              Formally Deprecating Some ICMPv4 Message Types

Abstract

   A number of ICMPv4 message types have become obsolete in practice,
   but have never been formally deprecated. This document deprecates
   such ICMPv4 message types, thus cleaning up the corresponding IANA
   registry. Additionally, it updates RFC 792 and RFC 950, obsoletes
   RFC 1788, and requests the RFC Editor to change the status of RFC
   1788 to Historic.

Status of This Memo

   This is an Internet Standards Track document.

   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). Further information on
   Internet Standards is available in 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/rfc6918.

Table of Contents

1. Introduction

   A number of ICMPv4 [RFC0792] message types have been specified over
   the years. A number of these message types have become obsolete in
   practice, but have never been formally deprecated. This document
   deprecates such ICMPv4 message types, "cleaning up" the corresponding
   IANA registry. Additionally, it updates RFC 792 and RFC 950,
   obsoletes RFC 1788, and requests the RFC Editor to change the status
   of RFC 1788 to Historic.

   Section 2 discusses each of the obsoleted ICMPv4 messages. Section 4
   requests the RFC Editor to change the status of RFC 1788 to Historic.

2. Discussion of Deprecated ICMPv4 Message Types

   The following subsections discuss the details of those ICMPv4 message
   types being deprecated, based on publicly available information
   and/or information provided by the requester of the corresponding
   assignment.

2.1. Alternate Host Address (Type 6)

   There is no publicly available information about this message type.

2.2. Information Request (Type 15)

   This message type is specified in [RFC0792]. However, other
   mechanisms (such as DHCP [RFC2131]) have superseded this message type
   for the purpose of host configuration.

2.3. Information Reply (Type 16)

   This message type is specified in [RFC0792]. However, other
   mechanisms (such as DHCP [RFC2131]) have superseded this message type
   for the purpose of host configuration.

2.4. Address Mask Request (Type 17)

   This message type is specified in [RFC0950] and was meant to provide
   a means to obtain the subnet mask. However, other mechanisms (such
   as DHCP [RFC2131]) have superseded this message type for the purpose
   of host configuration.

2.5. Address Mask Reply (Type 18)

   This message type is specified in [RFC0950] and was meant to provide
   a means to obtain the subnet mask. However, other mechanisms (such
   as DHCP [RFC2131]) have superseded this message type for the purpose
   of host configuration.

2.6. Traceroute (Type 30)

   This message type is specified in [RFC1393] and was meant to provide
   an alternative means to discover the path to a destination system.
   This message type has never been widely deployed. The status of
   [RFC1393] has been changed to Historic by [RFC6814], and the
   corresponding option this message type relies on (Traceroute, Type
   82) has been formally obsoleted by [RFC6814].

2.7. Datagram Conversion Error (Type 31)

   This message type was originally meant to report conversion errors in
   the TP/IX [RFC1475] protocol. However, TP/IX was never widely
   implemented or deployed, and the status of [RFC1475] is Historic.

2.8. Mobile Host Redirect (Type 32)

   This message type was originally specified as part of an experimental
   protocol for IP Mobile Hosts [CMU-MOBILE]. However, it was never
   widely implemented or deployed.

2.9. IPv6 Where-Are-You (Type 33)

   This message type was originally specified in [SIMPSON-DISCOV] for
   the purpose of identification of adjacent IPv6 nodes. It was never
   widely deployed or implemented.

2.10. IPv6 I-Am-Here (Type 34)

   This message type was originally specified in [SIMPSON-DISCOV] for
   the purpose of identification of adjacent IPv6 nodes. It was never
   widely deployed or implemented.

2.11. Mobile Registration Request (Type 35)

   This message type was originally meant for transparent routing of
   IPv6 datagrams to Mobile Nodes [SIMPSON-MOBILITY]. It was never
   widely deployed or implemented.

2.12. Mobile Registration Reply (Type 36)

   This message type was originally meant for transparent routing of
   IPv6 datagrams to Mobile Nodes [SIMPSON-MOBILITY]. It was never
   widely deployed or implemented.

2.13. Domain Name Request (Type 37)

   This message type was originally specified in [RFC1788] for the
   purpose of learning the Fully Qualified Domain Name associated with
   an IP address. This message type was never widely deployed or
   implemented.

2.14. Domain Name Reply (Type 38)

   This message type was originally specified in [RFC1788] for the
   purpose of learning the Fully Qualified Domain Name associated with
   an IP address. This message type was never widely deployed or
   implemented.

2.15. SKIP (Type 39)

   This message type was originally specified in [SKIP-ADP] for
   informing supported capabilities in the SKIP [SKIP] protocol. This
   message type was never widely deployed or implemented.

3. IANA Considerations

   The "Internet Control Message Protocol (ICMP) Parameters" registry
   [IANA-ICMP] contains the list of the currently assigned ICMP message
   Types.

   This document formally deprecates the following ICMP message Types
   and requests IANA to mark them as such in the corresponding registry
   [IANA-ICMP]:

   o Alternate Host Address (Type 6)

   o Information Request (Type 15)

   o Information Reply (Type 16)

   o Address Mask Request (Type 17)

   o Address Mask Reply (Type 18)

   o Traceroute (Type 30)

   o Datagram Conversion Error (Type 31)

   o Mobile Host Redirect (Type 32)

   o IPv6 Where-Are-You (Type 33)

   o IPv6 I-Am-Here (Type 34)

   o Mobile Registration Request (Type 35)

   o Mobile Registration Reply (Type 36)

   o Domain Name Request (Type 37)

   o Domain Name Reply (Type 38)

   o SKIP (Type 39)

      The ICMPv4 Source Quench Message (Type 4) has already been
      deprecated by [RFC6633].

4. Changing the Status of RFC 1788 to Historic

   This document requests the RFC Editor to change the status of
   [RFC1788] to Historic.

      Both [RFC1385] and [RFC1393] already have a status of Historic.
      The status of other RFCs (such as [RFC0792] and [RFC0950]) is not
      changed since other parts of these documents are still current.

5. Security Considerations

   This document does not modify the security properties of the ICMPv4
   message types being deprecated. However, formally deprecating these
   message types serves as a basis for, e.g., filtering these packets.

6. Acknowledgments

   The authors would like to thank Ron Bonica and Joel Halpern for their
   guidance.

7. References

7.1. Normative References

   [RFC0792]   Postel, J., "Internet Control Message Protocol", STD 5,
                 RFC 792, September 1981.

   [RFC6814]   Pignataro, C. and F. Gont, "Formally Deprecating Some
                 IPv4 Options", RFC 6814, November 2012.

7.2. Informative References

   [CMU-MOBILE] Johnson, D., "Transparent Internet Routing for IP Mobile
                 Hosts", Work in Progress, July 1993.

   [IANA-ICMP]   Internet Assigned Numbers Authority, "Internet Control
                 Message Protocol (ICMP) Parameters", September 2012,
                 <http://www.iana.org/assignments/icmp-parameters>.

   [RFC0950]   Mogul, J. and J. Postel, "Internet Standard Subnetting
                 Procedure", STD 5, RFC 950, August 1985.

   [RFC1385]   Wang, Z., "EIP: The Extended Internet Protocol",
                  RFC 1385, November 1992.

   [RFC1393]   Malkin, G., "Traceroute Using an IP Option", RFC 1393,
                  January 1993.

   [RFC1475]   Ullmann, R., "TP/IX: The Next Internet", RFC 1475,
                  June 1993.

   [RFC1788]   Simpson, W., "ICMP Domain Name Messages", RFC 1788,
                  April 1995.

   [RFC2131]   Droms, R., "Dynamic Host Configuration Protocol",
                  RFC 2131, March 1997.

   [RFC6633]   Gont, F., "Deprecation of ICMP Source Quench Messages",
                  RFC 6633, May 2012.

   [SIMPSON-DISCOV]
                  Simpson, W., "IPv6 Neighbor Discovery -- ICMP Message
                  Formats", Work in Progress, January 1995.

   [SIMPSON-MOBILITY]
                  Simpson, W., "IPv6 Mobility Support", Work in Progress,
                  November 1994.

   [SKIP]   Aziz, A., Markson, T., and H. Prafullchandra, "Simple
                  Key-Management For Internet Protocols (SKIP)", Work
                  in Progress, December 1995.

   [SKIP-ADP]   Aziz, A., Markson, T., and H. Prafullchandra, "SKIP
                  Algorithm Discovery Protocol", Work in Progress,
                  December 1995.

Authors' Addresses

   Fernando Gont
   UTN-FRH / SI6 Networks
   Evaristo Carriego 2644
   Haedo, Provincia de Buenos Aires 1706
   Argentina

   Phone: +54 11 4650 8472
   EMail: fgont@si6networks.com
   URI: http://www.si6networks.com

   Carlos Pignataro
   Cisco Systems
   7200-12 Kit Creek Road
   Research Triangle Park, NC 27709
   US

   EMail: cpignata@cisco.com