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## **Multicast Addresses for Documentation**

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#### **Abstract**

This document reserves IPv4 and IPv6 multicast addresses for use in documentation, RFCs etc. 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

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It is often useful in documentation to give 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 [\[RFC5737\]](#) (Arkko, J., Cotton, M., and L. Vegoda, "IPv4 Address Blocks Reserved for Documentation," January 2010.) and [\[RFC3849\]](#) (Huston, G., Lord, A., and P. Smith, "IPv6 Address Prefix Reserved for Documentation," July 2004.) respectively. There are however no multicast addresses available for such purposes. This document reserves such 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.

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## 2. Documentation IPv4 and IPv6 multicast addresses

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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 address allocated for documentation purposes is TBD.  
The IPv6 multicast address allocated for documentation purposes is TBD.

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### 3. GLOP multicast addresses

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GLOP [\[RFC3180\]](#) (Meyer, D. and P. Lothberg, "GLOP Addressing in 233/8," September 2001.) 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 [\[RFC5398\]](#) (Huston, G., "Autonomous System (AS) Number Reservation for Documentation Use," December 2008.).

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### 4. Unicast prefix based multicast addresses

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IPv6 multicast addresses can be derived from IPv6 unicast prefixes. The two ways currently defined are unicast-prefix based addresses [\[RFC3306\]](#) (Haberman, B. and D. Thaler, "Unicast-Prefix-based IPv6 Multicast Addresses," August 2002.) and Embedded-RP addresses [\[RFC3956\]](#) (Savola, P. and B. Haberman, "Embedding the Rendezvous Point (RP) Address in an IPv6 Multicast Address," November 2004.). There is also a proposal for doing this with IPv4 [\[I-D.ietf-mboned-ipv4-uni-based-mcast\]](#) (Thaler, D., "Unicast-Prefix-based IPv4 Multicast Addresses," April 2010.). 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 [\[RFC5737\]](#) (Arkko, J., Cotton, M., and L. Vegoda, "IPv4 Address Blocks Reserved for Documentation," January 2010.). For IPv6, see [\[RFC3849\]](#) (Huston, G., Lord, A., and P. Smith, "IPv6 Address Prefix Reserved for Documentation," July 2004.).

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### 5. Other multicast addresses

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For both IPv4 and IPv6, multicast address ranges have been defined for link-local, SSM, admin scoped etc. It may be considered to reserve a multicast address from these ranges for the purpose of documentation. For IPv6 this can be done by assigning a Group ID, see [\[RFC3307\]](#) (Haberman, B., "Allocation Guidelines for IPv6 Multicast Addresses," August 2002.). The question here is how common it is that examples require a multicast address of a particular non-global scope.

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## 6. Security Considerations

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

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## 7. IANA Considerations

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IANA is requested to assign both an IPv4 multicast address and an IPv6 multicast address for documentation purposes.

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## 8. Informative References

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[I-D.ietf-mboned-ipv4-uni-based-mcast]	Thaler, D., " <a href="#">Unicast-Prefix-based IPv4 Multicast Addresses</a> ," draft-ietf-mboned-ipv4-uni-based-mcast-06 (work in progress), April 2010 ( <a href="#">TXT</a> ).
[RFC3180]	Meyer, D. and P. Lothberg, " <a href="#">GLOP Addressing in 233/8</a> ," BCP 53, RFC 3180, September 2001 ( <a href="#">TXT</a> ).
[RFC3306]	Haberman, B. and D. Thaler, " <a href="#">Unicast-Prefix-based IPv6 Multicast Addresses</a> ," RFC 3306, August 2002 ( <a href="#">TXT</a> ).
[RFC3307]	Haberman, B., " <a href="#">Allocation Guidelines for IPv6 Multicast Addresses</a> ," RFC 3307, August 2002 ( <a href="#">TXT</a> ).
[RFC3849]	Huston, G., Lord, A., and P. Smith, " <a href="#">IPv6 Address Prefix Reserved for Documentation</a> ," RFC 3849, July 2004 ( <a href="#">TXT</a> ).
[RFC3956]	Savola, P. and B. Haberman, " <a href="#">Embedding the Rendezvous Point (RP) Address in an IPv6 Multicast Address</a> ," RFC 3956, November 2004 ( <a href="#">TXT</a> ).
[RFC5398]	Huston, G., " <a href="#">Autonomous System (AS) Number Reservation for Documentation Use</a> ," RFC 5398, December 2008 ( <a href="#">TXT</a> ).
[RFC5737]	Arkko, J., Cotton, M., and L. Vegoda, " <a href="#">IPv4 Address Blocks Reserved for Documentation</a> ," RFC 5737, January 2010 ( <a href="#">TXT</a> ).

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