IPv6 Multicast Address Assignments

1.0 Introduction

This document defines the initial assignment of IPv6 multicast addresses. It is based on the "IP Version 6 Addressing Architecture" [ADDARCH] and current IPv4 multicast address assignment found in <ftp://venera.isi.edu/in-notes/iana/assignments/multicast-addresses>. It adapts the IPv4 assignments that are relevant to IPv6 assignments. IPv4 assignments that were not relevant were not converted into IPv6 assignments. Comments are solicited on this conversion.

All other IPv6 multicast addresses are reserved.

Sections 2 and 3 specify reserved and preassigned IPv6 multicast addresses.


The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119].

2. Fixed Scope Multicast Addresses

These permanently assigned multicast addresses are valid over a specified scope value.
2.1 Node-Local Scope

**FF01:0:0:0:0:0:0:1**  All Nodes Address  [ADDARCH]
**FF01:0:0:0:0:0:0:2**  All Routers Address  [ADDARCH]

2.2 Link-Local Scope

**FF02:0:0:0:0:0:0:1**  All Nodes Address  [ADDARCH]
**FF02:0:0:0:0:0:0:2**  All Routers Address  [ADDARCH]
**FF02:0:0:0:0:0:0:3**  Unassigned  [JBP]
**FF02:0:0:0:0:0:0:4**  DVMRP Routers  [RFC1075, JBP]
**FF02:0:0:0:0:0:0:5**  OSPFIGP  [RFC2328, Moy]
**FF02:0:0:0:0:0:0:6**  OSPFIGP Designated Routers  [RFC2328, Moy]
**FF02:0:0:0:0:0:0:7**  ST Routers  [RFC1190, KS14]
**FF02:0:0:0:0:0:0:8**  ST Hosts  [RFC1190, KS14]
**FF02:0:0:0:0:0:0:9**  RIP Routers  [RFC2080]
**FF02:0:0:0:0:0:0:A**  EIGRP Routers  [Farinacci]
**FF02:0:0:0:0:0:0:B**  Mobile-Agents  [Bill Simpson]
**FF02:0:0:0:0:0:0:D**  All PIM Routers  [Farinacci]
**FF02:0:0:0:0:0:0:E**  RSVP-ENCAPSULATION  [Braden]
**FF02:0:0:0:0:0:1:1**  Link Name  [Harrington]
**FF02:0:0:0:0:0:1:2**  All-dhcp-agents  [Bound, Perkins]
**FF02:0:0:0:1:FFXX:XXXX**  Solicited-Node Address  [ADDARCH]

2.3 Site-Local Scope

**FF05:0:0:0:0:0:0:2**  All Routers Address  [ADDARCH]
**FF05:0:0:0:0:0:0:3**  All-dhcp-servers  [Bound, Perkins]
**FF05:0:0:0:0:0:1:4**  All-dhcp-relays  [Bound, Perkins]
**FF05:0:0:0:0:0:1:1000**  Service Location  [RFC2165]
-**FF05:0:0:0:0:0:1:13FF**

3.0 All Scope Multicast Addresses

These permanently assigned multicast addresses are valid over all scope ranges. This is shown by an "X" in the scope field of the address that means any legal scope value.

Note that, as defined in [ADDARCH], IPv6 multicast addresses which are only different in scope represent different groups. Nodes must join each group individually.

The IPv6 multicast addresses with variable scope are as follows:
Reserved Multicast Address

- FF0X:0:0:0:0:0:0:0:0 Reserved Multicast Address [ADDARCH]
- FF0X:0:0:0:0:0:0:0:100 VMTP Managers Group [RFC1045, DRC3]
- FF0X:0:0:0:0:0:0:0:101 Network Time Protocol (NTP) [RFC1119, DLM1]
- FF0X:0:0:0:0:0:0:0:102 SGI-Dogfight [AXC]
- FF0X:0:0:0:0:0:0:0:103 Rwhod [SXD]
- FF0X:0:0:0:0:0:0:0:104 VNP [DRC3]
- FF0X:0:0:0:0:0:0:0:105 Artificial Horizons - Aviator [BKF]
- FF0X:0:0:0:0:0:0:0:106 NSS - Name Service Server [BXS2]
- FF0X:0:0:0:0:0:0:0:107 AUDIONEWS - Audio News Multicast [MXF2]
- FF0X:0:0:0:0:0:0:0:108 SUN NIS+ Information Service [CXM3]
- FF0X:0:0:0:0:0:0:0:109 MTP Multicast Transport Protocol [SXA]
- FF0X:0:0:0:0:0:0:0:10A IETF-1-LOW-AUDIO [SC3]
- FF0X:0:0:0:0:0:0:0:10B IETF-1-AUDIO [SC3]
- FF0X:0:0:0:0:0:0:0:10C IETF-1-VIDEO [SC3]
- FF0X:0:0:0:0:0:0:0:10D IETF-2-LOW-AUDIO [SC3]
- FF0X:0:0:0:0:0:0:0:10E IETF-2-AUDIO [SC3]
- FF0X:0:0:0:0:0:0:0:10F IETF-2-VIDEO [SC3]
- FF0X:0:0:0:0:0:0:0:110 MUSIC-SERVICE [Guido van Rossum]
- FF0X:0:0:0:0:0:0:0:111 SEANET-TELEMETRY [Andrew Maffei]
- FF0X:0:0:0:0:0:0:0:112 SEANET-IMAGE [Andrew Maffei]
- FF0X:0:0:0:0:0:0:0:113 MLOADD [Braden]
- FF0X:0:0:0:0:0:0:0:114 any private experiment [JBP]
- FF0X:0:0:0:0:0:0:0:115 DVMRP on MOSPF [Moy]
- FF0X:0:0:0:0:0:0:0:116 SVRLOC [Veizades]
- FF0X:0:0:0:0:0:0:0:117 XINGTV <hgxing@aol.com>
- FF0X:0:0:0:0:0:0:0:118 microsoft-ds <arnoldm@microsoft.com>
- FF0X:0:0:0:0:0:0:0:119 nbc-pro <bloomer@birch.crd.ge.com>
- FF0X:0:0:0:0:0:0:0:11A nbc-pfn <bloomer@birch.crd.ge.com>
- FF0X:0:0:0:0:0:0:0:11B lmsc-calren-1 [Uang]
- FF0X:0:0:0:0:0:0:0:11C lmsc-calren-2 [Uang]
- FF0X:0:0:0:0:0:0:0:11D lmsc-calren-3 [Uang]
- FF0X:0:0:0:0:0:0:0:11E lmsc-calren-4 [Uang]
- FF0X:0:0:0:0:0:0:0:11F ampr-info [Janssen]
- FF0X:0:0:0:0:0:0:0:120 mtrace [Casner]
- FF0X:0:0:0:0:0:0:0:121 RSVP-encap-1 [Braden]
- FF0X:0:0:0:0:0:0:0:122 RSVP-encap-2 [Braden]
- FF0X:0:0:0:0:0:0:0:123 SVRLOC-DA [Veizades]
- FF0X:0:0:0:0:0:0:0:124 rl-n-server [Kean]
- FF0X:0:0:0:0:0:0:0:125 proshare-mc [Lewis]
- FF0X:0:0:0:0:0:0:0:126 dantz [Yackle]
- FF0X:0:0:0:0:0:0:0:127 cisco-rp-announce [Farinacci]
- FF0X:0:0:0:0:0:0:0:128 cisco-rp-discovery [Farinacci]
- FF0X:0:0:0:0:0:0:0:129 gatekeeper [Toga]
- FF0X:0:0:0:0:0:0:0:12A iberiagames [Marocho]
5.0 References


6. People

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7.0 Security Considerations

This document defines the initial assignment of IPv6 multicast addresses. As such it does not directly impact the security of the Internet infrastructure or its applications.

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