RFC6434-bis
IPv6 Node Requirements update

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IETF 100, Singapore, 15 November 2017
Context

• Two previous IPv6 Node Requirements RFCs:
  – RFC4294, April 2006
  – RFC6434, December 2011

• New –bis document history:
  – First -00 version published October 2016
  – Draft adopted by WG after IETF98
  – Changes from 6man Chicago session made for -00 WG version
  – Discussion in Prague led to a number of further changes
  – Current version is draft-6man-ietf-rfc6434-bis-02

• Some open questions remain (more on these shortly….)
Changes since IETF99

• Includes:
  – Text on EH processing (more on this in a moment…)
  – Updated RFC references (8200, 8201, 8221, 8247)
  – Added note on RFC 7772 for power consumption
  – Added ‘Why /64?’ reference; RFC 7421
  – Removed jumbogram text
  – Added reference to draft-ietf-v6ops-unique-ipv6-prefix-per-host
  – For 3GPP, added ‘snapshot’ comment on RFC7066
  – Noted that RFC4191 is a MUST, but a SHOULD for Type C nodes
  – Added RFC8028 as a SHOULD (for Section 5.5 from RFC 6724)
  – Removed ATM over IPv6
  – Added reference to RFC8064
  – Added MUST for BCP 198, and ref to draft-ietf-v6ops-ipv6rtr-reqs
  – Added text on avoiding 1280 MTU for UDP (inc. DNS) traffic
Addressing the open issues and mail list comments
Section 20: List of changes

• A comment from the chairs that our list of changes is in note form and not 100% comprehensive, and reasons for the changes are not given

• Note: the list of changes in RFC6434 from its predecessor RFC4294 was not complete either

• Proposal: review list of changes, add brief rationale for changes where appropriate.
RFC4191

• We have changed RFC4191 support to be a MUST, with a SHOULD for Type C.

• Comments?

• Proposal: leave text as is
Text on IPv6 EH processing by receivers

• Topic raised on 6man list by Tom Herbert
  – https://mailarchive.ietf.org/arch/msg/ipv6/yq8MtabkHk0ZEiH_smMeAynHF4I

• Text has now been added
  – Supplied by Tom
  – It is quite long; five paragraphs

• Is this appropriate?
  – Or should we shorten the text for 6434-bis, and spin up a new draft on the issue?
DHCPv6-PD

• Not explicitly mentioned

• Suggestion in Prague to not preclude option to do PD in the future to clients, as alternative to RA-based method

• Proposal: leave out at this time; nothing in 6434-bis precludes future PD use
Unknown ULP issue

- Comment raised on the list
- RFC8200 says there is only:
  - Known EHs
  - Known ULPs
  - Unknown EHs
- RFC8200 did not acknowledge a fourth case (Unknown ULPs) and that they cannot be distinguished from unknown EHs

- Proposal: add note in RFC6434-bis as a clarification
Proposed Text for ULP

• Note that it is impossible for a node to distinguish between an unrecognized extension header and an unrecognized upper layer protocol. Therefore, a node will behave in the same way for either of these cases, in particular by returning an ICMP Parameter Problem message with code 1 ("unrecognized Next Header type encountered") even for an unrecognized upper layer protocol.
Cite RFC1122

• Proposed by Fred Templin on the list that we should add a reference to this RFC on “Requirements for Internet Hosts -- Communication Layers”

• No other support for this (yet!)

• Proposal: No need to add the reference
Update DHCP vs RA options text

• Currently discussed in Section 8.4

• What should we say?

• Keep it minimal?

• Comments?
IPv6 only host (NAT64)

• Based on the IPv6 Hackathon
• Application or Host Operating System
  – Must be able to do NAT64 prefix discovery (RFC6052)
  – Synthesise IPv6 address from an IPv4 literal (RFC7050)
• Should do local DNS64 to support DNSSEC (RFC6147)
  (if you do validation)
Document status?

• We have deferred a decision on Informational vs BCP for the document; if we do move to WGLC we should propose one or the other before WGLC starts

• Proposal: make the document BCP
Anything else?

• Do we have consensus on the document, given what we’ve agreed on the open issues today?

• Are we ready for WGLC?

• Comments?