IPv6 Address Selection Considerations

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(see draft for design team credits)

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Scope of draft

- Looking at RFC3484 policy update requirements
  - Frequency of updates – how dynamic might this be?
  - Approaches/solutions given the frequency/scenarios
  - Host detection/communication of policy changes
  - Potential RFC3484 ‘default’ rule/policy updates

- New draft available
  - draft-chown-addr-select-considerations-03
  - (output of the Design Team)
General scenario focus

- Enterprise/site network
- Administrator wants to convey policy to hosts
  - Desired policy may be different to (current) ‘default’ RFC 3484 policy
  - Policy may vary across site
    - By topology
    - By time
  - May have nomadic nodes within the site
    - Policy may change as nodes move within topology
Changes since -02 (1/3)

- Some discussion since IETF74:
  - Noted differing administrative domains in scope
    - A new (separate) policy conflict draft now published
  - Noted that multiple interfaces are in scope
    - Described two common cases (VPN, wireless)
  - Noted many OSes have already modified 3484
    - Seeing divergence from current RFC 3484
    - Suggests revision of RFC 3484 very timely to reinstate a commonly understood ‘default’
Changes since -02 (2/3)

- On address selection policy updates:
  - Noted policy updates not frequent unless site TE changes frequently or hosts migrate frequently to areas of site with different policy
    - Thus update frequency generally not that different to general configuration requests (e.g. via DHCPv6)
  - Noted that managed (e.g. enterprise) networks tend to have policy that needs to be distributed
    - Suggests DHCPv6 an appropriate solution
  - Unmanaged networks probably don’t have policy
    - Implies some dynamic solution? Routing hints?
Changes since -02 (3/3)

- References to some new drafts:
  - Added ref to policy conflict draft
    - draft-arifumi-6man-addr-select-conflict-00
    - In very early stages
  - Added ref to v4+NAT vs v6 problem
    - draft-denis-v6ops-nat-addrsel-00
Next steps?

- Continue work on this DT draft
  - Adopt as WG item (was suggested at IETF74)
- Progress RFC 3484 update
  - Re-establish ‘default’ behaviour (policy table)
  - Define tables, do not preclude algorithmic changes
    - We have draft-arifumi-6man-rfc3484-revise-01 as a basis
- Progress policy update distribution draft
  - DHCPv6-based
    - Note that draft-fujisaki-dhc-addr-select-opt-07 already exists
- Progress policy conflict draft