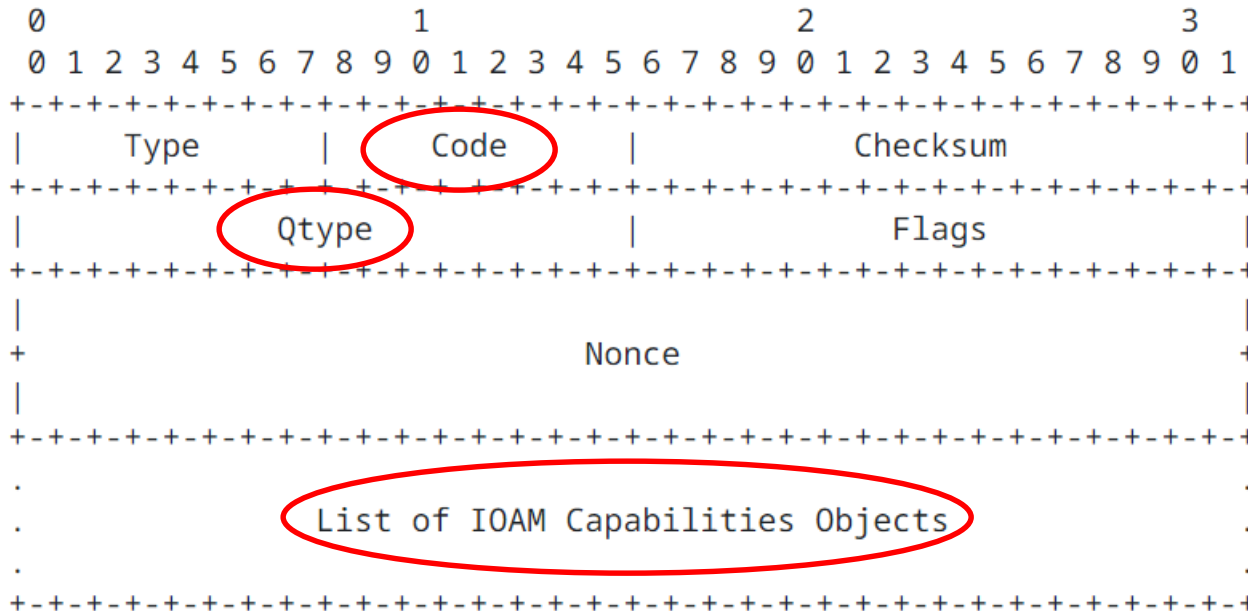
- This draft defines ICMPv6 extensions to achieve IOAM Capabilities Discovery in IPv6 Networks
 - A companion document of RFC 9359
 - Use RFC 4620 “IPv6 Node Information Queries” as basis
 - For this Query mechanism, five IOAM Capabilities Objects are defined in this document:
 - IOAM Tracing Capabilities Object
 - IOAM Proof of Transit Capabilities Object
 - IOAM Edge-to-Edge Capabilities Object
 - IOAM DEX Capabilities Object
 - IOAM End-of-Domain Object

IPv6 Node IOAM Request



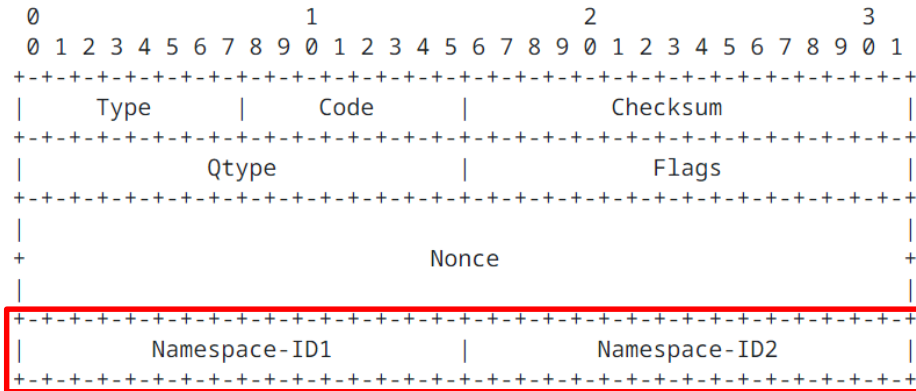
- For Node IOAM Request, this draft defines
 - New Qtype
 - New Code
 - New Data – List of IOAM Namespace-IDs

IPv6 Node IOAM Reply

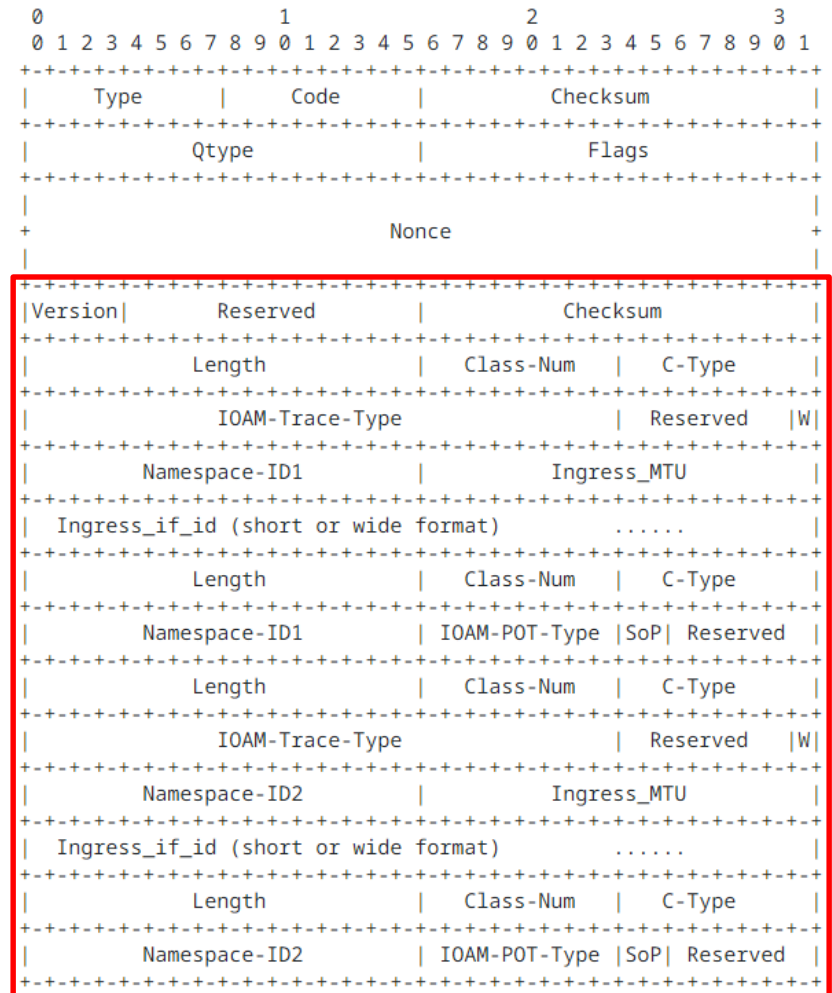


- For Node IOAM Reply, this draft defines
 - New Code
 - New Data – List of IOAM Capabilities Objects
- Qtype is copied from the Node IOAM Request

IPv6 Node IOAM Request/Reply Example



IPv6 Node IOAM Request



IPv6 Node IOAM Reply

Next steps

- Joint (6man&IPPM) WG Last Call?

Recap of RFC 9359

- RFC 9359 (developed by IPPM WG) defines a general method for IOAM Capabilities Discovery.
 - **Abstract:** “This document 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 is intended to be used with a variety of data planes such as IPv6, MPLS, Service Function Chain (SFC), and Bit Index Explicit Replication (BIER).”
 - Published in April 2023.

History of this draft

- The authors believe this draft is now a stable WG draft after several rounds of reviews and revisions.
 - 2021.10 -00 version individual draft. Requested to assign two new ICMPv6 types for Echo Request/Reply.
 - 2022.09 -02 version individual draft. Reused existing ICMPv6 types 139/140 as allocated for RFC 4620.
 - 2022.12 Adopted by 6man WG. -00 version WG draft.
 - 2023.10 -02 version WG draft. Improved security section and provided more examples.
 - 2024.06 -04 version WG draft. Cleaned up the whole draft.
 - 2024.06 -06 version WG draft. Fixed a bug in the examples.