OAM Header for use in Overlay Networks

draft-ooamdt-rtgwg-ooam-header-02

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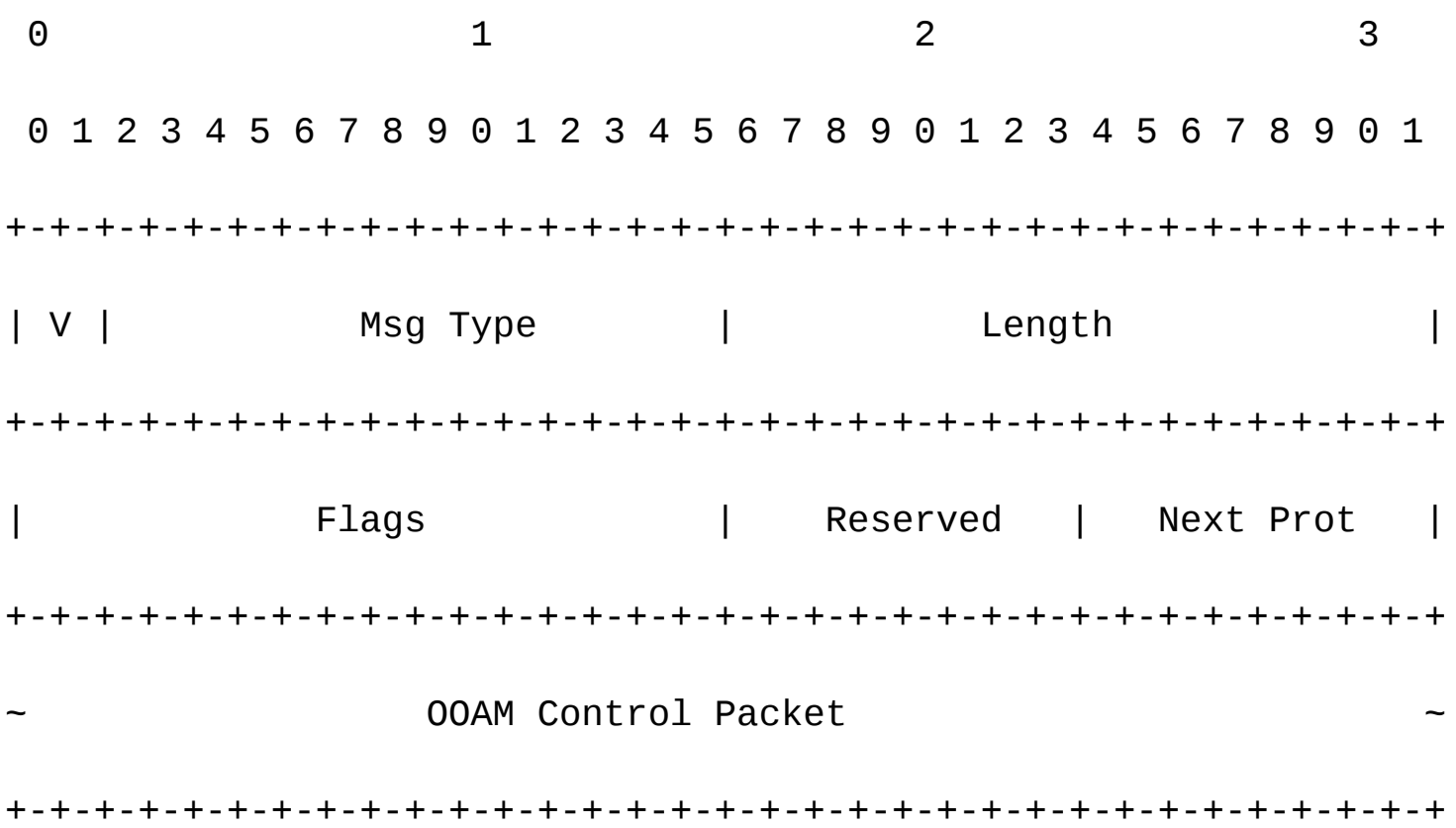
Update

- 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.

- Associated channel in the overlay network is the channel that, by using the same encapsulation as user traffic, follows the same path through the underlay network as user traffic. In other words, the associated channel is in-band with user traffic. Creating notion of the OAC in the overlay network ensures that control 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:

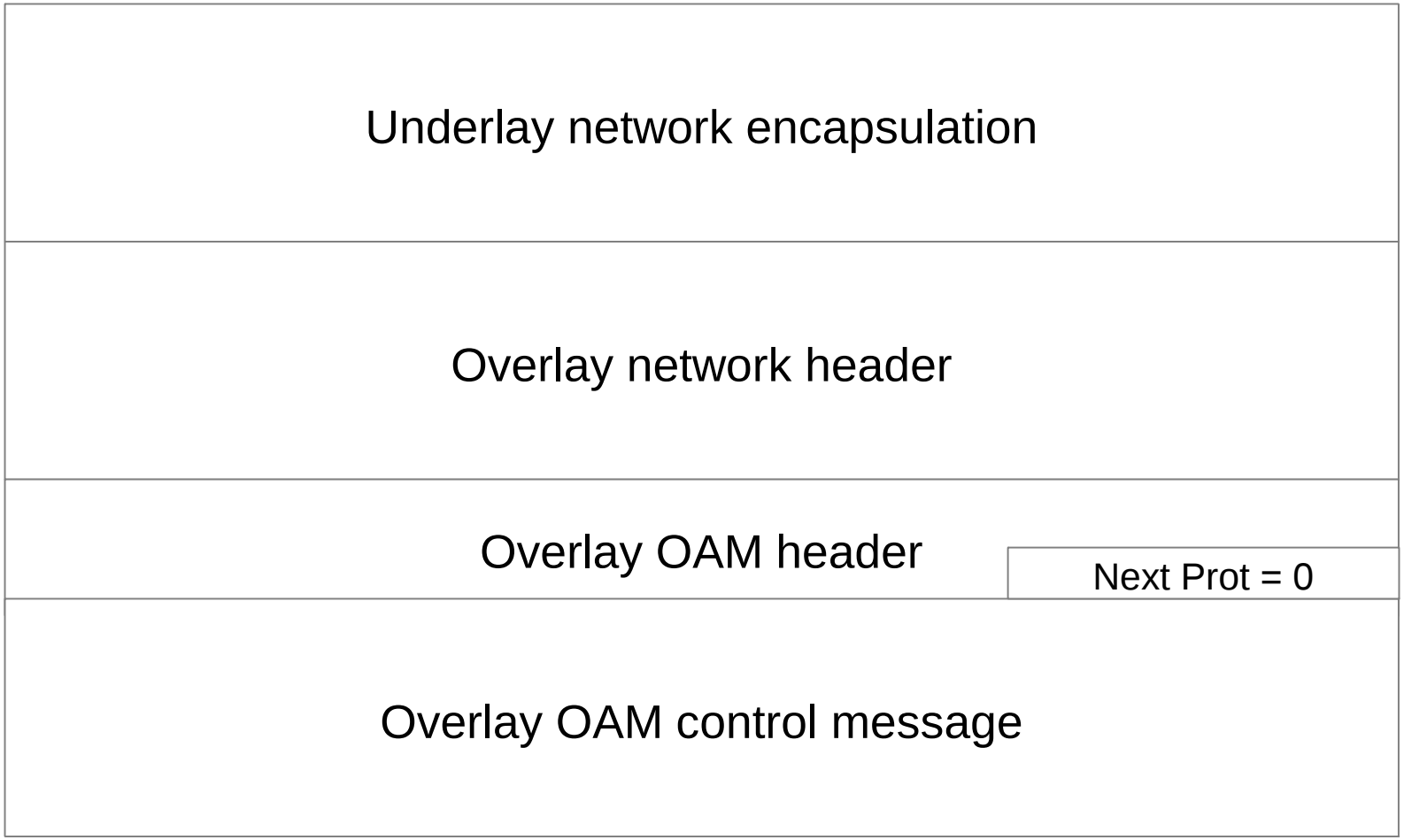


Requirements toward overlay encapsulation

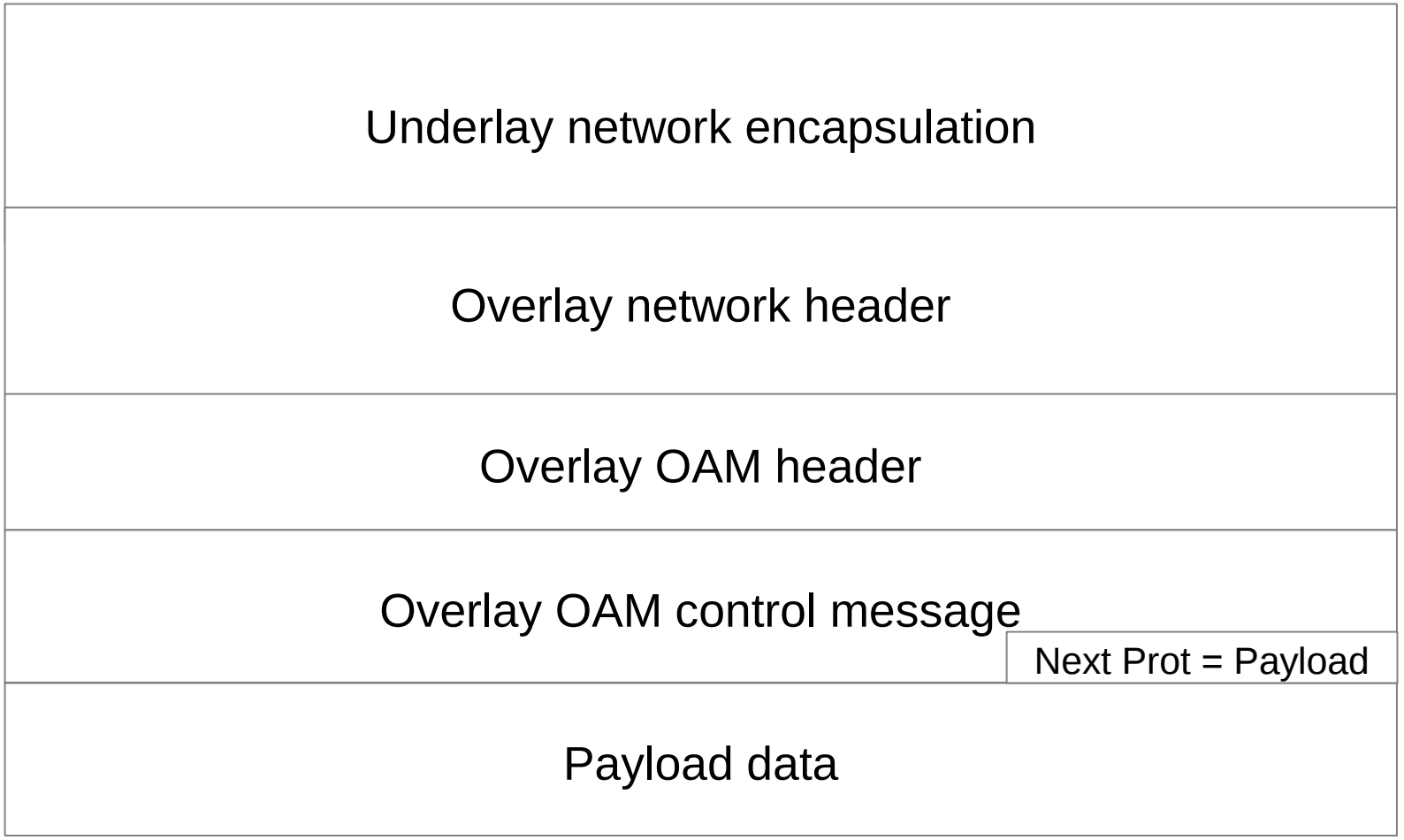
To ensure that active OAM control packets are in-band with the monitored data flow encapsulation layer MUST comply with the following requirements:

- 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

- Welcome comments from the WG
- Asking WG to consider adoption of the draft
- Thank you