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# DHCPv6 Relay-agent RADIUS Attributes Option (RRAO) draft-ietf-dhc-v6-relay-radius-00.txt

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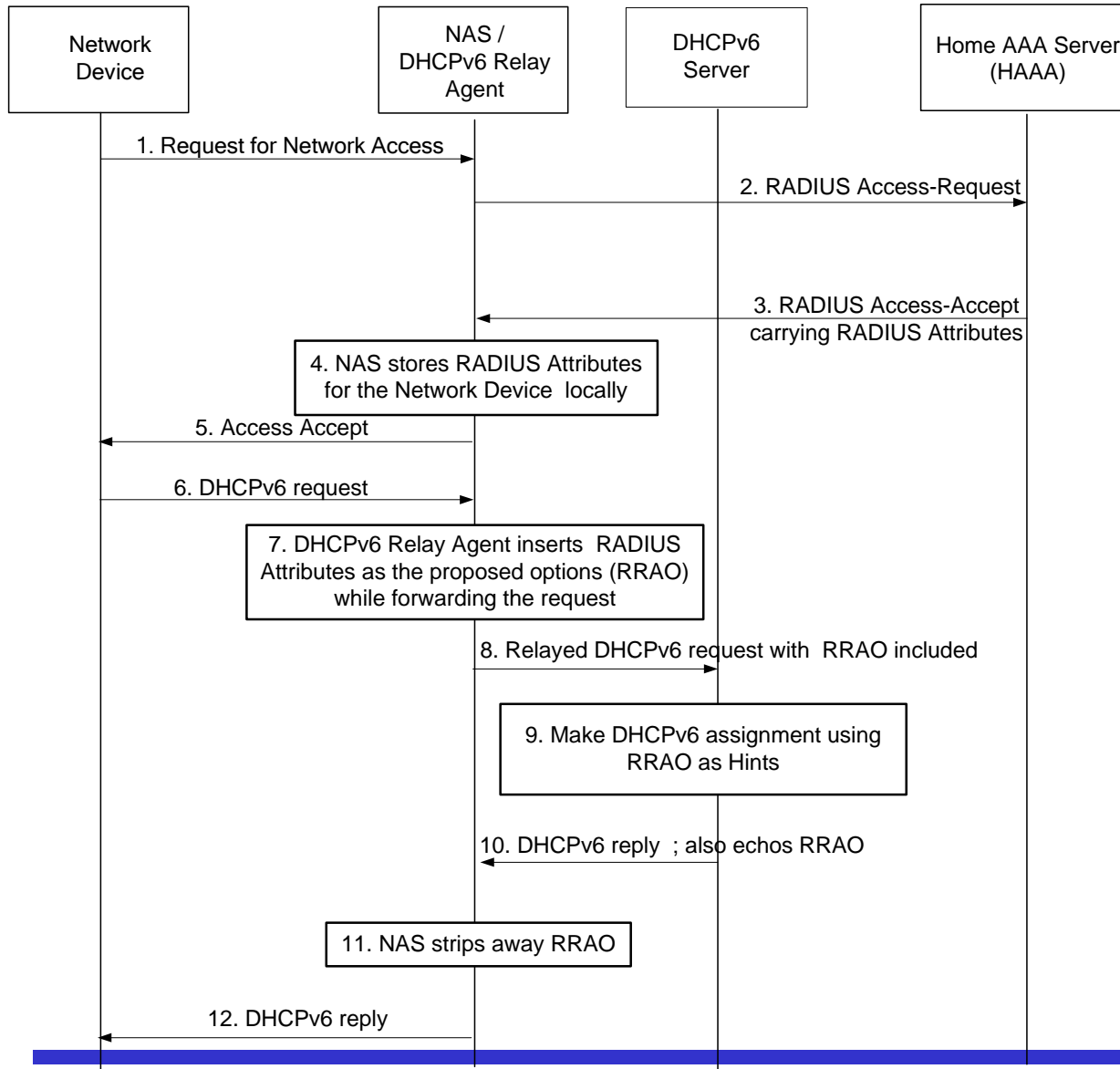
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# Objective

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- To provide an option for a DHCPv6 Relay Agent to insert RADIUS Attributes received from AAA server when forwarding client-originated message to a DHCPv6 server so that:
  - DHCPv6 server recognizing the Relayed RADIUS Attributes option **MAY** use the information as a **HINT** to implement IP address or other parameter **assignment policies**.

# Operations of DHCPv6 Relay agent RADIUS Attributes Option (RRAO)



- The relayed information is inserted (echoed) as the proposed RRAO in the Relay-Forward (Relay-Reply) Message, in the same manner as the insertion of the existing DHCPv6 Interface ID Option in RFC3315
- DHCPv6 client is unaware of the Option => Does not interfere with the current authentication model between the DHCPv6 client and server

# Related Work

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- Similar Relay Agent Information Option, RADIUS Attributes Sub-option and other sub-options already exist for DHCPv4 in Cable Modem/ DSL, as well as 802.1X applications:
    - RFC 3046 and
    - RFC 4014
      - » It also identifies the list of “safe” RADIUS Attributes to be relayed (to avoid interactions of RADIUS/DHCP state machines):
        - User-Name (RFC 2865)
        - Service-Type (RFC 2865)
        - Vendor-Specific (RFC 2865)
        - Session-Timeout (RFC 2865)
        - Framed-Pool (RFC 2869)
        - Framed-IPv6-Pool (RFC 3162)
- But NOT clear about the exact criteria of determining what RADIUS Attribute is “safe” to be relayed**
- draft-ietf-dhc-vendor-suboption-00.txt

# Major Change since previous version

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- Instead of a 2-level hierarchy of DHCP Relay Information Relay Option/ RADIUS Attributes sub-option in the DHCPv4 counterpart, a single-level option is used to relay RADIUS Attributes received from AAA server.

# Open Issues

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- Is there a need for DHCPv6 Relay agent to be able to relay general information other than RADIUS Attributes ?
  - e.g. Circuit ID's or Remote ID's as specified in RFC 3046 or Diameter attributes ?
- Currently, we are just following the list of “safe” RADIUS Attributes specified by RFC4014.
  - A clearer criteria would help in the case of new RADIUS Attributes to be defined in the future.
- Concern of cross-domain RADIUS operations where Home AAA server and DHCP relay-agent/server belong to different administrative domains
  - Current applicability statement states that the proposed mechanism would not provide robust operations across *arbitrary* RADIUS domains.
  - The proposed approach can be used to support roaming applications across Service Providers who
    - (1) Have Pre-established Roaming agreements and
    - (2) Are willing to accept the Risks, Limitations and Required Co-ordinations/Precautions of supporting cross-domain RADIUS service, e.g. as discussed in RFC 2607.

e.g. Existing practice in 3GPP2 environment

# Next Steps

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- Seek further feedbacks from the WG.
- Should we seek early review/advice from AAA doctors ?
  - In particular, to obtain a concrete criteria in determining whether a given RADIUS Attributes should and should not be relayed ?
  - A clearer criteria would help in the case of new RADIUS Attributes to be defined in the future.