

# OAM Header for use in Overlay Networks

draft-ooamdt-rtgwg-ooam-header

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# Problem statement

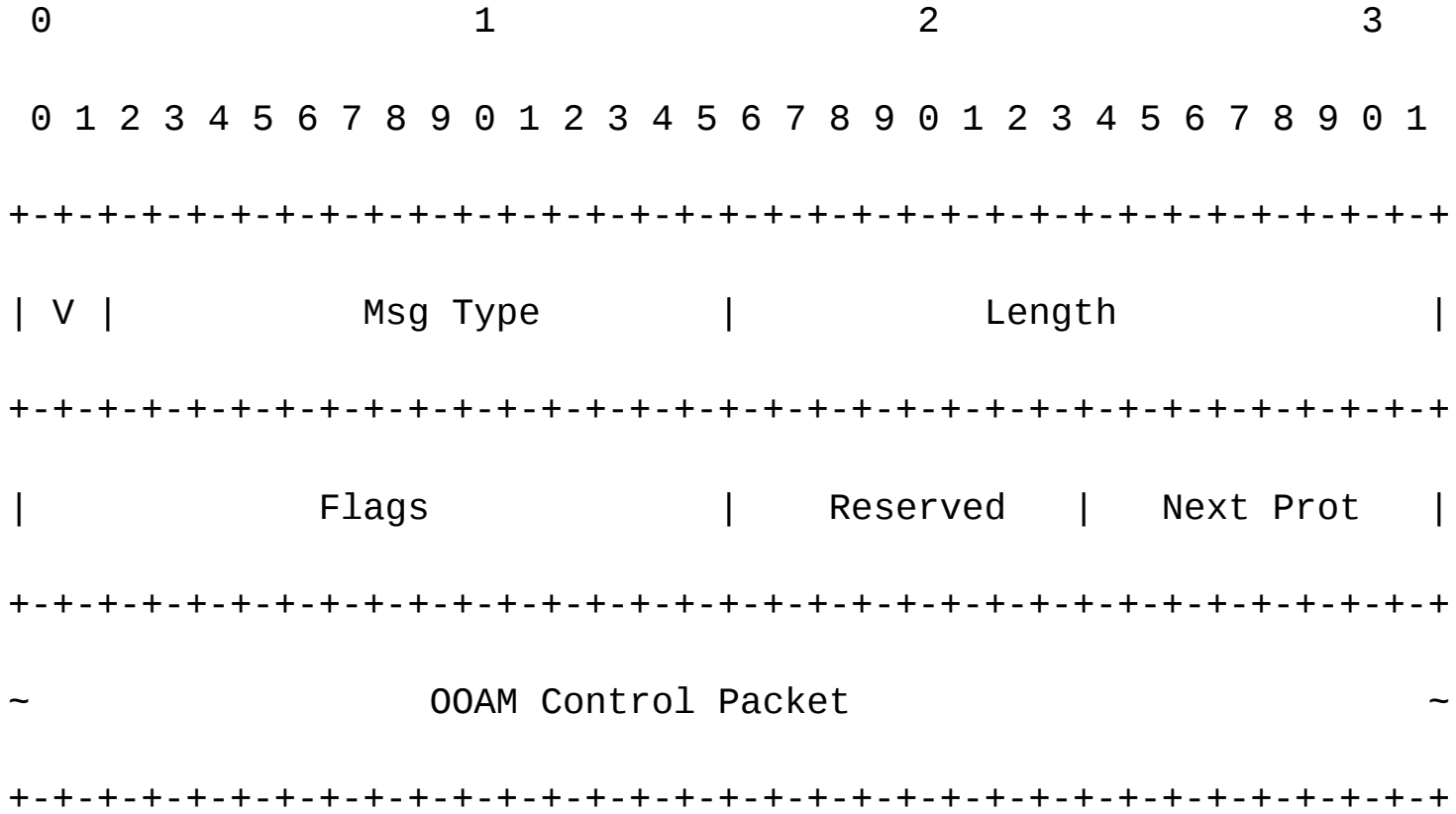
- This document introduces Overlay Operations, Administration, and Maintenance (OOAM) Header to be used in overlay networks to create Overlay Associated Channel (OAC) to ensure that OOAM control packets are in-band with user traffic and de-multiplex OOAM protocols.

# Overlay Associated Channel

- Associated Channel (OAC) in the overlay network is the channel that is in-band with user traffic through:
  - using the same encapsulation as user traffic;
  - following the same path through the underlay network as user traffic.
- Creating notion of the OAC in the overlay network ensures that packets of active OAM protocols carried in the OAC are in-band with user traffic. Additionally, OAC allows development of OAM tools that, from operational point of view, function in essentially the same manner in any type of overlay.

# Overlay OAM Header

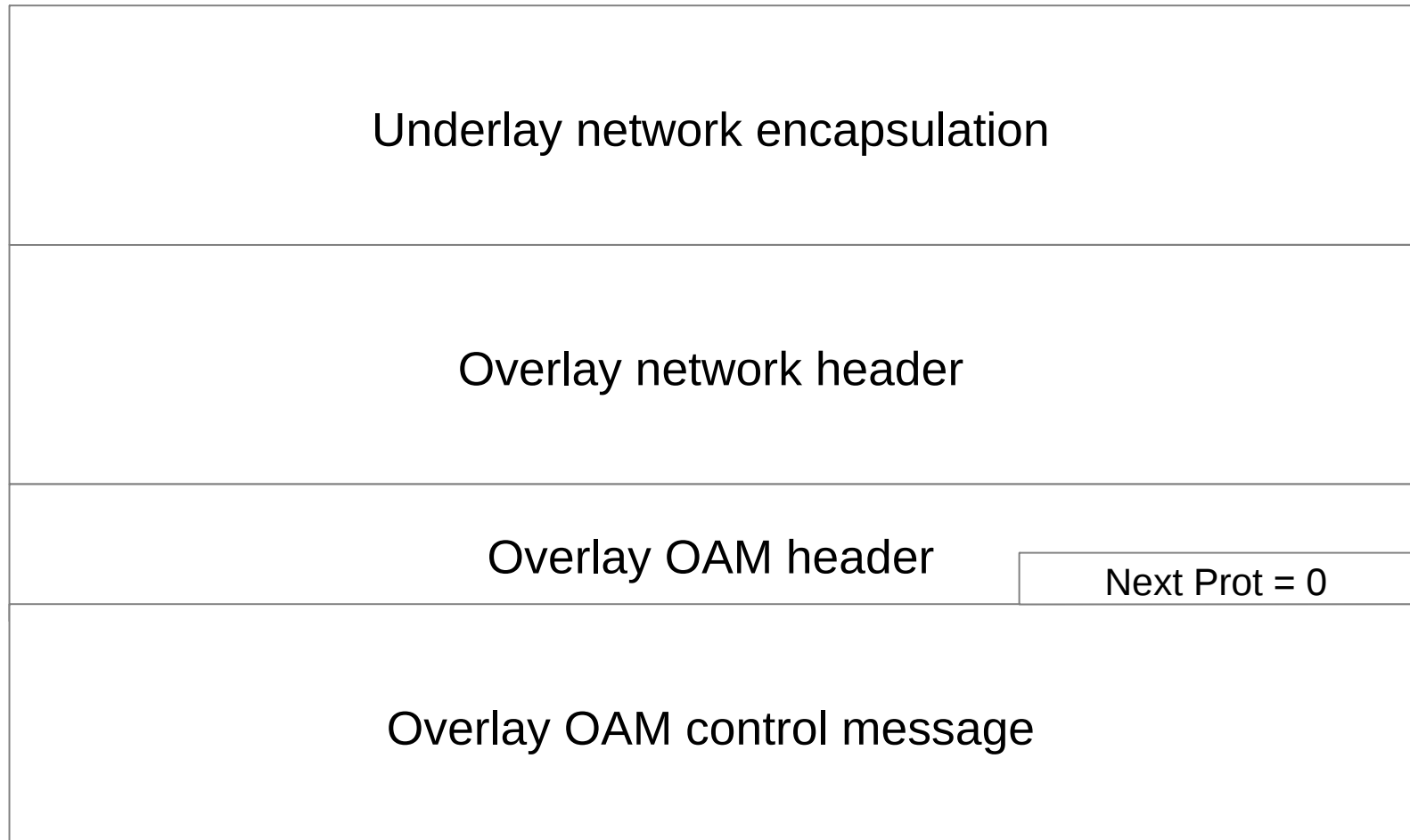
Header format:



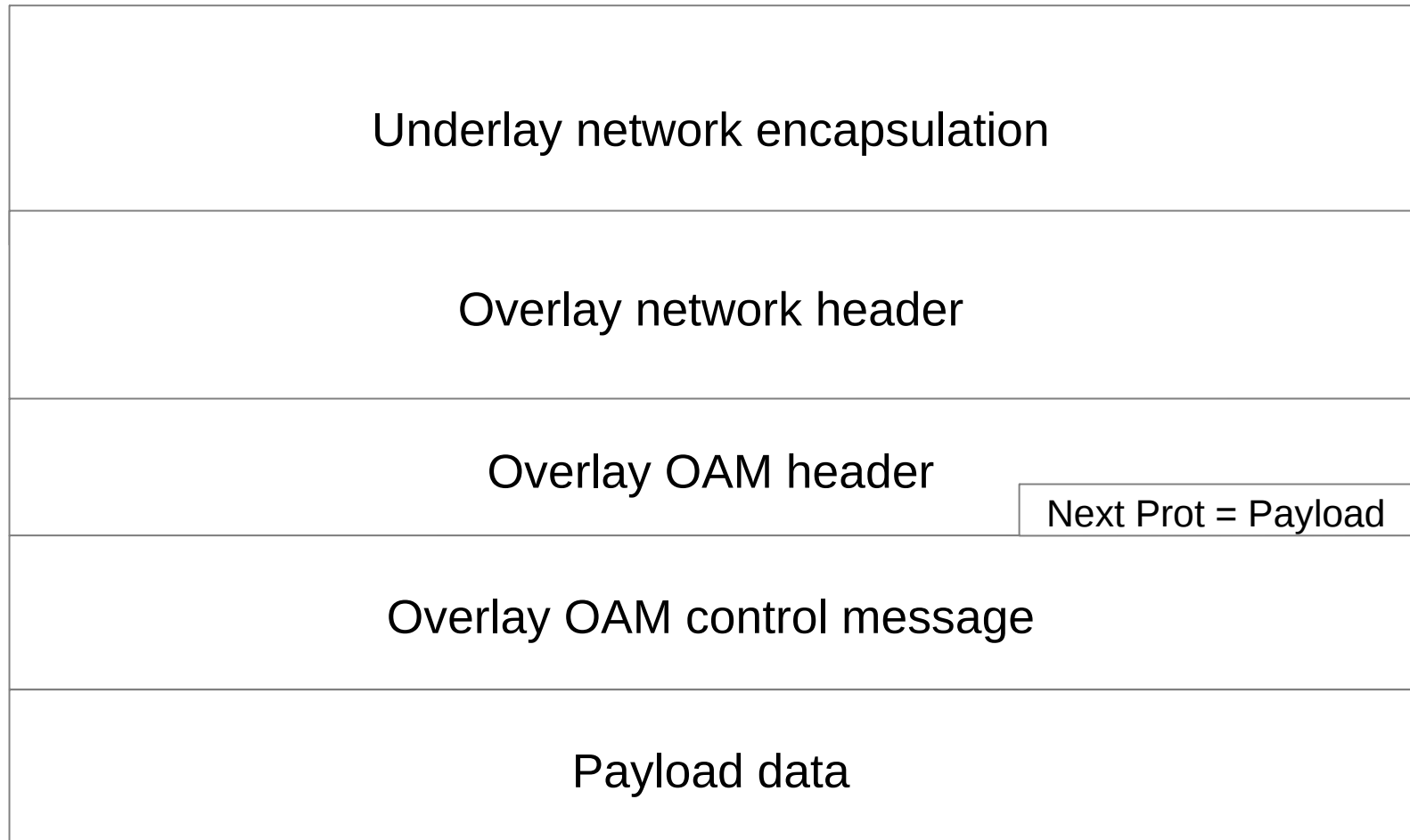
# Requirements toward overlay encapsulation

- To ensure that active OAM control packets are in-band with the monitored data flow encapsulation layer MUST comply with the following requirements:
  - encapsulation of OAM control message and data packets in underlay network MUST be indistinguishable from underlay network forwarding point of view;
  - presence of OAM control message in overlay packet MUST be unambiguously identifiable;
  - it MUST be possible to express entropy for underlay ECMP in overlay encapsulation in order to avoid using data packet content by underlay transient nodes.

# Active OAM control packet encapsulation



# Hybrid OAM control packet encapsulation



# Next steps

- Your comments, suggestions, questions always welcome and greatly appreciated
- WG adoption