

DHCPv4 and DHCPv6 Access-Network- Identifier Options

(draft-bhandari-dhc-access-network-identifier-00)

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Motivation/Use Case

- In many deployments there is a need to provide services based on the access network attachment.
- For example:

Endpoint ----- AP -----Access Gateway

- The service treatment can also be different based on the configured SSID in case of IEEE 802.11 based access networks.
- Shared access networks i.e. radio access & access points owned and possibly operated by other entity than the owner of a access gateway .

Need DHCP options to relay this information from access towards the gateway and server.

Carrying Access Network Information(ANI) in DHCP

- Primary Access Network Information
 - Access-Network-Type – 802.11, ethernet etc
 - Network-Identifier – e.g SSID, Access Point name
 - Operator-Identifier – e.g FQDN of the access network operator

Access Network Information in DHCP

- The draft defines new option in DHCPv4:
 - To carry access network information
 - Sub options to carry - Access-Network-Type, Network-Identifier, Operator-Identifier
- New options in DHCPv6
 - To carry access network information
 - Options within access network information option for - Access-Network-Type, Network-Identifier, Operator-Identifier

Next Steps

- WG draft?
- Request detailed review of the options defined

DHCPv6 class based prefix

(draft-bhandari-dhc-class-based-prefix-01)

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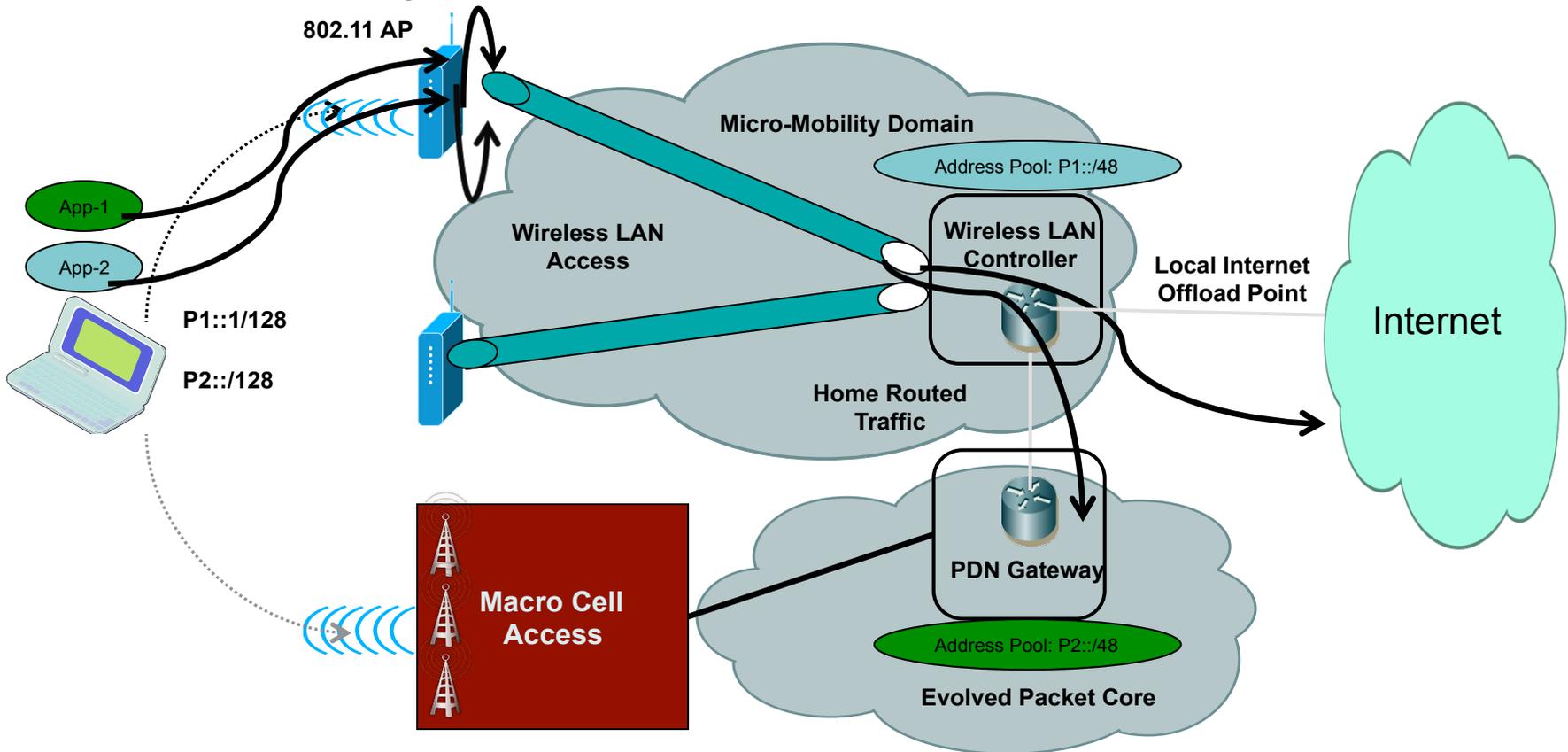
Sindhura Bandi (Cisco),

Hui Deng (China Mobile),

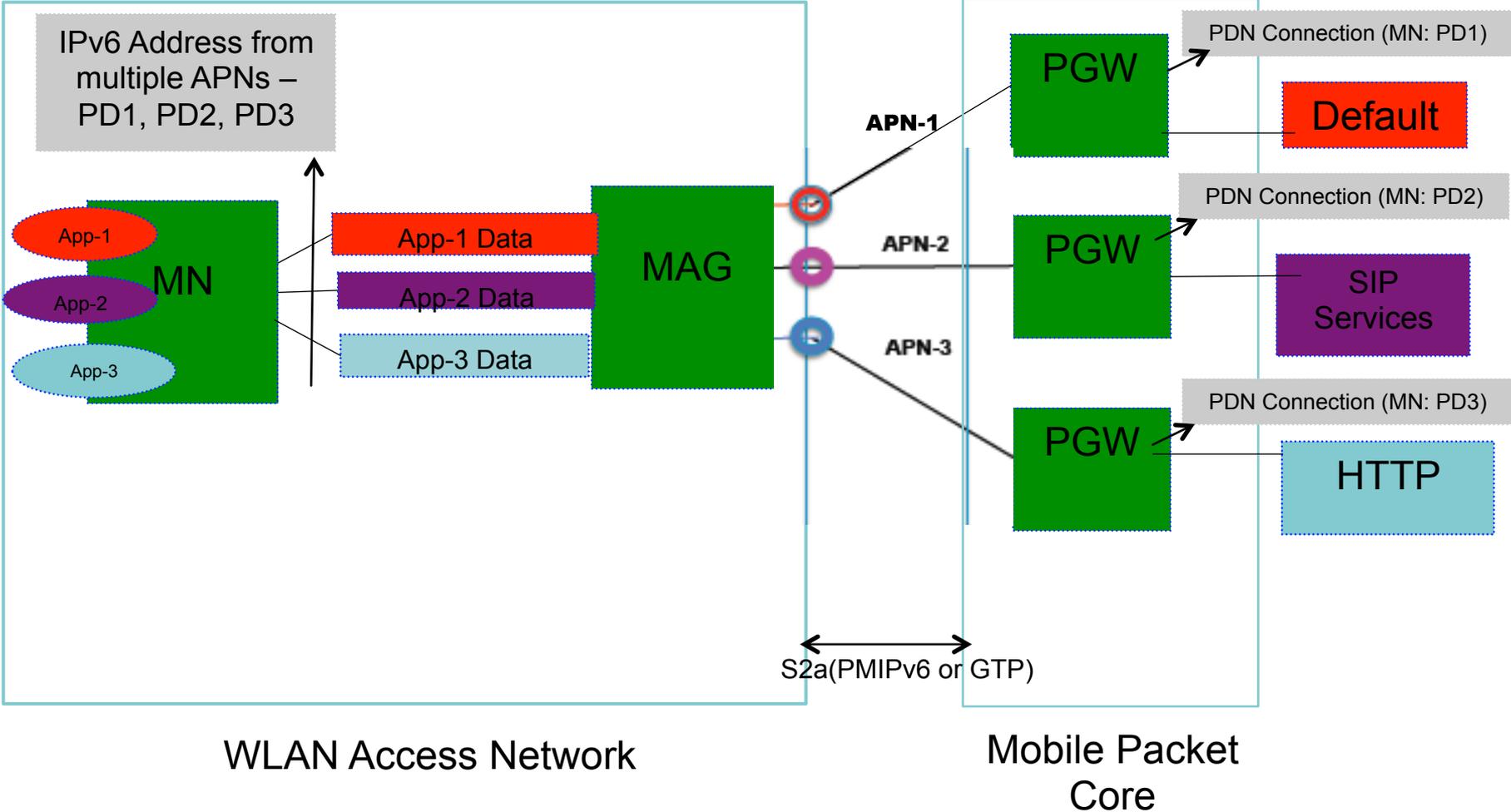
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Motivation: WLAN-EPC Integrated Architecture

- For supporting offload function for certain traffic in chained mobility scenario, the UE needs to use the right source address for the right application flows, based on the offload requirements. The obtained address configuration can be from EPC or from the local domains.



Motivation – Multiple APN Support



Requirement

- Prefix property to be expressed as an option in DHCPv6
- Prefix property requested by client and requesting router in IA_NA/IA_PD requests
- Prefix property offered in IA_NA/IA_PD response associated with prefixes.

Feedback from IETF83

- Have a stricter format to specify property
- Overlap with option specified in draft-liu-dhc-3gpp-option-01

Related Work

- IPv6 Prefix Coloring Approach:
 - http://www.psg.com/~charliep/txt/ietf81/alt_mext/Evolving-The-SAS-Rules-for-Mobility-Awareness-2.pdf
- Prefix Property extension to Prefix Information Option in IPv6 Neighbor Discovery messages
 - draft-korhonen-dmm-prefix-properties-02

Next Steps

- Authors appreciate feedback from the WG
- WG draft?

Client Hardware Address Option in DHCPv6

(draft-ietf-dhc-dhcpv6-client-link-layer-addr-opt)

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Problem Statement/Motivation

- **DHCPv4 to DHCPv6 transition**
 - Client hardware address is used as one of the keys to build DHCP client lease database and for accountability
 - Registration database built with MAC address of primary interface (e.g CPE WAN interface in ISP scenario)
- **Dual stack clients – Correlating DHCPv4 and DHCPv6 messages**
 - DUID in DHCPv4 messages needs modification of DHCPv4 stack (RFC 4361)
 - Chaddr in DHCPv4 correlation with an option in DHCPv6

Learning the link layer address of the actual interface being configured using DHCPv6 not in scope of this draft.

Open issues

WG agrees on first hop relay adding this option learnt from the link layer address of the frame received in Relay forward message.

- Should client add this option too?
 - NO
 - As a Top level option (As Each DHCPv6 exchange by a client is for ONE interface)
 - Within IA_PD or IA_NA option (above is moot)

Approach

1. Go with only Relay adding this option, for the current scope (correlation of v4 and v6)
2. Expand the scope to go beyond just DHCPv4 & DHCPv6 correlation, that will demand Client adding the option too.

Next Steps

- Vote on Approach (1) or (2)?