

IPv6 Destination Option for Congestion Exposure

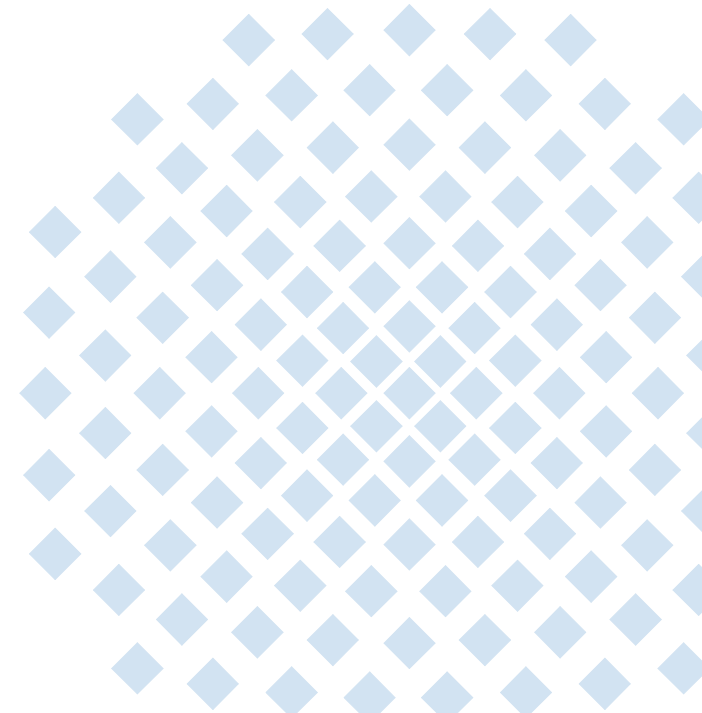
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Sections added

Requirements for marking IPv6 packets

- R-1: ConEx marking should be visible to all nodes.
- R-2: ConEx marking need to be able to traverse nodes that do not understand ConEx
- R-3: ConEx marking should not significantly alter the processing of the packet.
- R-4: ConEx marking should be immutable after once set by the sender.
- Candidates: Hop-by-Hop options, destination options, using header bits, and **Option Headers**

Compatibility with use of IPsec

- In IPsec transport mode no action need to be taken.
- In IPsec tunnel mode the CDO SHOULD be copied to the outer IP header.

Implementation in the fast path of ConEx-aware routers

- Destination options are usually not processed by routers.
- For efficient processing in ConEx-aware routers the CDO MUST be placed as the first destination option in the destination options header.

Change on Conex Destination Option (CDO)

"If the X bit is zero all other three bits (L, E, C) are undefined."

→ Before it said those bits should be 'zero', now it is 'undefined'.

Open Points

- Define use of IPv6 Payload length field for byte-based accounting
For ConEx-aware node processing, the CDO MUST use the Payload length field of the preceding IPv6 header for byte-based accounting.
- Define usage of Reserved bits
 - Sender SHOULD set these bits to zero.
 - Other nodes SHOULD not interpret these bits.

