

# RFC 6434 update: IPv6 Node Requirements

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# Rationale

- RFC 6434 was published in 2011
- It obsoleted RFC 4294, published in 2006
- IPv6 deployment experience has grown significantly in the last 5 years
- Many new RFCs published in 6man since 2011
  - And in related groups – v6ops, dhc, opsec, etc.
- So it seems timely to refresh the IPv6 Node Requirements document

# Current status

- Have spoken to RFC 6434 authors and determined new author list
- First draft of RFC 6434 –bis published
  - <https://tools.ietf.org/html/draft-clw-rfc6434-bis-00>
- No original text has been edited, yet
  - Except authors and acknowledgements
- There will be additions, changes and deletions to make

# Methodology

- We have reviewed RFCs published since 2011
  - Focusing on 6man, v6ops and opsec
  - There may be other WG publications to consider – help welcome!
- We have tried to identify sections of text that may no longer be relevant, and new topics that we might include
- From this, we have indicated potential “high level” changes through comment paragraphs delimited by **\*\*BIS ... \*\***
  - Currently 44 instances in the document
- We would like to get consensus on changes before making specific edits in future drafts

# Examples of changes

- Updates for RFC 2460-bis/1981-bis/4291-bis
- Atomic fragments; RFC 6946
- Various IPv6 EH related RFCs
- Various optimisations to NUD, RA, RS, DAD
- Address selection, new RFC 6724, and behaviour
- New: 6LowPAN – RFC 4919
- Remove A6 completely
- RFC 7278 on /64 use in 3GPP
- Updates to crypto algorithms, e.g. RFC 7321

# 6man mail list feedback

- Add more detail on transition methods?
  - Thoughts: No; not needed – separate draft?
- Mention draft-ietf-6man-multi-homed-host, which updates RFC 4861 behaviour
  - Thoughts: Yes, add
- Add two Appendices:
  - 1) List of obsoleted documents
  - 2) List of “other reading” – useful non-normative documents
  - Thoughts: Yes to both; suggestions for (2) very welcome

# Some proposed higher level changes

- Add note on use of 1280 MTU, and PLMTUD
- Add note on 'Why /64?' (RFC7421)
- Clarify RFC 4862 / RFC 7217 / RFC 4941
- Add note on support for DNS-SD
- Add Happy Eyeballs (or is that an application issue?)
- Add new section on constrained devices
- Add section on L2 smarts (RA Guard, etc)
- De-emphasise Jumbograms (RFC 2675)
- De-emphasise SEND – support in OSes seems limited
- De-emphasise mobility. Host MIPv6 not in use?

# New router requirements draft

- Interesting draft published prior to Seoul IETF
  - <https://tools.ietf.org/html/draft-ali-ipv6rtr-reqs-00>
- We have spoken to the authors and will be trying to keep our changes in sync with this
- Contains much practical guidance around deploying and managing router devices
- No detailed comparison/review yet



# Next steps?

- Anything else to consider?
- Planning -01
  - May just update the proposed changes
  - Then start making real changes to text in -02
  - But open to suggestions
- Any comments / questions?