Learning the IPv6 Prefix of a Network's IPv6/IPv4 Translator

draft-wing-behave-learn-prefix-04
draft-wing-v6ops-v6app-v4server-01

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The Problem:
Need to Know Translator's Prefix

- **Some** IPv6 applications need to know translator's prefix
  - Host-based, translation-aware DNSSEC validation ("DNS64 on the host")
  - Applications with IPv4 address literals
    - Multicast (e.g., RTSP signaled)
    - http://1.2.3.4
  - See draft-wing-v6ops-v6app-v4server
- Common idea: hard-code Well-Known Prefix into applications
  - But large networks don't use WKP
  - Makes assumption network operates a translator
  - So the prefix cannot be hard-coded into applications

Proposed Mechanisms

1. ~~DNS~~
   - ~~Using NAPTR (RFC4848) resource record~~
   - ~~Works on all OSs and all applications~~
2. DHCPv6
   - New DHCP option
   - Requires OS use DHCPv6
     - OSX: no
     - Linux: ?
     - Windows: yes
   - Requires OS handle arbitrary new DHCP option
     - Windows: yes
3. IPv6 Router Advertisement (RA)
   - New RA option type

Likely in -05

Questions

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