

Client Hardware Address Option in DHCPv6

(draft-halwasia-dhc-dhcpv6-hardware-addr-opt-01.txt)

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Problem Statement/Motivation

- **DHCPv4 to DHCPv6 transition**
 - SP use client hardware address as one of the keys to build DHCP client lease database
- **Dual stack clients – Correlating DHCPv4 and DHCPv6 messages**
 - DUID in DHCPv4 messages needs modification of DHCPv4 stack (RFC 4361)

Concerns

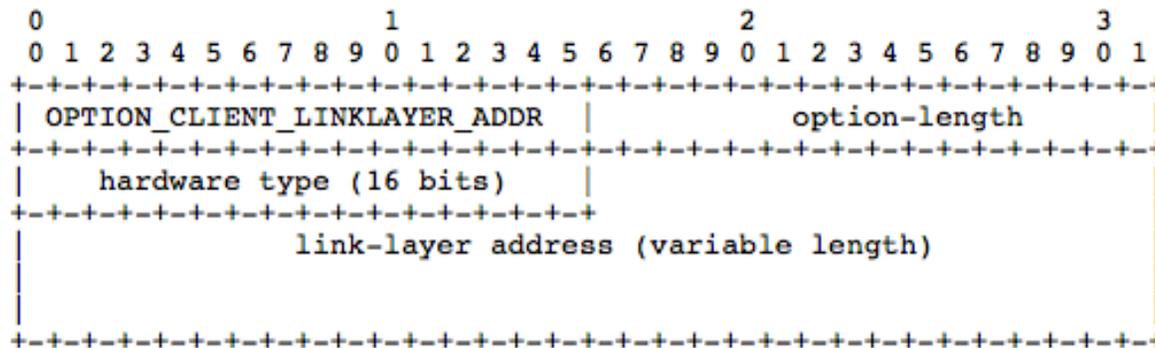
- Usefulness of having Link-layer/hardware address in DHCPv6
- Can DHCPv6 be used as is to gather this information?

Link layer address and client identifiers in DHCP

- DHCPv4
 - chaddr field – Layer 2 address of the network interface that the client is trying to configure
 - Client-identifier option (option 61) – Unique value used by DHCP clients as an identifier
- DHCPv6, no equivalent of chaddr, for client identifier:
 - DUID-LLT - the Link-Layer address of one of the device's network interfaces, concatenated with a timestamp
 - DUID-LL - the Link-Layer address of one of the device's network interfaces
 - DUID-EN - an Enterprise Number plus additional information specific to the enterprise
 - DUID-UUID – UUID (RFC 4122) based DUID

Link layer address option

- Proposed DHCPv6 option



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option-code:      OPTION_CLIENT_LINKLAYER_ADDR (TBD)
option-length:    2 + length of link-layer address
hardware type:    Client Link-layer address type. The hardware type MUST be a
                  valid hardware type assigned by the IANA, as described in [RFC0826]
link-layer address: Client Link-layer address.

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- Can be inserted by DHCPv6 Client
- Can be inserted by first hop DHCPv6 relay agent or the DHCPv6 client (Cisco IPR disclosed – regular terms apply)

Changes since -00

- Renamed option – hardware address to link-layer address
- Format of the option –
 - 8 bits ctype to 16 bits hardware address type (RFC0826)

Next Steps

- Authors appreciate feedback from the WG
- Add draft-halwasia-dhc-dhcpv6-hardware-addr-opt to DHC WG charter?