

# Carrying NRP Information in IPv6 Extension Header

*draft-ietf-6man-enhanced-vpn-vtn-id-06*

Jie Dong, Zhenbin Li @Huawei

Chongfeng Xie, Chenhao Ma @China Telecom

Gyan Mishra @Verizon

# Background Recap

- Network Resource Partition (NRP) is a collection of network resources allocated on a set of links in the underlay network
  - The NRP concept is introduced in RFC 9543 as an underlay network resource construct to support network slice or enhanced VPN services
  - The term “VTN” was used to refer to a virtual (underlay) transport network
  - According to the consensus in TEAS WG, it was agreed to converge to the term NRP
- This document introduces a new HBH option to carry NRP related information in IPv6 packets
  - Can be used by the transit nodes to determine the NRP a packet belongs to
  - NRP-specific packet processing and forwarding can be performed
- There was some discussion about the semantics of “S flag” in the NRP option
  - The usage and benefit of the S flag was elaborated during the discussion
  - Based on the discussion feedbacks, it seems useful to keep the S flag in this document

# Updates Since Last Presentation

- The terminologies and descriptions are aligned with IETF network slice framework and enhanced VPN framework documents
  - The term “NRP” is used consistently to refer to network resource constructs used to support network services with enhanced characteristics
  - The new HBH option and ID are renamed as “NRP option” and “NRP ID” respectively
- Elaborates the usage of the S flag and its benefits
  - S flag allows fine granular control of the forwarding behavior for packets in an NRP, when the NRP ID in the packet cannot match with locally provisioned NRPs
- Some editorial changes to improve readability

# Discussion on the S Flag

- Comments from Med:
  - The usage of S flag is not clear, can it be replaced by local configurations?
- Replies from authors:
  - The S Flag allows flexible and fine-granular processing policy (discard or best effort forwarding) for a subset of packets (e.g. OAM packets or specific service flows) of an unmatched NRP, which is not provisioned on a transit node
  - It would be burdensome to realize the same policy via local configurations, as it has to be done on all nodes along the forwarding paths, and it would require additional configurations for NRPs which are not provisioned on the nodes
- Comments from Ketan:
  - This seems as a local configuration of drop or fallback
- Replies from authors:
  - The indication of drop or fallback is not a simple global knob, it needs to be per-NRP and may be with flexible and fine granularity, and it is for NRPs which are not provisioned on the node

# Next Steps

- Authors believe this document is ready for WG last call
  - The content has become stable, and the terminology is aligned
  - All the received comments have been addressed
- Also would like to request for IANA code point early allocation (again)

Thank You