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
  – Current version is draft-6man-ietf-rfc6434-bis-01

• Seeking to sync with draft-ietf-v6ops-ipv6rtr-reqs-00
  – But noting focus of 6434-bis is hosts rather than routers
Changes/decisions after/at IETF98

• Includes:
  – MLDv2 (and SSM) is MUST, say nothing about MLDv1
  – RFC 8106 MUST for clients (to ensure at least one method supported for DNS configuration)
  – Mobility text added back
  – Added text on RFC7844 for DHCP anonymity profiles (with no mention of configurability)
  – Kept RFC 1981 as a SHOULD; retained informal PLPMTUD (RFC4821) reference
  – DHCP-PD was not included
New changes since IETF98

• Includes:
  – Re-organised various sections, including addressing and other configuration
  – Some text on constrained devices added
  – Added text on YANG/NETCONF
  – Various ID nits fixed
  – mDNS/DNS-SD text added
  – Added RFC8028 guidance as a SHOULD if device may be multihomed
  – ECN RFC3168 added as a SHOULD
    • Noting content of draft-ietf-tsvwg-ecn-experimentation-03
Open issues
Text on IPv6 EH processing by receivers

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

• Proposal to add text about how a receiving host processes EHs

• “Adding configurable limits to the number of options that are accepted at a destination host.”

• Proposal: Add text on this topic to the draft. Wary of including specific limits, so suggest we add general text (to be decided), and that 6man starts a separate draft with more specific guidance
Text on dangers of 1280 MTU

• Raised by Mark Andrews in Berlin 6man
• Documented in a comment by Geoff Huston on his own fragmentation blog piece
  – https://blog.apnic.net/2016/05/19/fragmenting-ipv6/
• “The message seems pretty clear that for UDP in IPv6 it’s best for a sender to use a large MTU if they can, in order to avoid gratuitous fragmentation-caused packet drop.”

• Proposal: Add text to express this sentiment in RFC6434-bis, for UDP IPv6. But need specific text.
Cite unique IPv6 prefix per host draft

• The draft already mentions RFC7934 on availability of multiple addresses

• Would be good to add example text; the unique IPv6 prefix per host draft documents real-world deployments

• Proposal: Add citation to draft, and say hosts SHOULD support the functionality described in draft-ietf-v6ops-unique-ipv6-prefix-per-host-01 (which is BCP status)
Router redirect host processing a MUST?

• Question raised by Tim Winters as we reviewed the –bis draft

• It seems from testing hosts that all do process router redirects
  – RFC4861 says SHOULD in section 8.3
  – Should that be upgraded to a MUST?

• Proposal: Leave it as a SHOULD in RFC6434-bis, but review RFC4861 text at next opportunity
Review by Brian Carpenter

- Update RFC2460 to RFC8200
- Update RFC1981 to RFC8201
- Remove IP over ATM (keep Frame Relay)
- Move PPP to previous list
- Since RFC 8028 updates rule 5.5 from RFC 6724 implementations SHOULD implement this rule.
- Add nothing about UDP tunnelling
- In EH text, s/processed/treated
- Keep jumbogram text
- Make RFC8208 normative
- Suggested text for RFC7217, but we could use RFC8064
- Section 14 - require BCP198 (RFC7608) support
3GPP and RFC7066

• Comments from Mohamed ("Med") Boucadair

• Made suggestions to clarify 3GPP-related text
  – Important point is implementers have pointers on where to look for guidance beyond RFC6434

• Proposal:
  – Add reference to RFC6459 and RFC7849 to Section 12
  – Be clear that RFC7066 trumps 6434bis
  – Add two or three examples of the additional requirements for flavour (e.g. RFC7828, RFC6603, …)
  – But do not replicate the specific MAY/SHOULD/etc
Keep Jumbogram text as is?

• The –bis draft currently says:
  – “To date, few implementations exist, and there is essentially no reported experience from usage. Consequently, IPv6 Jumbograms [RFC2675] remain optional at this time.”

• Is this still true? No harm to leave in?

• Proposal: Keep section on Jumbograms
Update DHCP vs RA options text

• Currently discussed in Section 8.4

• Proposal:
  – RFC8106 is a MUST
  – Stateless DHCPv6 SHOULD be supported if expect to use options other than DNS

• (reality is we seem to be heading to common minimal functionality in hosts and routers through RAs and RFC8106… but what to say here???)
Support for stateful DHCPv6

• Currently a SHOULD in Section 6.5

• Proposal: Keep as is
Other comments?

- Are latest changes acceptable?
- What other changes should we discuss?

- Comments?

- [Note that, as agreed at IETF98, we’ll decide on Informational vs BCP status once the document is finalised.]
- [Also need to see if a RFC4291 update appears.]