SRv6 Network Programming

Ethernet NH allocation

draft-ietf-spring-srv6-network-programming-05

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Internet Area WG

New allocation for Ethernet

- No available NextHeader value for Ethernet frames
  - Former revisions of this draft used IPv6 NoNextHeader (59)
  - ...but after WG discussion in 6man/SPRING it was decided to allocate a new codepoint
- Several options discussed in 6man/SPRING
  - Conclusion was to allocate a new codepoint for “Ethernet”
- Ethernet processing:
  - Preamble and Frame Check Sequence are stripped off from the packet upon encapsulation
- Early allocation:
  - Authors have requested early allocation based on RFC7120 procedure
  - Current industry status:
    - Several existing hardware(18) and opensource(8) implementations
    - Several deployments(7)
    - Need to update them to use the new value

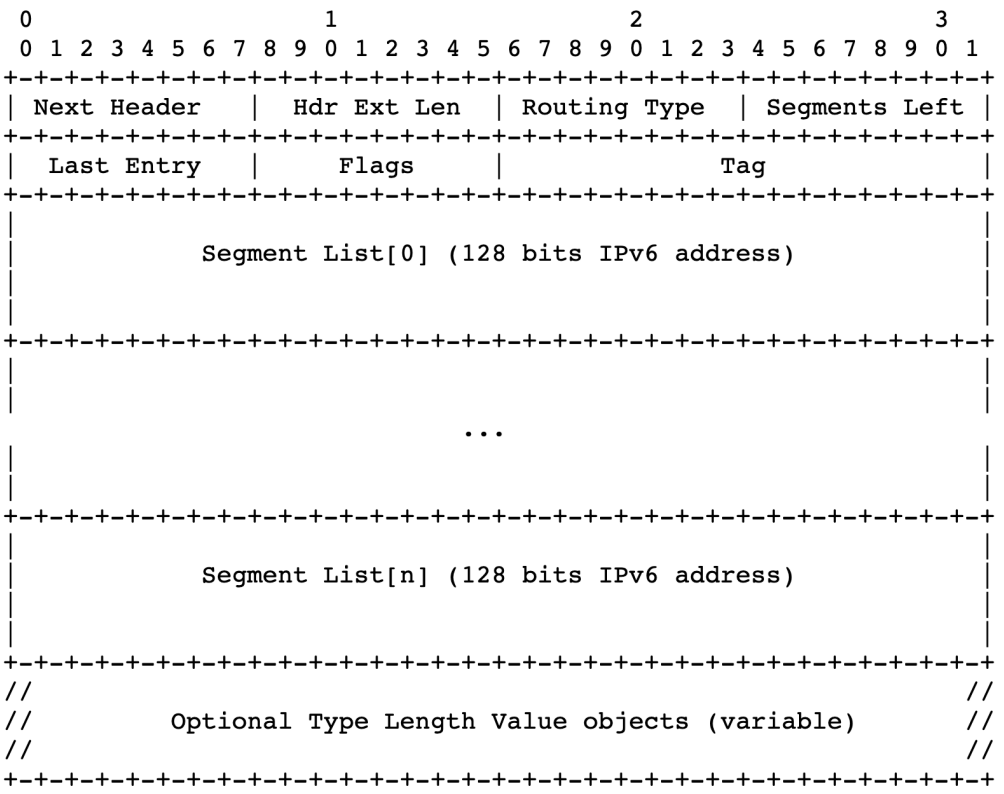
Any question?

- Thanks!

SRv6 recap (I)

- New IPv6 Routing Extension Header
  - **draft-ietf-6man-segment-routing-header-26**
  - **Proposed standard**

The Segment Routing Header (SRH) is defined as follows:



SRv6 recap (II)

- **draft-ietf-spring-srv6-network-programming-05**
  - Defines segment behaviors for Traffic Engineering, L3VPN and L2VPN

- General design:
  - Ingress PE encapsulates a packet received from the customer
    - Outer IPv6 header includes SRH with segments for TE and VPN
  - Transit P routers do not perform any SRv6/SRH processing
  - SR Endpoints perform SR processing
  - Egress PE decapsulates packet and forwards based on VRF/CE