IPv6 Node Requirements

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Outline

- Background/History

- Additions to most recent (-03) drafts

- Open Issues (one per chart)

- Open Discussion

Background

- RFC 4294 issued April, 2006
  - Needs updating (revised and new IPv6 specs)
- -00 issued as WG document February, 2008
- Progress stalled after Minneapolis (Nov, 2008)
- To be useful, needs to stay current
- Goal: finalize within 6 months.

Additions to -03

- RFC 5175 (extensions to RA Flags)

- Deprecation of RH0 processing

- Clarified text w.r.t. PMTU and minimum packet size

- Updated MIPv6 (RFC3775) recommendation to use RFC 4877 (IKEv2) to secure signaling with HA

Discussion Issues

Status of Document

- RFC 4294 was informational

- Informational documents cannot update Standards Track protocol documents

- Proper way to fix problems in Standards Track documents is

  - Revise/reissue the document, or

  - Create a short RFC that fixes just the specific problem

- Besides, if we try to fix protocol problems with Node Requirements doc, we never get done!

Applicability Statement

- Recommendation: Node Requirements should be an Applicability Statement (AS):

    - Can recommend (MUST/MAY/SHOULD) individual standards, or even sub-features of a Standard

    - Can provide more context for when to use a technology, but leave exact choice to others

- Info vs. BCP can be decided later and doesn't impact content itself

CGA/SEND Support

- RFC 3971 not mentioned in RFC 4294

- Should be added to Node Requirements

- Current thinking:

    - Insufficient real-world experience to date

    - Implemented in JunOS, but not in clients

    - Premature for SHOULD, MAY more appropriate

- Refer to on-going discussion on mailing list

DNS RA Option

- RFC 5006 "IPv6 Router Advertisement Option for DNS Configuration" is experimental

  - Arguably not appropriate for Node Requirements to recommend an Experimental document

  - If Experimental designation is "wrong", we should first revisit question of what appropriate status should be

- Needs more discussion on list

IPv6 over Foo Documents

- Node Requirements can't recommend any one

- Vendors will choose based on which link layers they support

- Recommendation: Simply list the various IP over Foo documents in a summary table

Privacy Extensions (RFC 4941)

- Current document has a blanket SHOULD
- More context needed
  - Only useful for mobile devices
  - No benefit to stationary servers or routers
- Proposed revised text posted to mailing list

MIPv6 (RFC 3775)

- Current text says hosts SHOULD support Route Optimization (RO)

  - But, RO is not implemented in production settings

  - We have no operational experience with it

  - New to IPv6 (MIPv4 does not have RO)

- Recommendation: SHOULD is too strong, MAY at best

- See thread on mailing list

Remaining Issues

- Security recommendation surrounding IPsec and IKE needs updating. New text TBD

Questions?