

Neighbor Discovery Registration Extension

<draft-nordmark-6lowpan-reg-00.txt>

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Motivation (1)

- For 6lowpan there is a desire to avoid multicasts around
 - Duplicate address detection
 - Router needing to multicast NS for hosts
 - Router needing to multicast NS for non-existing hosts
- If the router/routers would know all the hosts on the link we could avoid those issues

Motivation (2)

- Over the years there has been various proposals to try to snoop information from Neighbor Discovery messages
 - For instance, to create reverse DNS information for autoconfigured hosts

Approach

- Add option to Router Advertisement
 - Router asks hosts to register every N seconds at a set of IP addresses
- Add a Registration Message
 - Unacknowledged
 - Sent every N seconds
- “set of IP addresses” allows for redundancy – two routers would receive the reg messages
- Soft-state; no acknowledgement, no deregistration

Security

- Can Secure Neighbor Discovery be applied?
- I think this is easy as long as each registration message is only for one IP address
 - That is what is in the draft
 - Otherwise we could make things more efficient when a host has multiple IP addresses

Open Issues

- If the registry is not on the router it doesn't know the registration period
 - Included in the RA but not in the reg messages
 - Add to the reg message?
- Add a 'lifetime' to the registration message to allow for deregistration?
- I don't know if the draft makes more sense in 6lowpan or in 6man WG