RFC6434-bis IPv6 Node Requirements update

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IETF 98, Chicago, 30th March 2017

Context

- Two previous IPv6 Node Requirements RFCs:
 - RFC4294, April 2006
 - RFC6434, December 2011
- Work done to date:
 - draft-clw-rfc6434-bis-00; suggested changes
 - draft-clw-rfc6434-bis-01; started on real edits
 - **BIS** in the document indicates further changes
- In this slot we'll list some changes already made, and ask for views on some specific topics
- Will sync router-specific text with draft-ali-ipv6rtr-reqs-02

Some changes so far

Examples:

- Changes related to RFC2460-bis, e.g. atomic fragments (RFC8021), oversized header chains (RFC7112)
- ND enhancements, e.g. impatient NUD (RFC7048)
- Provision of multiple global addresses to hosts (RFC7934)
- Privacy addresses (RFC4941): SHOULD be supported, and MUST be configurable
- RFC7217 alternative to RFC4862 SLAAC
- MIPv6 text removed; 3GPP added (RFC7066, 7278)
- RFC6724 address selection update
- A6 Historic

Q1: RFC8106 support

- Section 7.3
- RFC8106 defines option to carry DNS resolver addresses in an RA
- Not (yet) implemented in all platforms, which hinders effective deployment
- Current text says SHOULD support
- Proposal:
 - Change text to say RFC8106 MUST be supported

Q2: MLDv2 support

- Section 5.10
- The MBONED WG has long recommended use of source-specific multicast, which requires MLDv2
- RFC6434 says MLDv1 MUST be supported, and MLDv2 SHOULD be supported
- Proposal:
 - Change text to say MLDv2 MUST be supported
 - Say nothing about MLDv1

Q3: PLPMTUD support

- Section 5.6.1
- Packetization Layer Path MTU Discovery (RFC4821) avoids dependency on PTB messages
- Mentioned in RFC6434, which says RFC1981 SHOULD be supported
- Proposal:
 - Add text to say RFC4821 SHOULD be supported
 - No longer state that RFC1981 SHOULD be supported

Q4: DHCP-PD for hosts?

- RFC7934 recommends that when hosts attach they are offered multiple IPv6 global addresses
- Currently likely to be implemented via RAs; should we encourage DHCP-PD as well?

• Proposal:

- Add text to say hosts SHOULD support DHCP-PD
- Also emphasize that hosts SHOULD also support RAbased configuration

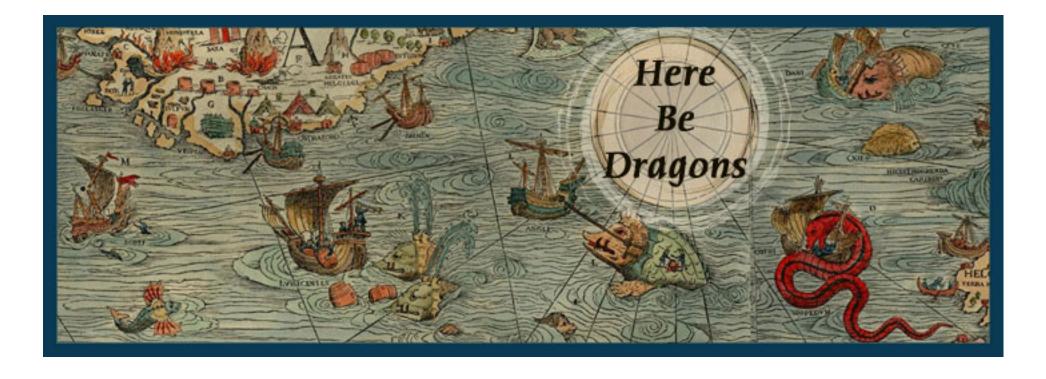
Q5: Node management?

- Currently says two MIBs SHOULD be supported (IP Forwarding Table and IP MIB)
- Much recent activity in Netconf and Yang

- Proposal:
 - Add text to say Netconf/Yang model SHOULD be supported?
 - Leave MIB text as it is

Q6: Privacy for IPv6 Nodes?

- Added Privacy addresses (RFC4941): SHOULD be supported, and MUST be configurable.
- Do we want to suggest nodes SHOULD follow RFC 7844 (Anonymity Profiles for DHCP Clients) as a method for privacy?
 - And that the behaviour SHOULD be configurable
- Any others?



6. DHCP versus Router Advertisement Options for Host Configuration

In IPv6, there are two main protocol mechanisms for propagating configuration information to hosts: Router Advertisements (RAs) and DHCP. Historically, RA options have been restricted to those deemed essential for basic network functioning and for which all nodes are configured with exactly the same information. Examples include the

Other comments?

- Are changes heading in the right direction?
- Still deemed useful work?
- If so, is it ready for WG adoption?

Should target be Informational or BCP?