Reverse DNS for Multicast Addresses

mboned – IETF 88
Joe Abley <jabley@dyn.com>
Where are we, now?

[walrus:~]% dig -x 224.0.0.2 PTR +short all-routers.mcast.net.

[walrus:~]% dig -x ff01::2 PTR +short

[walrus:~]%
Why name things?

• Because they are there

• Because names are easier to recognise than numbers

• In this case this is a fairly obscure part of the namespace, but if we can assign names methodically and predictably without causing anybody a lot of work, perhaps we should
Proposal

- draft-jabley-multicast-ptr-00
  - "DNS Reverse Mapping for Multicast Addresses"
  - Proposes a naming scheme for IPv6 multicast addresses
  - Establishes a unified process for both IPv4 and IPv6 multicast mapping, with the goal of making the IANA's job easier
IPv4 Naming Scheme

• The proposal is to mirror the historical, ad-hoc approach taken with MCAST.NET, document mappings in an IANA registry, and rename things under MCAST.ARPA

• support for legacy MCAST.NET names provided using DNAME

• no need for a defined sunset for the MCAST.NET zone (but allow for one)
IPv6 Naming Scheme

- IPv6 introduces scoped multicast addresses
  - propose an approach which is similar to that used for IPv4, but which includes an enclosing label describing the scope
  - instantiates a registry for scope labels
  - names under **MCAST6.ARPA**
- No legacy support required for IPv6, because there is no legacy
Examples

• Fixed-scope address ff01::1
  • scope label is "NODE-LOCAL"
  • address label is "ALL-NODES"
• ALL-NODES.NODE-LOCAL.MCAST6.ARPA
Examples

- Variable-scope address ff0x::fb
  - Address label "MDNSV6"
  - mapping depends on the scope used
  - x=5, use scope label "SITE-LOCAL"
    - ff05::db – MDNSV6.SITE-LOCAL.MCAST6.ARPA
  - x=2, use scope label "LINK-LOCAL"
    - ff02::db – MDNSV6.LINK-LOCAL.MCAST6.ARPA
IANA Considerations

• This proposal leaves decisions for naming existing assignments up to the IANA, with some light guidance

• Future assignments are made into a revised registry with a mandatory "DNS Label" column, so decisions are left to the specification
Thoughts?

• Thoughts on the proposed naming scheme?

• Thoughts on whether we should bother with reverse mapping for these addresses at all?

• Thoughts on an appropriate venue for discussion? mboned? dnsop? Somewhere else?

• Thoughts on future of this document? Individual stream? AD-Sponsored? Working group?