Learning the IPv6 Prefixes of an IPv6/IPv4 Translator

draft-wing-behave-learn-prefix-03

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Why Learning Prefix is Necessary

- **Some** IPv6 applications need to know translator’s prefix
  - Host-based, translation-aware DNSSEC validation ("DNS64 on the host")
  - Multicast (e.g., RTSP signaled)
  - URI schemes with IPv4 address literals
    - http://1.2.3.4
- Several BEHAVE scenarios cannot use IANA Well-Known Prefix
  - So the prefix cannot be hard-coded into applications
Types of Prefixes to Learn

- Unicast
- Any-Source Multicast (ASM)
- Source-Specific Multicast (SSM)
Mechanisms to Learn

1. DNS
   • Using NAPTR (RFC4848) resource record
2. DHCP
   • New DHCP option
3. IPv6 Router Advertisement (RA)
   • New RA option type
Issues & Comments

• Need to reduce number of mechanisms
  – DNS, DHCP, IPv6 RA
  – Feedback so far: keep DNS

• NAPTR deployability concern
  – Maybe consider a “_translator” TXT record?
    • Similar to DKIM’s “_domainkey” TXT record

• Add support for multiple prefixes
Questions

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