APN Header & IPv6 Encapsulation


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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
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](image-url)
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.
## APN6 Encapsulation

### Locations for APN Option
- Hop-by-Hop Options Header (HBH)
- Destination Options Header (DOH)
- APN TLV of SRH

![Figure 1. APN Option](image1)

![Figure 2. APN TLV](image2)
Thank you!