LAC-2007-02 eGLOP Multicast Address Assignments.
Guillermo Cicileo.
http://mail.lacnic.net/pipermail/politicas/2007-March/006879.html

Other RIRs are receiving proposals for the implementation of RFC 3138, which defines a range of addresses to be used by multicast applications (in cases where other solutions such as SSM, GLOP, etc. cannot be used). This implies that the RIRs will need a mechanism for assigning these addresses. The range used for these addresses, called eGLOP, is 233.252.0.0/14, which corresponds to the private AS range (see RFC3180 which describes how to map an AS to these addresses).

I propose that LACNIC joins this initiative, designating a /20 to this end, as is being proposed at other RIRs. I include the email with the proposal presented at ARIN.

http://lists.arin.net/pipermail/ppml/2007-February/005970.html

Policy Proposal Name: eGLOP multicast address assignments

Author: Marshall Eubanks, David Meyer
Proposal Version: 1
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Proposal type: new
Policy term: permanent
Policy statement:

RFC 2770 [now replaced by RFC 3180 / BCP 53] set up an automatic "GLOP" multicast address assignment in 233/8 based on Autonomous System Numbers (ASNs). The mechanism that was set up in RFC 3180 for extending GLOP assignments, known as eGLOP, envisioned the assignment of multicast addresses by RIRs from the portion of the 233/8 space corresponding to the RFC 1930 private address space. This mechanism has never been used, but its use has now imperative due to both an increased interest in multicast address assignments to support IPTV and the adopted proposals to assign 4-octet ASNs, which do not have GLOP assignments. This proposal is for the assignment of Multicast addresses by the ARIN RIR using the criteria set up in RFC 3180; equivalent proposals are being sent to the other RIRs for their consideration.

Rationale:

RFC 2770 [now replaced by RFC 3180 / BCP 53] set up an automatic "GLOP" multicast address assignment in 233/8 based on Autonomous System Numbers (ASNs). The mechanism that was set up in RFC 3180 for extending GLOP assignments, known as eGLOP, envisioned the assignment of multicast addresses by RIRs from the portion of the 233/8 space corresponding to the RFC 1930 private address space. This mechanism has never been used, but its use has now imperative due to both an increased interest in multicast address assignments to support IPTV and the adopted proposals to assign 4-octet ASNs, which do not have GLOP assignments. This proposal is for the assignment of Multicast addresses by the APNIC RIR; equivalent proposals will be sent to the other RIRs for consideration in due course.

RFC 2770 and RFC 3180 describe an experimental policy for use of the class D address space by mapping 16 bits of Autonomous System number (AS) into the middle two octets of 233/8 to yield a /24, which is automatically assigned to that ASN. While this technique has been successful, the assignments are inefficient in those cases in which a /24 is too small or the user doesn't have its own AS, and it does not work for 4-octet AS number extension scheme.

RFC 3138 expanded on RFC 2770 to allow routing registries to assign multicast addresses from the GLOP space corresponding to the RFC 1930 private AS space; referred to as the EGLOP (Extended GLOP) address space.

The failure to instantiate RFC 3138 assignments had lead to a situation where some multicast users feel like they cannot obtain addresses, while others apply directly to IANA, with there being at least 24 approved applications in 2006. The current situations in inequitable and inefficient and there is no reason not to apply the mechanism set up in RFC 3138.

RFC 3138 allocated 233.252/14 to eGLOP. The RFC further says that:

Globally scoped IPv4 multicast addresses in the EGLOP space are assigned by a Regional Registry (RIR). An applicant MUST, as per [IANA], show that the request cannot be satisfied using Administratively Scoped addressing [RFC2365], GLOP addressing
[RFC2770], or SSM. The fine-grained assignment policy is left to the assigning RIR.

We propose that each RIR be allocated an initial /20 from this address range, and allocate by default /28's to proposers (16 addresses as Multicast address are not subject to CIDR default restrictions), subject to the above criteria, and that the RIR assign more addresses based on demonstrated need. (Note that Multicast addresses are not subject to classless aggregation and address blocks as small as a /32 can be usefully assigned.)

The proposed policy should facilitate multicast deployment. The current mechanism for non-GLOP multicast deployment involves requesting an assignment from IANA, which has no ability to evaluate these requests and relies on the IANA Multicast Expert appointed by the IESG (currently David Meyer). This process is inefficient, inequitable (as this policy route is not widely known), encourages the use of "rogue" self- assignments, and discourages application developers and service providers from developing and deploying multicast.

The only disadvantage that we can see from the proposed policy is that the RIR's will have to set up and execute mechanisms to implement it.

Effect on APNIC: We feel that adoption of this proposal will help to make multicast deployment more widespread, and should be of benefit to APNIC members adopting Multicast for video distribution on the Internet.

References

[IANA]   http://www.iana.org/assignments/multicast-addresses

[RFC1930]   Hawkinson, J., and T. Bates, "Guidelines for creation, selection, and registration of an Autonomous System
              (AS)", RFC 1930, March 1996.

[RFC2365]   Meyer, D., "Administratively Scoped IP Multicast",
              RFC 2365, July 1998.

[RFC2770]   Meyer, D. and P. Lothberg, "GLOP Addressing in
              233/8", RFC 2770, February 2000.

[RFC3138]   Meyer, D., "Extended Assignments in 233/8", RFC 3138,
              June 2001.

[RFC3180]   Meyer, D., "GLOP Addressing in 233/8", BCP 53, RFC
              3180, September 2001.