Network Working Group Internet-Draft Expires: December 2002 Myung-Ki Shin ETRI June 2002

DSTM Ports Option for DHCPv6 draft-ietf-dhc-dhcpv6-opt-dstm-ports-01.txt

Status of this Memo

This document is an Internet-Draft and is in full conformance with all provisions of <u>Section 10 of RFC2026</u>.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF), its areas, and its working groups. Note that other groups may also distribute working documents as Internet-Drafts.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

The list of current Internet-Drafts can be accessed at http://www.ietf.org/ietf/lid-abstracts.txt.

The list of Internet-Draft Shadow Directories can be accessed at http://www.ietf.org/shadow.html.

This Internet-Draft will expire on August 2002.

Copyright Notice

Copyright (C) The Internet Society (2002). All Rights Reserved.

Abstract

The DSTM Ports Option provides DSTM (Dual Stack Transition Mechanism) configuration information to DHCPv6 hosts.

1. Introduction

This document describes the Ports Option for DHCPv6 $[\underline{2}]$ that provide information for hosts using the "Dual Stack Transition Mechanism" (DSTM) $[\underline{3}]$.

2. Requirements

Shin

[Page 1]

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 <u>RFC 2119</u> [<u>1</u>].

3. Terminology

This document uses terminology specific to IPv6 and DHCPv6 as defined in section "Terminology" of the DHCPv6 specification.

<u>4</u>. DSTM Ports Option

The DSTM Ports option carries a port range that is to be used for the associated IPv4-mapped IPv6 address in an IA_DSTM option $[\underline{5}]$.

The format of the DSTM Ports option is:

Θ	1		2		3
0123456	578901234	56789	0 1 2 3 4	56789	0 1
+-+-+-+-+-+-+-+-	.+.+.+.+.+.+.+.+	+ - + - + - + - +	+ - + - + - + - +	+ - + - + - + - + - •	+ - + - +
OPTION_DSTM_PORTS		I	option-1	length	
+-+-+-+-+-+-+-	-+-+-+-+-+-+-+-+	- + - + - + - + - +	+ - + - + - + - +	+ - + - + - + - + - •	+ - + - +
star	rt port	I	end port	t	
+-					
option-code: option-length:	OPTION_DSTM_PORTS	S (TBD)			
start port:	The start port nu mapped IPv6 addre	umber for t ess.	the associa	ated IPv4-	
end port:	The end port numb mapped IPv6 addre	per for the ess.	e associate	ed IPv4-	
A DSTM Ports opt specify the port	tion MAY be encaps t range associted	ulated in with the 1	an IA_DSTM IPv4-mapped	ዛ option [<u>!</u> d IPv6 add	<u>5</u>] to ress.

A DSTM Ports option MUST NOT be used except when encapsulated in an IA_DSTM option [5].

5. Appearance of these options

The DSTM Ports option MUST only appear as an encapsulated option in an IA_DSTM option [5].

The DSTM Ports option may be used by an intruder DHCP server to

Shin

Expires December 2002 [Page 2]

assign an invalid port range to a DHCP client in a denial of service attack.

To avoid this security hazard, a DHCP client MUST use authenticated DHCP to confirm that it is exchanging the DSTM options with an authorized DHCP server.

7. IANA Considerations

IANA is requested to assign an option code to this option from the option-code space defined in section "DHCP Option" of the DHCPv6 specification $[\underline{2}]$.

References

- [1] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", <u>BCP 14</u>, <u>RFC 2119</u>, March 1997.
- [2] Bound, J., Carney, M., Perkins, C., Lemon, T., Volz, B. and R. Droms (ed.), "Dynamic Host Configuration Protocol for IPv6 (DHCPv6)", <u>draft-ietf-dhc-dhcpv6-26</u> (work in progress), June 2002.
- [3] Bound, J., "Dual Stack Transition Mechanism (DSTM)", <u>draft-ietf-ngtrans-dstm-07</u> (work in progress), Feburary 2002.
- [4] Hinden, R. and S. Deering, "IP Version 6 Addressing Architecture", <u>RFC 2373</u>, July 1998.
- [5] Volz, B. et al., "DSTM Options for DHCPv6", <u>draft-ietf-dhc-dhcpv6-opt-dstm-01.txt</u>, (work in progress), April 2002.

Authors' Addresses

Myung-Ki Shin ETRI PEC 161 Kajong-Dong, Yusong-Gu, Taejon 305-350, Korea Tel : +82 42 860 4847 Fax : +82 42 861 5404 E-mail : mkshin@pec.etri.re.kr

Full Copyright Statement

Copyright (C) The Internet Society (2002). All Rights Reserved.

This document and translations of it may be copied and furnished to

Shin

Expires December 2002

[Page 3]

others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this paragraph are included on all such copies and derivative works. However, this document itself may not be modified in any way, such as by removing the copyright notice or references to the Internet Society or other Internet organizations, except as needed for the purpose of developing Internet standards in which case the procedures for copyrights defined in the Internet Standards process must be followed, or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by the Internet Society or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and THE INTERNET SOCIETY AND THE INTERNET ENGINEERING TASK FORCE DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Acknowledgement

Funding for the RFC Editor function is currently provided by the Internet Society.

Shin

Expires December 2002

[Page 4]