Carrying VTN Information in IPv6 Extension Header

draft-ietf-6man-enhanced-vpn-vtn-id-01

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Background and Current Status

- This document introduces a new IPv6 HBH option to carry VTN information in IPv6 packets
  - Used by transit nodes on the path to steer packets to the set of network resources allocated to a VTN

- Comments received during and after the adoption shows there is interest to make this option generic and more flexible
  - In IETF 113 the authors presented the considerations about the extensibility of VTN option in both the semantics and the format

- This -01 version reflects the update to the format of VTN option
  - The generalization of the semantics may need further discussion

The Updated VTN Option Format

Option Type:
- BB: 00
- C: 0
- TTTTT: to be assigned by IANA

Opt Data Len: the value is 8

Flags:
- S flag: Strict match
- Other flags: reserved for future use

Reserved: for future extensions

VTN Resource ID:
- The identifier of the set of resources allocated to a VTN

```
                    Option      Option
                     Type      Data Len
                   +--------+--------+
                   |BBCTTTTT|  Length |
                   +--------+--------+--------+--------+
         Option    |S| Flags |          Reserved          |
         Data      +--------+--------+--------+--------+
                   |              VTN Resource ID           |
                   +--------+--------+--------+--------+
```

- Both keeps the VTN option with fixed length, and leaves room for future extensions
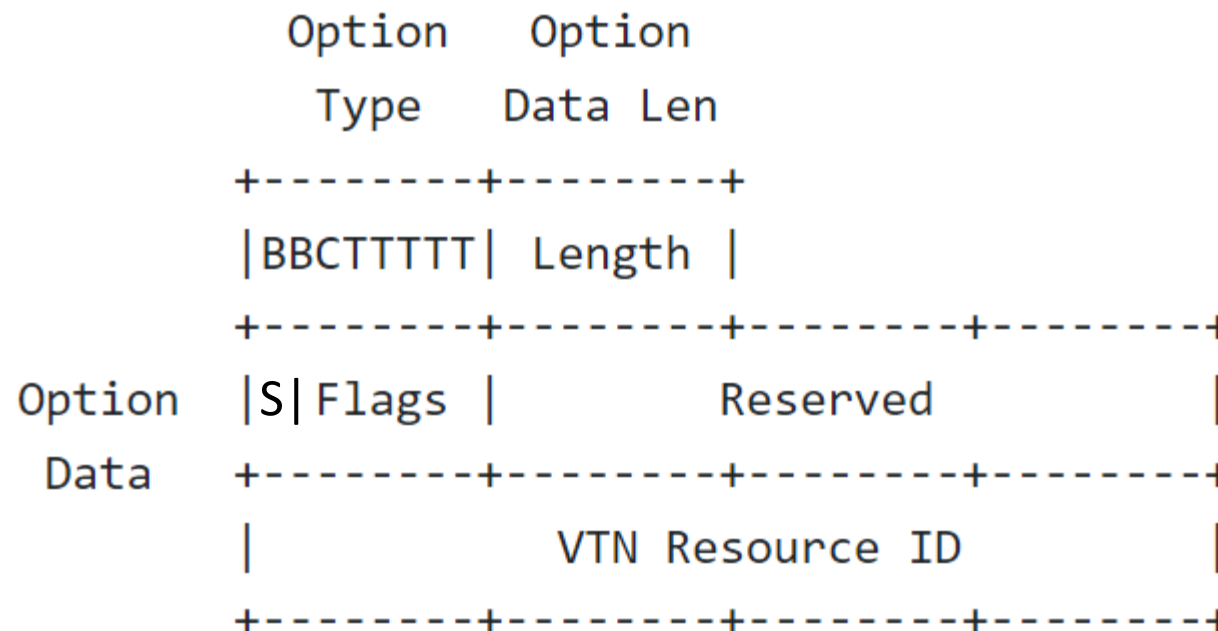
Other Updates in -01 version

- Clarifies that the VTN option can be used for network slicing, and could also be used for other application scenarios

  - In the context of network slicing, VTN and NRP are similar concepts

- Clarifies the relationship with 5G network slice ID (S-NSSAI)

  - In 5G network slice scenarios, there may be mapping relationship between S-NSSAI and VTN

- Updates the forwarding behaviors taking the S flag into consideration

- Some editorial changes

Next Steps

- Collect feedbacks from WG

- Further discussion about the semantics generalization?

- Update the document accordingly

Thank You