IPv6 Node Requirements
draft-ietf-6man-node-req-bis-05.txt

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Misc Changes 04 -> 05

- Shortened Security Considerations Section

  - Says much less now, defers to other RFCs for details

- Cleaned up DHCP section, added DNS RAs,

- Removed out-of-date IPsec text, see discussion

Configuration: RAs vs. DHCP

- Multiple ways of configuring same info is not ideal

  - Network operator (not client device implementer) controls which mechanism will supply configuration

  - For maximum interoperability, general purpose client should implement both (or all) relevant configuration mechanisms

  - Client device Implementer generally does not control where device is used (i.e., which network it plugs into)

  - See RFC 5505 (Principles of Internet Host Configuration)

- Added background section on RAs vs. DHCP

  - RAs: best for info that is the same for all nodes

  - DHCP: good for client-specific information

  - Which mechanism is"better" not always clear, e.g., with DNS config

  - Implement both for maximum deployability/interoperability

DNS Configuration

- Same general issue as before: client can't definitively predict what network will support

  - To maximize interoperability, implement both

- Current draft says:

  - SHOULD implement DHCPv6 for "other" configuration

    - RFC 4294 says "can use DHCPv6"

  - SHOULD implement DNS RA option

    - Can't say MUST, given current state of implementations

  - Includes context that implementer should consider

Address Configuration

- As before, same general issue: client can't definitively predict what network will support

- Retain previous recommendation of MUST for SLAAC

- For DHCP, RFC 4294 has wishy washy text:

    - "The method by which IPv6 nodes that use DHCP for address assignment ..."

- Current draft says:

    - Current draft says MAY implement DHCPv6 for address configuration

- After hallway discussions this week

    - Suggest we elevate MAY to SHOULD

    - Include text explaining likelyhood that DHC will be used in enterprise networks

    - Rational: for general purpose devices that expect to be able to plug into enterprise networks, support of DHCP for address assignment will be required

IPsec & IKEv2

- RFC 4294 says IPsec is a MUST

    - Both AH and ESP are MUSTs

- RFC 4294 says IKEv2 is a SHOULD but

    - IP Security Architecture is a MUST, which implies IKEv2 is a MUST...

- Proposed revision, both IKEv2 and IPsec be made (strong) SHOULDs:

    - There are classes of constrained and special purpose devices for which other security protocols are arguably more appropriate than IPsec/IKE

    - Furthermore: IKEv2 is a MUST, if IPsec is implemented (i.e., don't just implement IPsec)

Next Steps

- Close on current discussion/issues

- Update introduction to make clear Node Requirements is aimed at very general nodes

  - Specific deployment environments will have their own requirements that will differ, including elevating some requirements to MUST

- In updating DHCP/ND section, became clear that our (lack of) recommendations regarding the M&O bits is completely broken and embarrassing

  - Needs to be fixed in a separate document

Questions/Comments?