Carrying VTN Information in IPv6 Extension Header

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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
- 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