Layer 2 Relay Agent Information
draft-ietf-dhc-l2ra-00.txt
DHC WG

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Layer 2 Relay Agent

- Describes the basic Layer 2 Relay Agent functionality in different network scenarios.
- Few comments were received and draft has been updated based on these comments.
- More review in Working Group?
Extensions to Layer 2 Relay Agent
draft-kurapati-dhc-l2ra-extensions-00.txt
History

• Previous draft draft-joshi-dhc-layer2-relay-agent-01
  – This draft explained L2RA and also suggested extensions to support Leasequery, prevent flooding between l2ra and l3ra etc.

• Chicago IETG WG meet saw favourable response for L2RA and subsequent discussions in WG mailing list resulted in conclusion that we should split the drafts into 2 categories
  – An informational draft explaining basic Layer 2 Relay Agent functionality. This informational draft was accepted as Working Group item in Vancouver IETF WG.
  – All extensions to L2RA in separate drafts after the informational draft is published.
Extension to Layer 2 Relay Agent

- Extending RFC 4388 to Layer 2 Relay Agent
  - Some Layer 2 Relay Agents glean lease information from DHCP messages and use it for anti-spoofing, MAC forwarding.
  - This information is lost when Layer 2 Relay Agent reboots.

- Prevention of flooding of DHCP messages between L3RA and L2RA
  - Layer 2 Relay Agent would broadcast a DHCP request message to all ports except on which it was received.
  - Layer 3 Relay Agent would broadcast a DHCP reply message towards the Layer 2 Relay Agent.
Extension of RFC 4388 to Layer 2 Access Networks

- Generate Reply based on the query and send it to Layer 3 Relay Agent

- Forward Leasequery similar to DHCP message
- Forwards reply based on giaddr or state information

- Generates LEASEQUERY
Flooding between L3RA-L2RA
Prevention of flooding between L3RA-L2RA

- **STB**
- **RG**
- **L2RA**
- **Switch**
- **L3 Relay Agent**
- **Service Provider’s IP Network**
- **DHCP Server**

**Unicast-address sub-option**

<table>
<thead>
<tr>
<th>Sub-opt</th>
<th>Len</th>
<th>htype(1)</th>
<th>hwaddr</th>
</tr>
</thead>
<tbody>
<tr>
<td>82</td>
<td>Len</td>
<td>I1</td>
<td>I2</td>
</tr>
</tbody>
</table>

- **B flag set**
- **Local Loop**

- **Unicast to Layer 2**
- **Unicast to Layer 2**
Next step

- More review in Working Group
- Accept as a working group item?