RFC2462 updates

<draft-ietf-ipv6-rfc2462bis-00.txt>

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Summary of status

- Issue tracker
 - URL: https://rt.psg.com/
 - User/Passwd: ietf/ietf
 - Queue: ipv6-2462bis
 - 21 issues so far
 - 18 identified in the previous revision
 - 3 new issues
- Current status
 - 14 resolved
 - 2 need confirmation
 - 5 under discussion

Resolved issues (1-7/14)

- 264 dead code in the DoS prevention algorithm
- 265 unclear text about a corner case in the inbound NA processing
- · 266 unclear text about StoredLifetime
- 267 remove references to site-local
- 268 source address selection issues with regards to deprecated addresses
- 269 semantics of "new communication" wrt a deprecated address
- 270 L=0 and A=1 case

Resolved issues (8-14/14)

- 271 update security consideration and alignment with SEND
- 273 conflict between 802.11 spec and DAD assumption
- 276 possible (new) DoS
- 279 'not-yet-ready' status of an autoconfigured address to help renumbering
- 280 interface failure upon DAD failure
- 321 (new) preferred lifetime update
- 324 (new) obsolete text in IF ID definition

Changes that (may) affect implementations

- 265 corner case for inbound NA proc
 - validation check becomes a bit stricter
- 269 semantics of "new communication"
 - response to TCP SYN is okay
 - application's choice must be honored
- 280 disabling interface upon DAD failure
 - now only happens upon duplication of HW based address
- 321 preferred lifetime update
 - always update preferred LT even if valid LT is rejected

Resolutions need to be checked

- 271 stable storage for autoconfigured addresses
 - new section (5.7) with some considerations
 - perhaps too much, should be a future extension?
- 274 conflict between MLD spec and RFC2462
 - RFC2462: delay before sending DAD NS
 - 2462bis: delay before joining the group
- · a bug fix, agreed in the ML
- affect existing implementation, pls check

Ongoing issues (summary)

- 278 router autoconfiguration
- 275 DAD issues (requirement level, etc)
- 277 semantics of M/O flags
- 281 64-bit interface ID assumption
- 337 (new) DAD can collide for addrs configured by multicast RA

DAD issues (requirement level, etc)

- Base line
 - we should honor DAD, not DIID
 - separate the issue from "optimistic DAD"
- Proposed change
 - RFC2462: SHOULD do DAD, but MAY omit it
 - if LL is unique and IFID is shared
 - 2462bis: MUST (or SHOULD) do DAD, period.
 - by respecting the above decision
 - for simplicity, avoiding confusion

M/O flags

- Questions from Ralph Droms in March 2003
 - use RFC 2119 keywords, which keywords?
 - what is "the stateful configuration protocol"?
 - relationship between "stateless" DHCPv6 and the O flag
- Two points to make decisions
 - DHCPv6 was officially published
 - the sense of node-requirements draft
 - implementing DHCPv6 is optional
 - allow admin to turn it on with explaining the effects

M/O flags: Proposed resolution

- What is "stateful"?
 - it is DHCPv6
- RFC2119 keywords
 - loosen the requirement level for no router case
 - from MUST (2462) to MAY (bis)
 - use SHOULD for the other cases
 - (e.g.), SHOULD perform DHCPv6 with the M flag
- "stateless" DHCPv6 and O flag
 - separate the O flag from stateless DHCPv6

64-bit interface ID

- Inconsistency on IFID length among specs
 - RFC2462: IFIDs are link-type specific
 - IPv6 over Ethernet: ditto
 - · add-arch: address format defines the length
 - link-local(fe80::/10) => 64 bits
 - global starting with !000 => 64 bits
- · Basic assumption
 - do not change other specs on this matter
 - no real problem due to the inconsistency
- Proposed resolution
 - do not change the current def, but add a note on the issue

Other ongoing issues

- 278 router autoconfiguration
 - allow half-router and half-host configuration?
 - also need to resolve multihome ND?
 - just make a note as a future extension?
- 337 DAD can collide for addrs configured by multicast RA
 - impose a delay before DAD in this case?
 - should be a future extension?

Future plans

- Separate serious issues from future extensions
 - make a solid consensus on the former
 - make appendices for the latter
 - like Appendix B of RFC2461 (future ext.)
 clarify the points, and just note them
- Revise the draft around the end of March
- WG last call

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