

# SR Policies Extensions for NRP in BGP-LS

draft-chen-idr-bgp-ls-sr-policy-nrp-06

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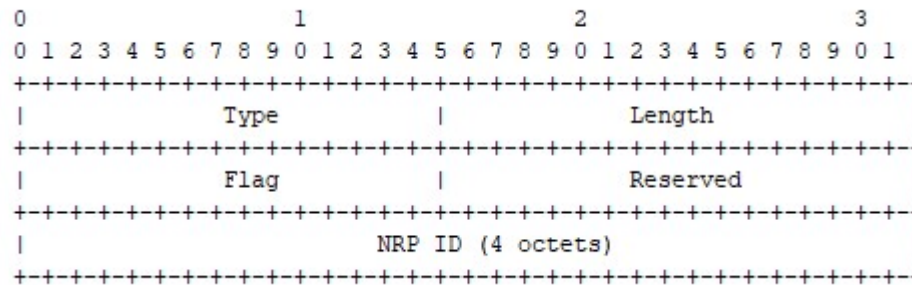
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# Introduction

- Segment Routing Policy [RFC9256] is an ordered list of segments (i.e. instructions) that represent a source-routed policy.
- [draft-ietf-teas-ietf-network-slices] introduces the concept Network Resource Partition (NRP), which is a subset of the resources and associated policies in the underlay network.
- [draft-ietf-idr-sr-policy-nrp] defines the extensions to BGP SR policy to specify the NRP which the SR Policy candidate path is associated with.
- [draft-ietf-idr-bgp-ls-sr-policy] describes a mechanism to distribute SR policy information to external components using BGP-LS.
- This document defines a new TLV which enable the headed to report the configuration and the states the NRP which the SR Policy candidate path is associated with.

# BGP-LS SR Policy Extensions for NRP

- A new SR Policy state TLV called “NRP TLV” to carry the NRP which the SR Policy candidate path is associated with.



- Type: TBD.
- Length: The total length of the value field not including Type and Length fields.
- Flag: 2-octet flag field. None is defined at this stage. The flags SHOULD be set to zero on transmission and MUST be ignored on receipt.
- RESERVED: 2-octet reserved bit. It SHOULD be set to zero on transmission and MUST be ignored on receipt.
- NRP: 4-octet domain significant identifier of Network Resource Partition. Value 0 and 0xFFFFFFFF are reserved.

# Procedures

- An SR Policy candidate path (CP) may be instantiated with a specific NRP on the headend node via a local configuration, PCEP, or BGP SR Policy signaling.
- Then the state and attributes of the NRP associated with the candidate path of SR policy are encoded in the BGP-LS Attribute field as SR Policy State TLVs.
  - The SR policy State TLVs defined in [draft-ietf-idr-bgp-ls-sr-policy](#) are not changed to report the SR Policy Candidate Path's state and attributes
  - The NRP TLV is included to report the state of NRP.

# Update

- Update the NRP TLV format based on RFC9552.
- Update the reference to RFC9552.
- Update the "Scalability Considerations" section to be consistent with draft-ietf-idr-sr-policy-nrp-00.
- Update the terminology usage in "IANA Considerations" section.

# Next Step

- Comments welcome.
- WG adoption 😊

Thank you!