DHCP-DNA Interaction

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DNA-DHCP Interaction

- dna WG has identified issue with DHCPv6 specification (RFC 3315) and DNA: **ctieware.eng.monash.edu.au/twiki/bin/view/DNA/DNASoln1Issue017**
- Summary - RFC 3315 defines a “DNA” procedure: “In any situation when a client may have moved to a new link, the client MUST initiate a Confirm/Reply message exchange.”
- Can the DNA mechanism eliminate the Confirm/Reply message exchanges?

DNAv6 Mechanism

- An RS/RA exchange is used for DNA
- Routers on a link listen to each others' advertisements, and keep a record of any that they aren't advertising themselves
- Hosts include a prefix they believe to be on their current link in a new option (Landmark Option) in the RS; "Is this prefix being advertised on this link?"
- Routers would normally unicast a response including the Landmark Option with a yes or no flag to answer the question.
- If it is not possible to send a unicast response, either because of insufficient information in the RS, or because of the rate limiting put in place in the proposal, then the question is ignored, and a multicast response is scheduled that instead includes all configured PIOs plus another new option that includes all of the learned prefixes.

Effect on DHCPv6

- DNAv6 eliminates need for Confirm/Reply exchange:
  - DNAv6 returns “same link”: no DHCPv6 message exchange
  - DNAv6 returns “different link”: client immediately starts Solicit/Advertise/Request/Confirm message exchange
- Next step: discussion on dhc/dna WG mailing lists