

# APN Header & IPv6 Encapsulation

<https://datatracker.ietf.org/doc/html/draft-li-apn-header-00>  
<https://datatracker.ietf.org/doc/html/draft-li-apn-ipv6-encap-00>

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# APN Header

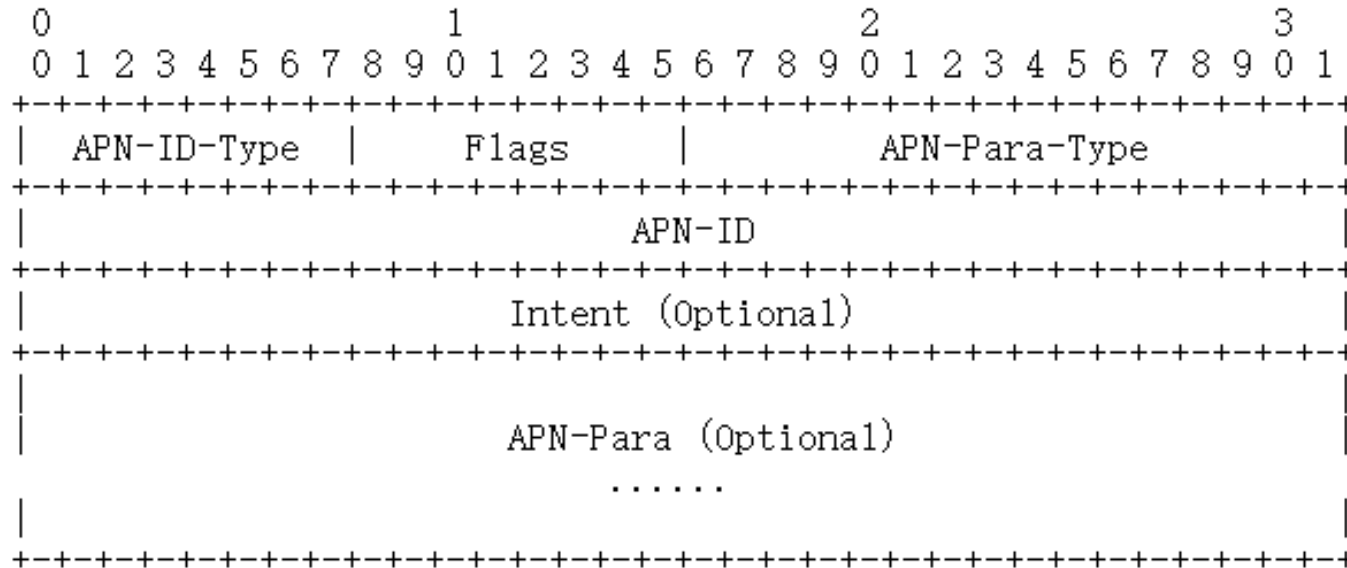


Figure 1. APN Header with Short APN ID

- Two types of APN ID:
  - Short APN ID: it is 32 bits
  - Long APN ID: it is 128 bits
- Intent: A 32-bit identifier, represents a set of service requirements to the network.
- APN-Para-Type: A 16-bit identifier, specifies which APN parameters are specified for the APN ID. The APN-Para-Type value is a bitmap.
- APN-Para: A variable field including APN parameters

# APN ID

- The APN ID can be divided into three parts:
  - APP-Group-ID: Application Group ID
  - USER-Group-ID: User Group ID
  - Reserved: The reserved fields.

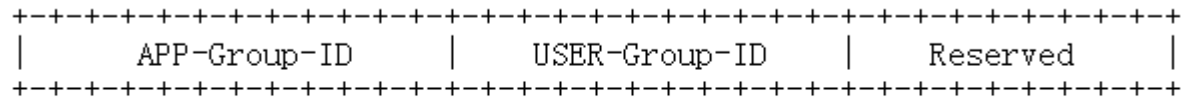


Figure 3. Structure of APN-ID

# APN Parameters

- The order of packing the data fields in each node data element follows the bit order of the APN-Para-Type field, as follows:
  - ❑ Bit 0 (Most significant bit) When set, indicates the presence of the bandwidth requirement.
  - ❑ Bit 1 When set, indicates the presence of the delay requirement.
  - ❑ Bit 2 When set, indicates the presence of the jitter requirement.
  - ❑ Bit 3 When set, indicates the presence of the packet loss ratio requirement.

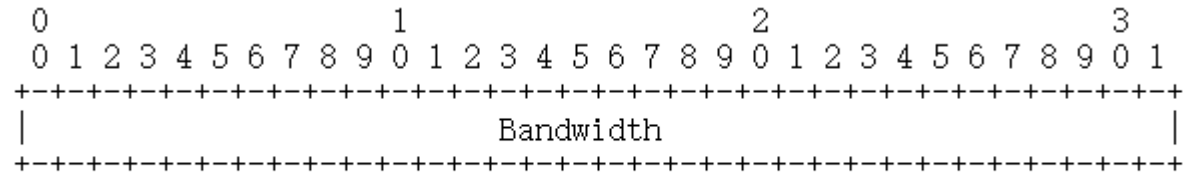


Figure 4. Bandwidth Requirement Parameter

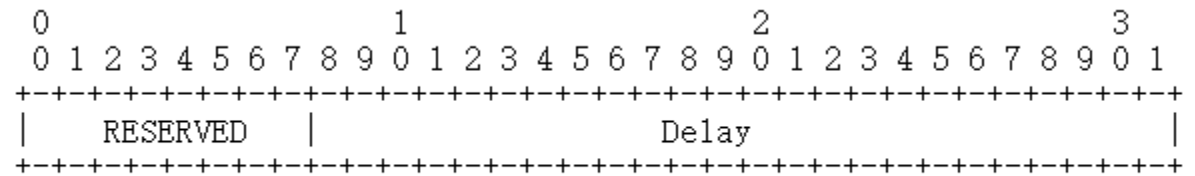


Figure 5. Delay Requirement Parameter

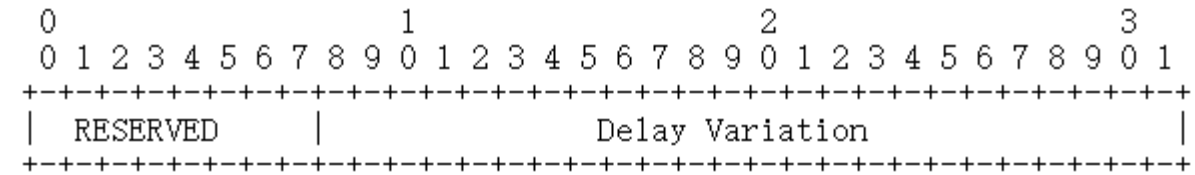


Figure 6. Delay Variation Parameter

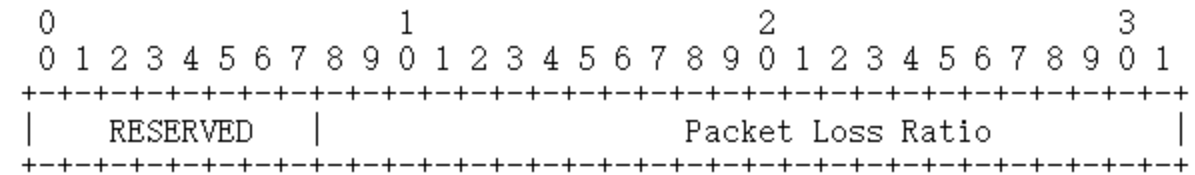


Figure 7. Packet Loss Ratio Sub-TLV

# APN6 Encapsulation

## Locations for APN Option

- Hop-by-Hop Options Header (HBH)
- Destination Options Header (DOH)
- APN TLV of SRH

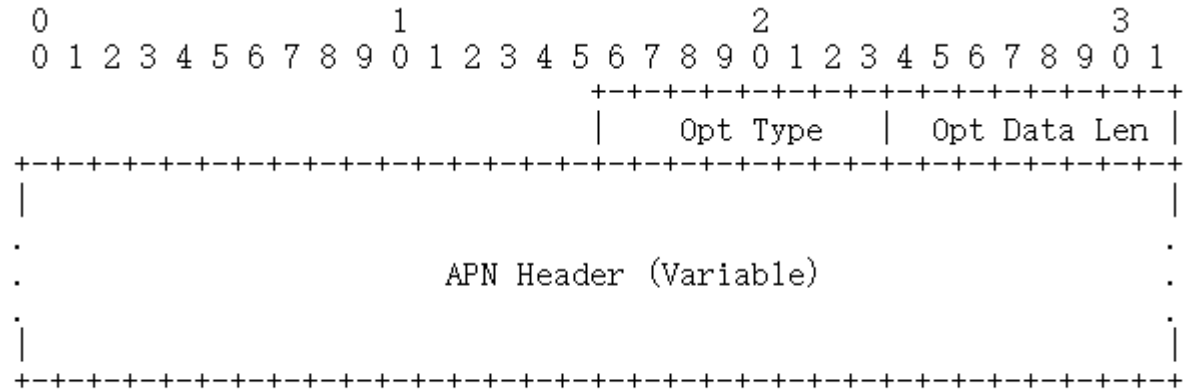


Figure 1. APN Option

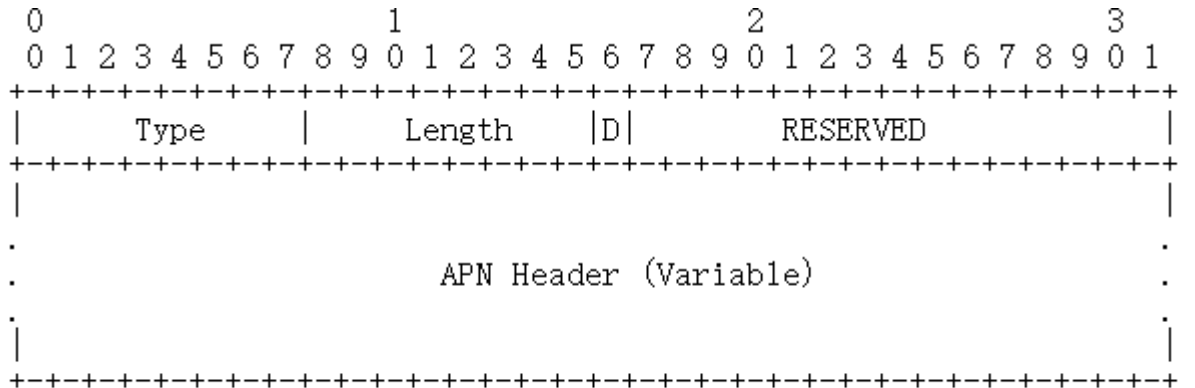


Figure 2. APN TLV

*Thank you!*