

# Carrying Network Resource Information in IPv6 Extension Header

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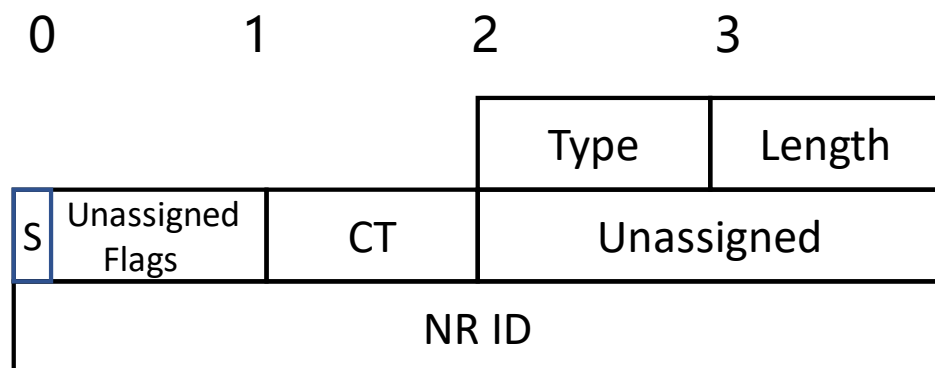
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# Background Recap

- Network Resource Partition (NRP) is a set of network resources allocated on a set of links in the underlay network
  - The concept is introduced in RFC 9543 as an underlay network resource construct to support network slice or enhanced VPN services
- This document introduces a new HBH option to carry Network Resource 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 on each node along the path
  - This HBH option can also be generalized for other network resource semantics and functions
- This revision (-09) addresses the comments received during and after IETF 119
  - Based on the discussion with the reviewers on IETF 120

# Network Resource (NR) Option

- The format of the NR option has been stable
  - Recent changes are mainly about the names of the option and fields, and the clarification about the semantics



- Option Type: TBA
- **Length**: Length of the data fields in octets
- **Flags**: the first bit is defined as Strict Match (S)
- **Context Type (CT)**: Indicates the semantics and length of the NR ID
  - **CT=0**: The ID is a **network-wide data plane NRP ID**
- **Unassigned** field: leave for future extensions
- **NR ID**: The identifier of a set of network resources

# Updates Since Last Presentation

- The Terminology
  - For generalization, this new HBH option is renamed as “Network Resource (NR) option”
    - So that it can also be used for network scenarios and behaviors other than network slicing/NRP
    - NRP is the application of this option defined by this document
  - The term “NRP” is used consistently for the network resource constructs used to support network slice or enhanced VPN services
    - Aligns with the IETF network slice framework (RFC 9543) and the enhanced VPN framework draft in TEAS WG
  - Based on the recent feedbacks on TEAS mailing list, when CT=0, the ID field is renamed as “data plane NRP ID” to distinguish it from the NRP IDs used in the management/control plane
  - The reserved field is renamed as Unassigned
- The Encoding
  - The usage of the S flag and its benefit is further clarified and agreed by the reviewers
  - As discussed in TEAS, the length of the ID field is data plane protocol specific
- Many editorial changes (thanks to Med for his careful review)

# Next Steps

- All the received comments have been addressed
  - The terminology is aligned and refined
  - The encoding is stable and further clarified
- The authors would like to request for WG last call and IANA code point early allocation

Thank You