Next steps for 6renum work

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Introduction

- Some items need to be implemented and/or deployed.
  - No IETF design work to be done.
  - Maybe BCP or Informational documents needed?
  - In 6renum, v6ops or opsawg?
- Other items need to be specified.
  - IETF specifications needed.
  - In appropriate WGs

Implementation and deployment advice (1)

- Use names, not addresses
  - For device configuration (e.g. printers)
  - For IPsec security associations [RFC2407]
- Consider use of SLP
- Deploy ULA prefix to stabilise addresses used for internal traffic

Implementation and deployment advice (2)

- Use IPAM / asset management tool, or more generally an Operational Support System, to populate DNS, reverse DNS, DHCPv6 and router configurations.
  - Use DNS names or parametric names in configuration files
  - Include servers in DHCPv6 to avoid manual configuration
  - Use Secure Dynamic DNS Update [RFC3007] (requires key management in the management tool)
- Plan a renumbering procedure [RFC4192], [draft-ietf-6renum*]

Implementation and deployment advice (3)

- Support: The management tool will need the following, or equivalent:
  - DHCPv6 RECONFIGURE/RENEW [RFC3315]
  - DHCPv6-PD [RFC3633]
  - ICMPv6 router renumbering [RFC2894]
- Avoid software license systems that rely on IP addresses

Specifications needed

- Reconcile use of DHCPv6 and RA in an enterprise network
  - DHCPv6 and ND state machines influence each other
  - What should a DHCPv6-configured host do when it receives RA messages containing a new prefix? Current implementations just configure the new prefix. Is this OK?
  - What should a SLAAC-configured host do when it receives RA messages with "M" set?
  - See analysis in draft-liu-6renum-dhcpv6-slaac-switching
- Bulk DHVPv6 RECONFIGURE mechanism
- Clarify how a MIPv6 host rebinds with its home agent if the latter is renumbered while mobile is disconnected.

Questions? Discussion?

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