

DHCPv6 suboptions IETF81

draft-mrugalski-dhc-dhcpv6-suboptions-00

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What is the problem?

- RFC3315 defines how to request options:
 - send ORO
- RFC3315 does not define:
 - how to request options within other options
- What if client wants to receive options not in top-level scope (in message directly), but within other options (suboptions)?
- Goal: One page clarification draft

Terminology

<advertise>

<client-id>

<server-id>

<ia_na>

<iaaddr>

<ia_na>

<iaaddr>

<ia_pd>

<iaprefix>

<pd_exclude>

ia-na1 scope

ia-na2 scope

ia-pd scope

iaprefix scope

Top-level scope

- Scope = any place where options can appear
- Top-level Option = Option in top-level scope
- Suboption = Option in non top-level scopes

Examples

- PD_EXCLUDE: expected in
IA_PD => IAPREFIX => PD_EXCLUDE
- 4rd architecture: requesting an extension
- Route option: possible extensions on 3 levels:
 - IA_RT
 - IA_RT => NEXT_HOP
 - IA_RT => NEXT_HOP => RTPREFIX
- More examples will appear as DHCPv6 options become more complex

Possible solutions

- 1) Include ORO in message, request options on any scope
 - + client simple to implement
 - requires per option logic on the server side
(poor server scalability with more options defined)
 - all requests are global
- 2) Include ORO instance in each requested scope

e.g. client includes ORO in IA_PD to indicate that PD_EXCLUDE is requested

 - + unified server logic in all scopes (easy to parse option within option within option)
 - + possible to specify requests per instance (e.g. request one IA_PD with PD_EXCLUDE and one without)
 - + good server scalability with more options defined
 - requires some implementation on server

Next Steps

- Reach a consensus
- Update draft to reflect common position (if needed)
- Ask for adoption



Thank you