

IGP-TE Extensions for DetNet Information Distribution

draft-geng-detnet-info-distribution-02

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DetNet Topology Attribute

- Node Type
 - Edge Node/Relay Node/ Transit Node
- Replication Capability
- Elimination Capability
- Queuing Management Algorithm
 - Type
 - Basic Parameters
- Resource Reservation Base
 - Max FanIn Ports
 - Max Packet Size
- Bandwidth Metric
 - DetNet Unreserved Bandwidth
 - Maximum DetNet Reservable Bandwidth
- Delay Metric
 - Link Delay (defined in RFC7471 and RFC 7810)
 - Maximum Packet Processing Delay
 - Minimum Packet Processing Delay
 - Maximum Output Queuing Delay
 - Minimum Output Queuing Delay

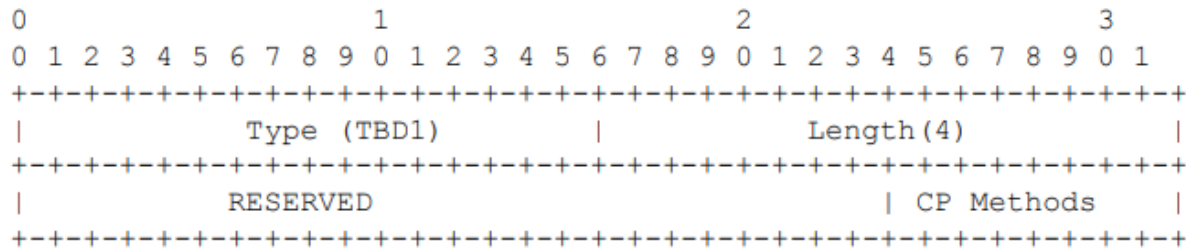
OSPF Extension for DetNet

- Define sub-TLVs to Link TLV:
 - Congestion Control Method sub-TLV
 - Max DetNet Reservable Bandwidth sub-TLV
 - Available DetNet Bandwidth sub-TLV
 - Min/Max Queuing Delay sub-TLV

Congestion Control Mechanism sub-TLV

- This Congestion Protection (CP) Method sub-TLV is used to advertise the DetNet flow congestion protection methods used in transit nodes.

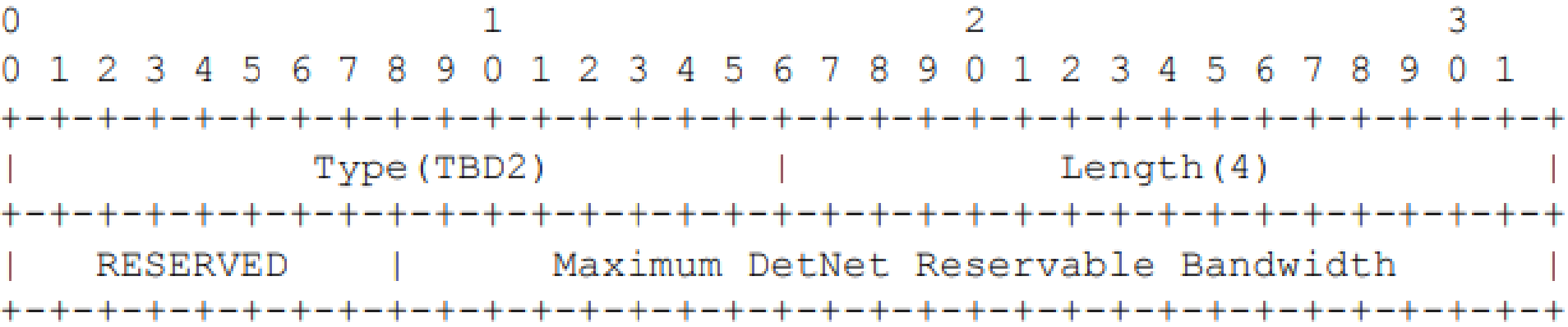
Five congestion protection methods are introduced in this document:



Value	Congestion Control Mechanisms
0	Reserved
1	Time Aware Shaper
2	Credit Based Shaper
3	Time Aware Shaper and Credit Based Shaper
4	Cyclic Queuing and Forwarding
5	Asynchronous Traffic Shaping
6-254	Unassigned
255	Reserved

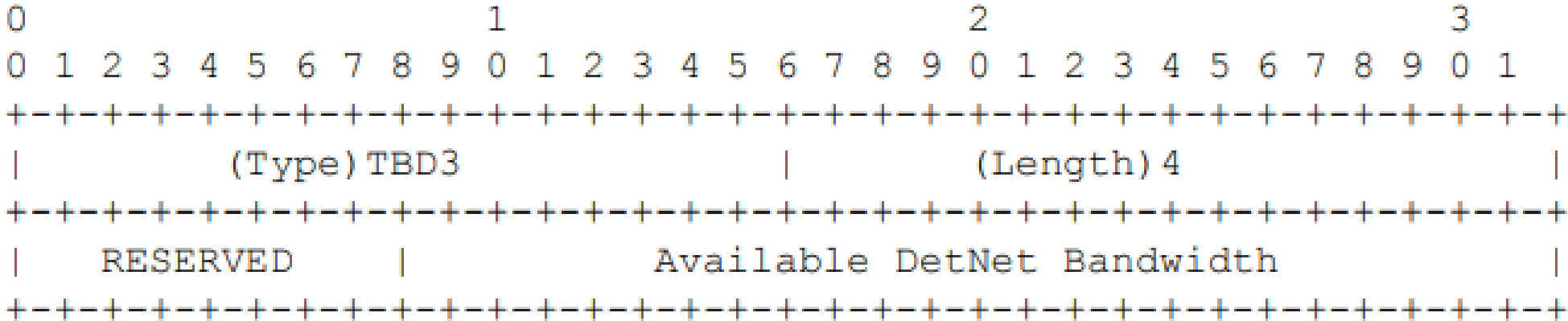
Max DetNet Reservable Bandwidth sub-TLV

- This sub-TLV specifies the maximum amount of bandwidth that is reserved for DetNet on this link. Note that this value SHOULD be smaller than the value of Maximum Reservable Bandwidth sub-TLV [[RFC3630](#)].



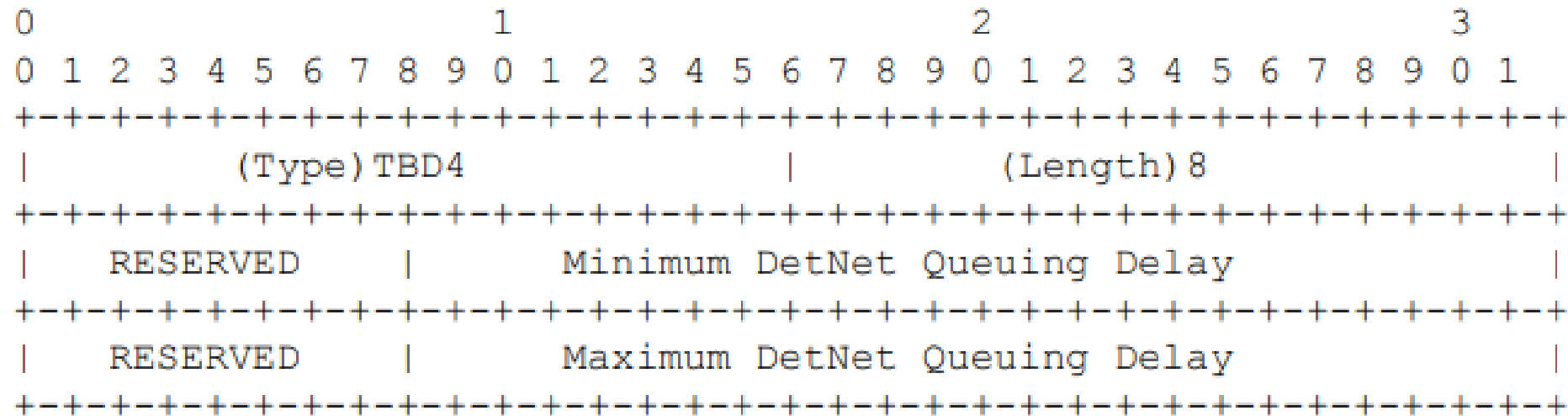
Available DetNet Bandwidth sub-TLV

- This sub-TLV specifies the available bandwidth that can be reserved for DetNet flow on this link.



Min/Max Queuing Delay sub-TLV

- This sub-TLV advertises the minimum and maximum queuing delay values of specific DetNet flow in the link.



Next Steps

- Align with the topology data model
- Solicit more comments from the WG
- Improve the document based on received comments and feedbacks
- Given that this work is not in the current charter, how to process this document?

Thanks