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

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

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Introduction

- RFC 8978: Problem statement for SLAAC flash renumbering
- RFC 9096: CE Router recommendations (Updates RFC7084)
- draft-ietf-6man-slaac-renum: **Protocol improvements**
Progress on draft-ietf-6man-slaac-renum

- Remaining feature to incorporate:
  - Heuristics to deprecate stale information
  - Presented/discussed at IETF 114
Concept

- Probe the local router when missing data is detected in received RA
Algorithm

EVENT: Router Advertisement is received

TIME= time()

For each piece of SLAAC configuration information advertised by this router in the received RA:

INFO_LAST= TIME

IF LTA_MODE==FALSE && TIME > (LTA_LAST+LTA_CYCLE)

IF this RA is missing any previously-advertised information:

LTA_MODE=TRUE

LTA_LAST=TIME
Algorithm

IF LTA_MODE==TRUE:
    TIME=time()

    IF TIME > (LTA_LAST + LTA_CYCLE)
        Disassociate any options for which INFO_LAST < LTA_LAST
        LTA_MODE= FALSE; RS_COUNT= 0

    ELSE IF TIME > (LTA_LAST + RA_WIN + RS_RNDTIME) && TIME >
        (RS_LAST + RS_TIMEOUT) && RS_COUNT < RS_COUNT_MAX:
            IF for all options INFO_LAST >= LTA_LAST
                LTA_MODE= FALSE; RS_COUNT= 0
            ELSE
                SendRS()
                RS_LAST=TIME; RS_COUNT++
Moving forward

- WGLC?