Client Hardware Address Option in DHCPv6
(draft-halwasia-dhc-dhcpv6-hardware-addr-opt-01.txt)

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Presenter:
Shwetha Bhandari (shwethab@cisco.com)

Authors:
Gaurav Halwasi (ghalwasi@cisco.com),
Wojciech Dec (wdec@cisco.com),
Shwetha Bhandari (shwethab@cisco.com)
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

```plaintext
+++- 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
<table>
<thead>
<tr>
<th>OPTION_CLIENT_LINKLAYER_ADDR</th>
<th>option-length</th>
</tr>
</thead>
<tbody>
<tr>
<td>hardware type (16 bits)</td>
<td></td>
</tr>
<tr>
<td>link-layer address (variable length)</td>
<td></td>
</tr>
</tbody>
</table>
```

- 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 chtype to 16 bits hardware address type (RFC0826)
Next Steps

- Authors appreciate feedback from the WG
- Add draft-halwasia-dhc-dhcppv6-hardware-addr-opt to DHC WG charter?