Improving the Robustness of Stateless Address Autoconfiguration (SLAAC) to Flash Renumbering Events
(draft-ietf-6man-slaac-renum)

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Introduction

- This document specifies mitigations for the problem discussed in RFC 8978
- It has incorporated items from individual I-D, one at a time, based on wg consensus
- Only one item left:
  - Infer stale information from incoming RAs
Mitigation

- Consists of two parts:
  - **Trigger**: Should cause the host to check whether information is fresh
  - **Check**: The actual check

- Obvious trigger:
  - Receipt of RA missing previous information (PIO)

- Possible checks:
  - Implicit: Reduce PL and VL – they will be refreshed as appropriate
  - Implicit: Halve PL and VL – they will be refreshed as appropriate
  - **Explicit**: Poll the router (send unicast RS), and check returned info
Proposed mitigation: Router Refresh

• Upon receipt of RA:
  • If RouterRefresh == False
    – If PIO missing → RouterRefresh = True; Mark missing PIOs; Set timer
  • If RouterRefresh == True
    – Clear received PIOs

• When timer expires:
  • If all PIOs received
    – RouterFresh = False
  • If xmit > MAX_XMIT
    – disassociate missing PIOs with router: RouterFresh = False
  • else
    – Send unicast RS to counter
Proposed mitigation: Router Refresh (II)

- Can be simplified if all options of the same type are required to be in the same RA
  - RFC 4861 allows options to be split arbitrarily into multiple packets
- This was proposed in individual I-D, but not incorporated (yet).
Comments?