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- Removed out-of-date IPsec text, see discussion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