                   IPv6 Multicast Address Assignments

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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   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:

```
   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]
```

```
  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]
```

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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