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C. Pignataro
Cisco Systems
F. Gont
UTN-FRH / SI6 Networks
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Formally Deprecating some IPv4 Options
draft-gp-intarea-obsolete-ipv4-options-iana-02

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, and serving as a basis for providing advice about the filtering of packets containing these options. Additionally, it requests that the status of the corresponding RFCs be changed to "Historic".

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Internet-Draft

Deprecating some IPv4 Options

September 2012

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Table of Contents

1.	Introduction	3
2.	Discussion of Deprecated Options	3
2.1.	Stream ID	3
2.2.	Extended Internet Protocol	3
2.3.	Traceroute	3
2.4.	ENCODE	3
2.5.	VISA	3
2.6.	Address Extension	4
2.7.	Selective Directed Broadcast	4
2.8.	Dynamic Packet State	4
2.9.	Upstream Multicast Pkt.	4
3.	IANA Considerations	4
4.	Changing the status of the corresponding RFCs to Historic . . .	5
5.	Security Considerations	5
6.	Acknowledgments	5
7.	References	5
7.1.	Normative References	5
7.2.	Informative References	6
	Authors' Addresses	7

Internet-Draft

Deprecating some IPv4 Options

September 2012

[1.](#) Introduction

The Internet Protocol version 4 (IPv4) [[RFC0791](#)] 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, "cleaning up" the corresponding IANA registry.

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

[2.](#) Discussion of Deprecated Options

The following subsections discuss the details of options being deprecated, and no other reference information has been found.

[2.1.](#) Stream ID

The Stream ID option is obsolete. It is specified in [RFC 791](#) [[RFC0791](#)], and 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" and 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 the Experimental [[RFC1475](#)], and marked as IPv7.

[2.7.](#) Selective Directed Broadcast

The Selective Directed Broadcast option is originally defined in [[RFC1770](#)].

[2.8.](#) Dynamic Packet State

The Dynamic Packet State option was specified in [[I-D.stoica-diffserv-dps](#)]. The aforementioned document was meant to be published as "Experimental", but never became an RFC.

[2.9.](#) Upstream Multicast Pkt.

This option was originally specified in [[draft-farinacci-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 the currently assigned IP option numbers. This registry also denotes an deprecated IP Option Number by marking it with a single asterisk

("*").

This document formally deprecates the following options, and requests IANA to mark 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,

Pignataro & Gont

Expires March 27, 2013

[Page 4]

Internet-Draft

Deprecating some IPv4 Options

September 2012

value 12) initially defined in [[RFC1063](#)] have already been deprecated by [[RFC1191](#)].

[4.](#) Changing the status of the corresponding RFCs to Historic

This document requests the RFC Editor to change 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. However, formally deprecating these options serves as a basis for e.g. providing advice about filtering packets containing these options (as in [[I-D.ietf-opsec-ip-options-filtering](#)]).

[6.](#) Acknowledgments

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Authors' Addresses

Carlos Pignataro
Cisco Systems
7200-12 Kit Creek Road

Research Triangle Park, NC 27709
US

Email: cpignata@cisco.com

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>