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Multicast Addresses for Documentation
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Abstract

This document discusses which multicast addresses should be used for documentation purposes and reserves IPv6 multicast addresses for such use. Some multicast addresses are derived from AS numbers or unicast addresses. This document also explains how these can be used for documentation purposes by deriving them from AS numbers and unicast addresses that are reserved for such purposes.

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1. Introduction

It is often useful in documentation, IETF documents, etc., to provide examples containing IP multicast addresses. To prevent conflicts or confusion, one should avoid using multicast addresses that may be in actual use. For unicast there are both IPv4 and IPv6 addresses reserved for this purpose, see [RFC5737] and [RFC3849] respectively. There are IPv4 multicast addresses reserved for this purpose, and this document reserves such IPv6 multicast addresses.

There are also some multicast addresses that are derived from AS numbers or unicast addresses. For examples where such addresses are desired, one should derive them from the AS numbers and unicast addresses reserved for documentation purposes. This document also discusses the use of these.

2. Documentation IPv4 and IPv6 multicast addresses

For documentation where examples of general purpose multicast addresses are needed, one should use multicast addresses that never will be assigned or in actual use. There is a risk that addresses used in examples may accidentally be used. It is then important that the same addresses are not used by other multicast applications or services. It may also be beneficial to filter out such addresses from multicast signalling and multicast data sent to such addresses.

The IPv4 multicast addresses allocated for documentation purposes are 233.252.0.0 - 233.252.0.255 (233.252.0.0/24). The IPv6 multicast addresses allocated for documentation purposes are TBD.

3. Administratively scoped IPv4 multicast addresses

Administratively scoped IPv4 multicast addresses [RFC2365] are reserved for scoped multicast. They can be used within a site or an organization. Apart from a small set of scope relative addresses, these addresses are not assigned. There are no specific scoped addresses available for documentation purposes. Except for examples detailing the use of scoped multicast, one should avoid using them.

4. GLOP multicast addresses

GLOP [RFC3180] is a method for deriving IPv4 multicast group addresses from 16 bit AS numbers. For examples where GLOP addresses are desired, the addresses should be derived from the AS numbers reserved for documentation use. See [RFC5398].

5. Unicast prefix based multicast addresses

IPv6 multicast addresses can be derived from IPv6 unicast prefixes. The two ways currently defined are unicast-prefix based addresses [RFC3306] and Embedded-RP addresses [RFC3956]. There is also a proposal for doing this with IPv4 [I-D.ietf-mboned-ipv4-uni-based-mcast]. For examples where these types of addresses are desired, the addresses should be derived from the unicast addresses reserved for documentation purposes. For IPv4, see [RFC5737]. For IPv6, see [RFC3849].

6. Security Considerations

The use of specific multicast addresses for documentation purposes has no impact on security.

7. IANA Considerations

IANA is requested to assign a set of IPv6 multicast addresses of "variable scope" for documentation purposes. The set should be a /96 prefix of the form FF0X:...

8. Acknowledgments

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9. Informative References

[I-D.ietf-mboned-ipv4-uni-based-mcast]
Thaler, D., "Unicast-Prefix-based IPv4 Multicast Addresses", draft-ietf-mboned-ipv4-uni-based-mcast-06 (work in progress), April 2010.

[RFC2365] Meyer, D., "Administratively Scoped IP Multicast", BCP 23, RFC 2365, July 1998.

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

[RFC3306] Haberman, B. and D. Thaler, "Unicast-Prefix-based IPv6 Multicast Addresses", RFC 3306, August 2002.

[RFC3307] Haberman, B., "Allocation Guidelines for IPv6 Multicast Addresses", RFC 3307, August 2002.

[RFC3849] Huston, G., Lord, A., and P. Smith, "IPv6 Address Prefix Reserved for Documentation", RFC 3849, July 2004.

[RFC3956] Savola, P. and B. Haberman, "Embedding the Rendezvous Point (RP) Address in an IPv6 Multicast Address", RFC 3956, November 2004.

[RFC5398] Huston, G., "Autonomous System (AS) Number Reservation for Documentation Use", RFC 5398, December 2008.

[RFC5737] Arkko, J., Cotton, M., and L. Vegoda, "IPv4 Address Blocks Reserved for Documentation", RFC 5737, January 2010.

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