

Unicast-Prefix-based IPv4 Multicast Addresses

draft-ietf-mboned-ipv4-uni-based-mcast-05.txt

Dave Thaler

dthaler@microsoft.com

Status

- Chairs issued WG Last call Dec. 12, 2007
 - also asked whether there was support for this draft
- WG Last call completed Jan. 11, 2008
- General support:
 - 9 (+2 just to author) for,
 - 1 against,
 - 3 others commented but didn't state a position

9 Issues Raised

#	Description	Submitter
1	Consider hard-coded-addresses issue	Toerless Eckert
2	Make space permanent	Stig Venaas
3	Make UBM addresses be non-global	Toerless Eckert
4	Add examples	Prashant Jhingran
5	LIRs and “Owners” of address space	Peter Koch
6	DNS reverse mapping	Peter Koch
7	Use of IPv4 addrs other than global unicast addrs	Peter Koch
8	Prefix length	John Linn
9	Relationship to Ethernet MAC encoding	John Linn

#1: Consider hard-coded-addr issue

- Issue: You never own unicast space forever, so you can't hardcode anything derived from
- Aside: This applies to many other types of addresses too, not just IPv4 UBM
- Resolution: added text
 - “Since unicast addresses are not permanently assigned, UBM addresses MUST NOT be hard-coded in applications.”

#2: Make space permanent

- Issue: Draft -04 said 1-year experiment. Only running for a year may not be a useful experiment. Why not 3-5 or permanent?
- List discussion:
 - permanent: Stig, Marshall, Lenny, DaveT, Pekka
 - 3-5: Pekka, Toerless, Tim
- Claim rough consensus on permanent (same as RFC 3306 for IPv6)
- Change in -05: The 4 sentences on experiment & expiration removed.

#3: Make UBM addresses be non-global

- Issue: inter-domain ASM not that interesting, reclassify as private space
- List discussion:
 - Private space proposal best suited for a separate draft
 - Rough consensus supporting draft as is
- Resolution: no change

#4: Add examples

- Issue: Would be clearer with examples like RFC3306 (IPv6 UBM) & 3956 (Embedded RP) both do.
- Resolution: added example section

“The following are a few examples of the structure of unicast-prefix based multicast addresses.

Consider an organization that has been assigned the global unicast address space 192.0.2.0/24. This means that organization can use the global multicast address TBD.192.0.2 without coordinating with any other entity. Someone who sees this multicast address and wants to find who is using it can mentally shift the address left by 8 bits to get 192.0.2.0, and then look up who has been assigned unicast address space that includes that address.

Consider an organization has been assigned a larger address space, x.y.0.0/16. This organization can use the global multicast address space TBD.x.y.0/24 without coordinating with any other entity, and can assign addresses within this space by any mechanism the organization wishes. Someone who sees a multicast address (say) TBD.x.y.10, and wants to find who is using it can mentally shift the address left by 8 bits to get x.y.10.0, and can then look up who has been assigned unicast address space that includes that address.”

#5: LIRs and “Owners”

- Issue: What is impact on LIRs? Draft -04 used term “owner”, who is that?
- List discussion:
 - No impact on LIRs
 - “owner” is a bad term
- Resolution: removed all uses of “own*”, replaced with “assigned to” for consistency with registry terminology

#6: DNS Reverse Mapping

- Issue: Is there any intention to support DNS reverse mapping for the /8-to-be?
- List discussion: No (but not really any different from any other multicast address... IPv6 UBM, GLOP, etc)
- Resolution: no change

#7: Use of IPv4 addresses other than global unicast addresses

- Issue: what about IPv4 prefixes other than public unicast (loopback, RFC1918, multicast, etc)
- RFC 3306 says unicast-only, and multicast scope MUST NOT exceed scope of embedded unicast prefix
- Resolution: added text
"The embedded unicast prefix MUST be a global unicast prefix (i.e., no loopback, multicast, link-local, or private-use IP address space)."

#8: Prefix length

- Issue: what about using a shorter prefix so as to give /24 networks more space
- Discussion: not a new issue. Diagnostic advantages to byte alignment.
- Resolution: no change

#9: Relationship to Ethernet MAC encoding

- Issue: It could be noted that this layout is sympathetic to the Ethernet MAC multicast encoding
- Discussion: not obvious what one might say. "Sympathetic" is a bit vague, and the bits don't map exactly since there's 23 in the MAC encoding and a variable number (24 or less) for the group ID in UBM.
- Resolution: no change

Done?