

DHCP Options for 3GPP Service

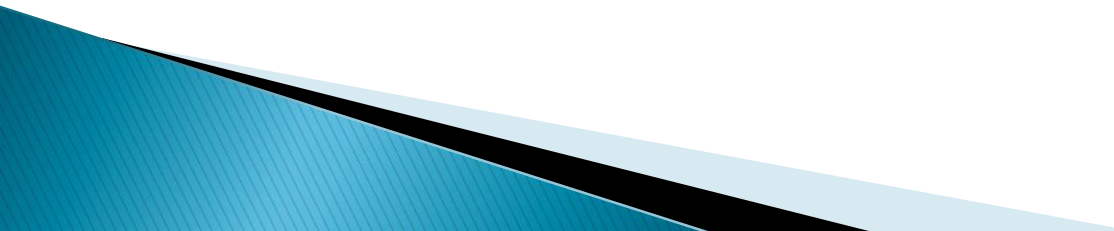
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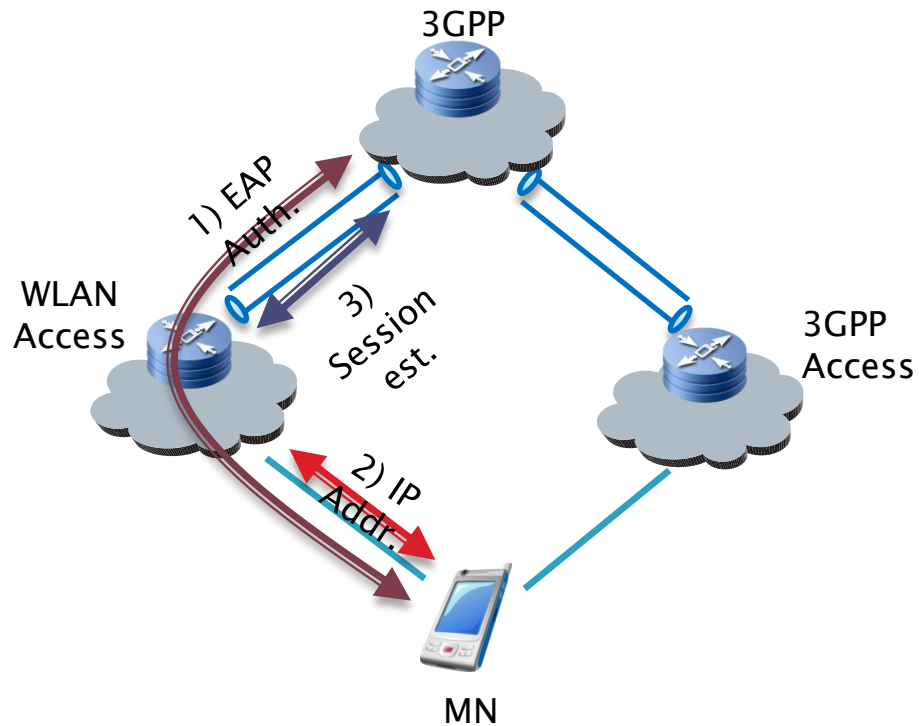


Background

- ▶ MN can access 3GPP EPC through trusted non-3GPP access networks, such as WLAN.
 - ▶ MN may send DHCP messages for requesting IP address.
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Use Cases

Use Case: IP address allocation.



Identified Problem

1. During MN access 3GPP EPC through non-3GPP, APN (Access Point Name) is needed, based on following consideration.
 - ▶ Firstly, PDN GW shall be selected based on APN and other information ;
 - ▶ Secondly, MN shall request IP addresses from the PDN GW based on MN requested APN, and other information.

Conclusion1: MN shall send requested APN to trusted non-3GPP Access in DHCP message.

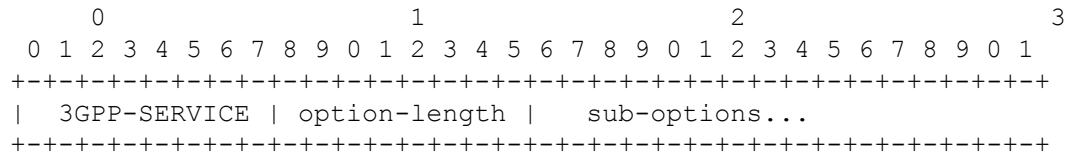
Identified Problem

2. IP address can be allocated by non-3GPP for service offloading or by 3GPP EPC for 3GPP service. And then, MN also wishes to associate its request for an IP address with IP services provided by the 3GPP or by non-3GPP.

Conclusion 2: MN shall send Non Seamless Offload to trusted non-3GPP access in DHCP message.

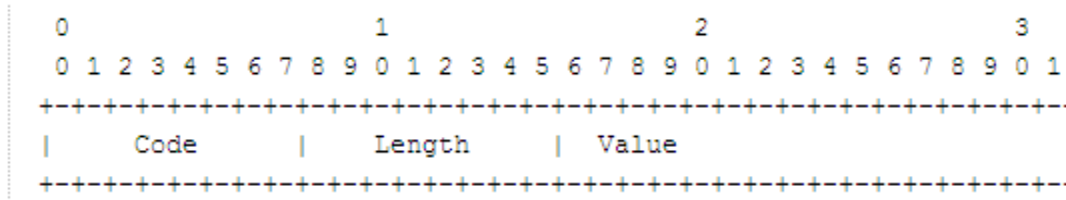
Initial idea for addressing issue

- ▶ 3GPP-Service option : A new option is defined in DHCP messages exchanged between MN and trusted non-3GPP access.



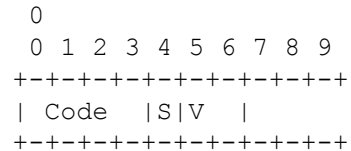
option-code	3GPP-Service (TBD)
option-length	The number of octets in the option, minimum 1.
Sub-options	The “3GPP-Service” Option may contain one or more Sub-options further defined in this document

3GPP-APN Sub-option: APN is defined in 3GPP-Service option .



- Code 3GPP-APN(TBD).
- Length The number of octets in the option, minimum 1.
- Value The APN value, as defined in 3GPP TS 24.008 [TS24008] section 10.5.6.1

Non Seamless WLAN Offload (3GPP-NSO) Sub-option : 3GPP-NSO is defined in 3GPP-Service option.



Code 3GPP-Service-Type (TBD).

S Bit 4 of octet 1 is spare and shall be coded as zero.

V The 3GPP-Service-Type value, the definition is as follows,

Bits 0 1

0 1 NSO

0 0 EPC

All other values are reserved.

Next steps

- ▶ If the working group agrees that this is a problem and that the DHC resolve this issue.