

Prefix Length Hint Issues

draft-cui-dhc-dhcpv6-prefix-length-hint-issue-00

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Prefix length hint

- RFC3633 allows a client to set a hint value in the prefix-length field of the IA_PD option
- unclear about how the client and server should act in different situations involving the prefix length hint
- This document provides guidance on **client & server behavior**
 - Summary of existing issues
 - Some possible solutions

Client gets undesired prefix

- Servers are free to ignore hint
- Some clients **can't function normally** when they're provided with a prefix which length is different from what they requested
- E.g. if the client is asking for a /56 and the server returns a /64
- the functionality of the client might be limited because it might not be able to split the prefix for all its interfaces

Client gets undesired prefix

- Ignore Advertise message and keep sending Solicit for desired prefix?
- Accept the delegated prefix, and ask for the desired prefix during Renew/Rebind process?
 - Include both existing prefix hint prefix in Renew/Rebind
 - Extend lifetime of old prefix while asking for the new prefix

Client initiated re-numbering

- Client configuration changes and requires a different prefix length
- Send Solicit with different IA_ID to ask for new prefix?
- If gets new prefix, use two prefixes, wait for old one to expire?
- Extend lifetime of the old prefix and give it a shorter lifetime?

Next Step

- Comments and reviews are appreciated
 - Problem summary might not cover all the issues
 - Proposed some possible solutions, but not perfect