

CRH-20 Deterministic Routing Header

draft-pb-6man-deterministic-crh-01

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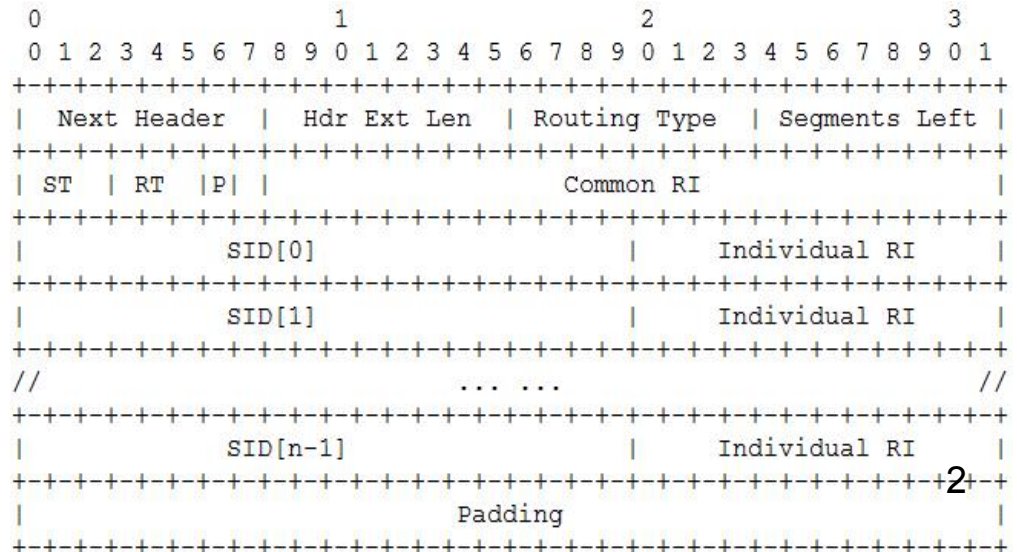
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Problem Statement and Solution

- Problem statement:
 - DetNet path is usually an **explicit routing**, and **different hops may use different scheduling parameters** (such as different slot-id, delay level, worst-case latency per-hop by net-calc, etc) to archive DetNet QoS.
 - **Core stateless**, i.e., the scheduling state is carried in the packet, without relying on maintaining the flow state on the node, is an important principle of DetNet EDP (enhanced data plane) for meeting large scaling requirements.
- Solution
 - Define **CRH-20**, a variant of CRH (RFC9631), to **carry scheduling parameters per compact segment** for the DetNet explicit routing case.

Main design considerations:

- Decouple the scheduling metadata and topology instruction (such as MPLS Label) to save topology instructions and signaling advertisement.
- Never rely on dynamic FIB state for the purpose of queue scheduling and segment compression knowledge for packet self-parsing.



Next step

- Any questions/comments ?

Thank you!