

Improving the Robustness of Stateless Address Autoconfiguration (SLAAC) to Flash Renumbering Events

(draft-ietf-6man-slaac-renum)

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6man wg. IETF 110
March 8th-12nd, 2021

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?
