

APN Header & IPv6 Encapsulation

<https://datatracker.ietf.org/doc/html/draft-li-apn-header-01>

<https://datatracker.ietf.org/doc/html/draft-li-apn-ipv6-encap-01>

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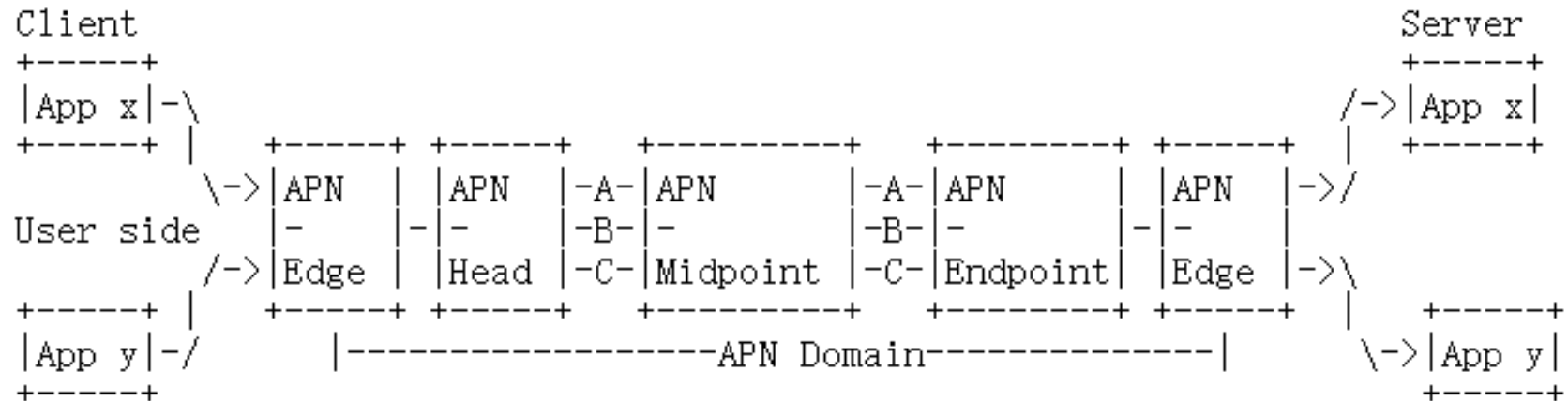
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APN Framework

- Application-aware Networking (APN) is a new framework, where
 - application-aware information (i.e. APN attribute) including APN identification (ID) and/or APN parameters (e.g. network performance requirements) is encapsulated at network edge devices and carried along with the tunnel encapsulation for the packet traversing an APN domain
 - to facilitate service provisioning, perform fine-granularity traffic steering and network resource adjustment



APN Header and IPv6 Encapsulation

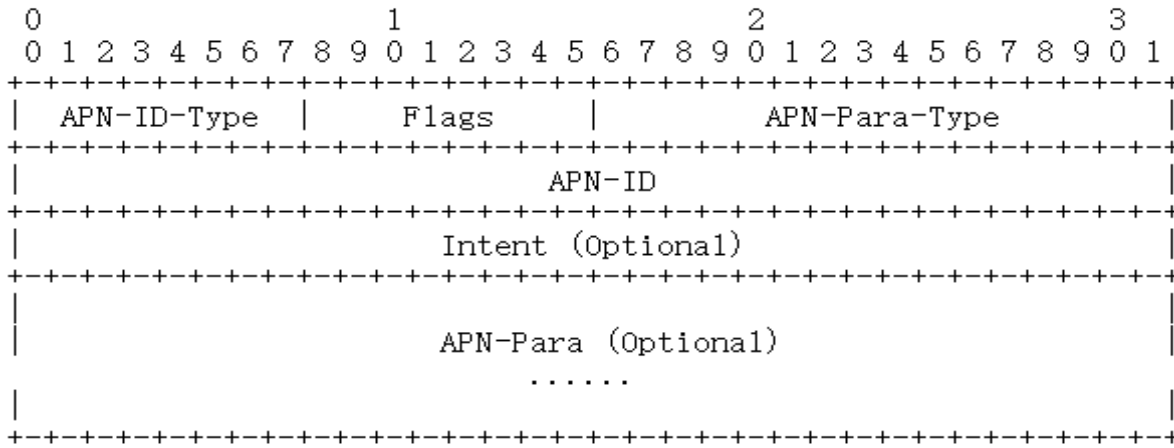


Figure 1. APN Header with Short APN ID

- 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

IPv6 Encapsulation: APN Option

- Hop-by-Hop Options Header (HBH)
- Destination Options Header (DOH)

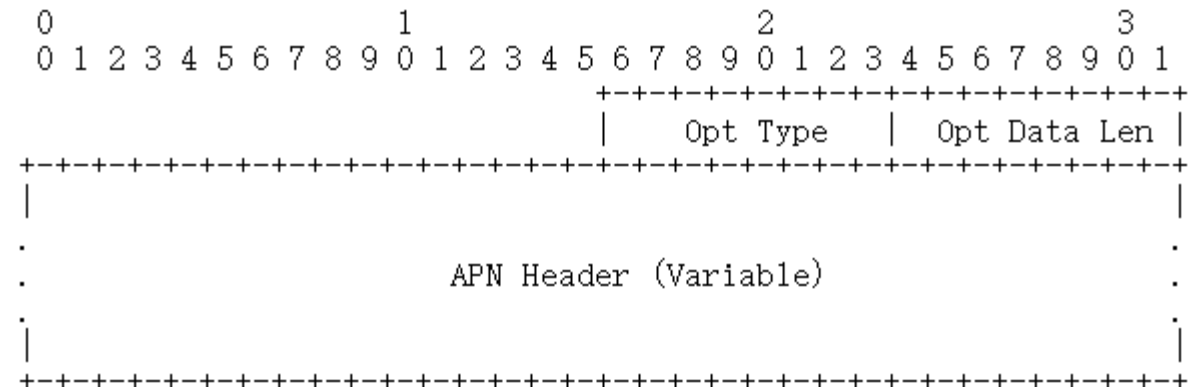


Figure 1. APN Option

Next Step

- Request early allocation of codepoints for the possible implementation and interop test
- Solicit comments and refine the draft

Thank you!