

# Carrying Neighbor Discovery Information over DHCP

draft-krishnan-dhc-ndc-option-00

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# Background

- IPv6 Neighbor discovery options, in addition to being used for Neighbor Discovery, are used to convey some forms of network configuration information to hosts.
- Centrally managed networks may not wish to configure their routers to advertise these pieces of information and might use a DHCP server instead to distribute these parameters.
- Traditionally, these parameters have been independently developed and standardized for DHCP and for IPv6 ND.

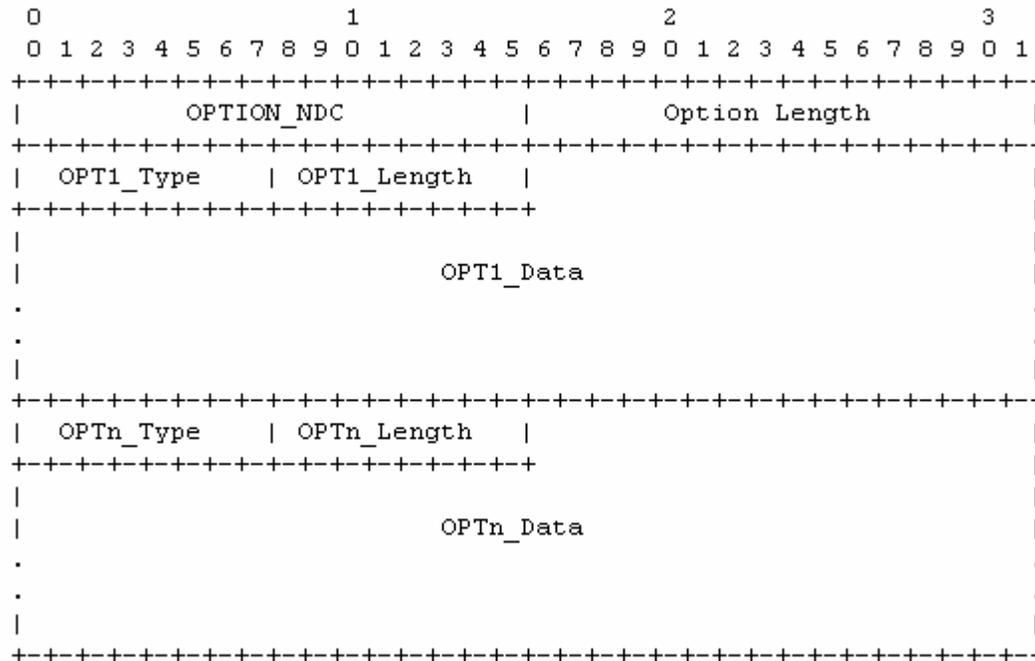
# Why?

- Eliminate duplicate standardization efforts
  - Since the same parameters need to be distributed using DHCP and IPv6 ND, duplicate standardization efforts in IETF result e.g. Prefix Information
- Reduce implementation complexity on hosts
  - Since the DHCP and ND options for the same parameter can be of varying formats, two sets of code need to be written to process them on the hosts.

# How?

- A DHCP option called NDC that can be used to directly carry any neighbor discovery option.
- Can carry multiple ND options in a single NDC option
- Client processes the ND options as if it had received them through a Router Advertisement
- Highly likely that the code for processing these options is shared between the RA based delivery and DHCP based delivery of these options.

# Format of the option



# Applicability

- Theoretically, it is possible to carry any neighbor discovery option using the NDC option.
- This does not always make sense since there are neighbor discovery options that are not related to configuration.
- The NDC option **SHOULD NOT** be used to carry neighbor discovery options that are not related to configuration.

# Conclusion

- More ND options being defined that may require DHCP based delivery as well
  - draft-woodyatt-ald-01
  - draft-soliman-firewall-control-00s
- Questions?
- Adoption as wg item?