Network Working Group
Request for Comments: 2375
Category: Informational

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July 1998

IPv6 Multicast Address Assignments

Status of this Memo

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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.

[ADDRARCH] defines rules for assigning new 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]
FF02:0:0:0:0:1:FFXX:XXXX	Solicited-Node Address	[ADDARCH]

2.3 Site-Local Scope

FF05:0:0:0:0:0:0:2	All Routers Address	[ADDARCH]
FF05:0:0:0:0:0:1:3	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 -FF05:0:0:0:0:0:1:13FF	Service Location	[RFC2165]

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:

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

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   FF0X:0:0:0:0:0:0:201  "rwho" Group (BSD) (unofficial)         [JBP]
   FF0X:0:0:0:0:0:0:202   SUN RPC PMAPPROC_CALLIT               [BXE1]

   FF0X:0:0:0:0:0:2:0000
    -FF0X:0:0:0:0:0:2:7FFD  Multimedia Conference Calls          [SC3]
   FF0X:0:0:0:0:0:2:7FFE    SAPv1 Announcements                 [SC3]
   FF0X:0:0:0:0:0:2:7FFF    SAPv0 Announcements (deprecated)    [SC3]
   FF0X:0:0:0:0:0:2:8000
    -FF0X:0:0:0:0:0:2:FFFF  SAP Dynamic Assignments             [SC3]
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5.0 References

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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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