                 IANA IPv4 Special Purpose Address Registry

Abstract

   This is a direction to IANA concerning the creation and management of
   the IANA IPv4 Special Purpose Address Registry.

Status of This Memo

   This document is not an Internet Standards Track specification; it is
   published for informational purposes.

   This document is a product of the Internet Engineering Task Force
   (IETF). It represents the consensus of the IETF community. It has
   received public review and has been approved for publication by the
   Internet Engineering Steering Group (IESG). Not all documents
   approved by the IESG are a candidate for any level of Internet
   Standard; see Section 2 of RFC 5741.

   Information about the current status of this document, any errata,
   and how to provide feedback on it may be obtained at
   http://www.rfc-editor.org/info/rfc5736.

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1. Introduction

   This is a direction to [IANA] concerning the creation and management
   of the IANA IPv4 Special Purpose Address Registry. The registry will
   be used for recording IETF protocol assignments from 192.0.0.0/24 and
   any other address prefixes allocated to the registry in the future,
   as described in Section 3.

2. IANA IPv4 Special Purpose Address Block

   [RFC5735] records the assignment of an IPv4 address prefix to IANA
   for IETF protocol assignments.

      192.0.0.0/24 - This block is reserved for IETF protocol
      assignments.

   This address allocation to IANA is intended to support IETF protocol
   assignments. A more general view of the roles of IANA with respect
   to address allocation functions is documented in [RFC2860]:

      4.3. [...] Note that [...] (b) assignments of specialised address
      blocks (such as multicast or anycast blocks), and (c) experimental
      assignments are not considered to be policy issues, and shall
      remain subject to the provisions of this Section 4. (For purposes
      of this MOU, the term "assignments" includes allocations.)

   The reference to Section 4 here is to the general technical work for
   the IANA as described in [RFC2860]:

      4.1. The IANA will assign and register Internet protocol
      parameters only as directed by the criteria and procedures
      specified in RFCs, including Proposed, Draft, and full Internet
      Standards and Best Current Practice documents, and any other RFC
      that calls for IANA assignment.

   This document directs IANA to designate special purpose address
   blocks in compliance with [RFC2860].

This document directs IANA to open an IPv4 Special Purpose Address
Registry for the management of these IANA-designated address blocks.
Special Purpose registrations to be made from this registry include
addresses for IETF protocol assignments and other special purpose
cases, as documented in IESG-reviewed RFCs, according to the
provisions described in Section 4.1 of [RFC2860].

3. IANA Considerations

IANA maintains an "IANA IPv4 Special Purpose Address Registry". The
registry records current IANA address designations from the IANA-
managed IPv4 Special Purpose address pool.

This recommendation concerns the management of the address pool used
for IETF protocol assignments as documented in [RFC5735] -- namely,
192.0.0.0/24. Following the policies outlined in [RFC5226], further
assignments of address space to IANA for subsequent designation of
address prefixes for the purposes listed here shall be undertaken
only through an IETF Review action.

IANA may make Special Purpose address designations to support testing
or experimental usage activities initiated by the IETF, or for
specialised use of a designated address block in a context (e.g.,
anycast) associated with an Internet Standards Track protocol. All
such address designations must be documented in the "IANA
Considerations" section of an IESG-reviewed RFC.

The IANA IPv4 Special Purpose Address Registry records, for all
current address designations undertaken by IANA:

1. The designated address prefix.

2. The RFC that called for the IANA address designation.

3. The date the designation was made.

4. The date the use designation is to be terminated (if specified as
    a limited-use designation).

5. The nature of the purpose of the designated address (e.g.,
    unicast experiment or protocol service anycast).

6. For experimental unicast applications and otherwise as
    appropriate, the registry will also identify the entity and
    related contact details to whom the address designation has been
    made.

7. The registry will also note, for each designation, the intended
    routing scope of the address, indicating whether the address is
    intended to be routable only in scoped, local, or private
    contexts, or whether the address prefix is intended to be routed
    globally.

8. The date in the IANA registry is the date of the IANA action,
    i.e., the day IANA records the allocation.

The IANA registry notes, as a general comment, that address prefixes
listed in the IPv4 Special Purpose Address Registry are not
guaranteed routability in any particular local or global context.

IANA will not maintain further sub-registries for any IPv4 Special
Purpose address block designated according to this direction.

4. Security Considerations

Security of the Internet's routing system relies on the ability to
authenticate an assertion of unique control of an address block.
Measures to authenticate such assertions rely on validation that the
address block forms part of an existing allocated address block, and
that there is a trustable and unique reference in the IANA address
registries.

This registry is intended to provide an authoritative source of
information regarding the currency and intended purpose of IPv4
Special Purpose address blocks that are designated from the IANA-
administered IPv4 Special Purpose address pool. This is a small step
towards the creation of a comprehensive registry framework that can
be used as a trust point for commencing a chain of address
validation. Consideration should be given to the use of file
signatures and associated certificate mechanisms to allow
applications to confirm that the registry contents are current, and
that they have been published by the IANA.

5. Acknowledgements

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assistance of Leslie Daigle, Brian Haberman, Bob Hinden, David
Kessens, Kurt Lindqvist, Thomas Narten, and Paul Wilson. While all
these individuals were not explicitly consulted in the preparation of
this document, their original contribution is acknowledged here.

6. Informative References

[IANA]   IANA, "IANA Matrix for Protocol Parameter Assignment/
            Registration Procedures",
            <http://www.iana.org/numbers.html>.

[RFC2860]   Carpenter, B., Baker, F., and M. Roberts, "Memorandum of
            Understanding Concerning the Technical Work of the
            Internet Assigned Numbers Authority", RFC 2860, June 2000.

[RFC4773]   Huston, G., "Administration of the IANA Special Purpose
            IPv6 Address Block", RFC 4773, December 2006.

[RFC5226]   Narten, T. and H. Alvestrand, "Guidelines for Writing an
            IANA Considerations Section in RFCs", BCP 26, RFC 5226,
            May 2008.

[RFC5735]   Cotton, M. and L. Vegoda, "Special Use IPv4 Addresses",
            BCP 153, RFC 5735, January 2010.

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