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Formally Deprecating Some IPv4 Options

Abstract

A number of IPv4 options have become obsolete in practice, but have never been formally deprecated. This document deprecates such IPv4 options, thus cleaning up the corresponding IANA registry. Additionally, it obsoletes RFCs 1385, 1393, 1475, and 1770, and requests that the RFC Editor change their status 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/rfc6814.

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1. Introduction

The Internet Protocol version 4 (IPv4) [RFC791] provides for expansion of the protocol by supporting a number of "options" in the variable-length IPv4 header. IPv4 options are identified by an option "type" value, whose registration is managed by IANA [IANA-IP]. A number of IPv4 options have become obsolete in practice, but have never been formally deprecated. This document deprecates such IPv4 options, thus cleaning up the corresponding IANA registry.

This document also obsoletes [RFC1385], [RFC1393], [RFC1475], and [RFC1770], and requests that the RFC Editor change their status to Historic.

2. Discussion of Deprecated Options

The following subsections discuss the options being deprecated. No other reference information has been found.

2.1. Stream ID

The Stream ID option is obsolete. It is specified in RFC 791 [RFC791], and is deprecated in Section 3.2.1.8 of RFC 1122 [RFC1122] and Section 4.2.2.1 of RFC 1812 [RFC1812].

2.2. Extended Internet Protocol

The Extended Internet Protocol option is defined in [RFC1385] and is superseded by [RFC2460].

2.3. Traceroute

The Traceroute option is defined in [RFC1393]. The Traceroute option is defined as Experimental; it was never widely deployed on the public Internet.

2.4. ENCODE

This option was used for experimentation around IP-layer encryption. No products are known to ever have shipped with support for this option.

2.5. VISA

This option was part of an experiment [VISA87] [VISA89] at USC and was never widely deployed.

2.6. Address Extension

The Address Extension option is defined in an Experimental RFC [RFC1475] and marked as IPv7. IPv7 was never widely deployed.

2.7. Selective Directed Broadcast

The Selective Directed Broadcast option was originally defined in [RFC1770]. This option was never widely deployed and the approach was abandoned.

2.8. Dynamic Packet State

The Dynamic Packet State option was specified in [DIFFSERV-DPS]. The aforementioned document was meant to be published as Experimental, but it never became an RFC. The IP option was never widely deployed.

2.9. Upstream Multicast Pkt.

This option was originally specified in [BIDIR-PIM]. Its use was deprecated by [RFC5015], which employs a control-plane mechanism to solve the problem of doing upstream forwarding of multicast packets on a multi-access LAN.

3. IANA Considerations

The "IP OPTION NUMBERS" registry [IANA-IP] contains the list of currently assigned IP option numbers. This registry also denotes a deprecated IP Option Number by marking it with a footnote.

This document formally deprecates the following options. IANA has marked them as such in the corresponding registry [IANA-IP].

Copy	Class	Number	Value	Name	Reference
1	0	8	136	SID - Stream ID	[RFC791,JBP]
1	0	14	142	VISA - Experimental Access Control	[Estrin]
0	0	15	15	ENCODE - ???	[VerSteeg]
1	0	17	145	EIP - Extended Internet Protocol	[RFC1385]
0	2	18	82	TR - Traceroute	[RFC1393]
1	0	19	147	ADDEXT - Address Extension	[Ullmann IPv7]
1	0	21	149	SDB - Selective Directed Broadcast	[Graff]
1	0	23	151	DPS - Dynamic Packet State	[Malis]
1	0	24	152	UMP - Upstream Multicast Pkt.	[Farinacci]

The IP options "MTU Probe" (MTUP, value 11) and "MTU Reply" (MTUR, value 12) were initially defined in [RFC1063] and have already been deprecated by [RFC1191].

4. Changing the Status of the Corresponding RFCs to Historic

Per this document, the RFC Editor has changed the status of [RFC1385], [RFC1393], [RFC1475], and [RFC1770] to Historic.

5. Security Considerations

This document does not modify the security properties of the IPv4 options being deprecated.

6. Acknowledgments

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7. References

7.1. Normative References

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[RFC1191] Mogul, J. and S. Deering, "Path MTU discovery", RFC 1191, November 1990.

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