

DHC  
Internet-Draft  
Expires: June 20, 2005

B. Volz  
Cisco Systems, Inc.  
December 20, 2004

**DHCPv6 Relay Agent Remote ID Option**  
**draft-volz-dhc-dhcpv6-remoteid-00.txt**

Status of this Memo

This document is an Internet-Draft and is subject to all provisions of [section 3 of RFC 3667](#). By submitting this Internet-Draft, each author represents that any applicable patent or other IPR claims of which he or she is aware have been or will be disclosed, and any of which he or she become aware will be disclosed, in accordance with [RFC 3668](#).

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/1id-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 June 20, 2005.

Copyright Notice

Copyright (C) The Internet Society (2004).

Abstract

This memo defines a new Relay Agent Remote-ID option for the Dynamic Host Configuration Protocol for IPv6 (DHCPv6). This option is the DHCPv6 equivalent for the Dynamic Host Configuration Protocol for IPv4 (DHCPv4) Relay Agent Option's Remote-ID suboption as specified in [RFC 3046](#).



## Table of Contents

<a href="#">1.</a>	Introduction . . . . .	<a href="#">3</a>
<a href="#">2.</a>	Requirements Terminology . . . . .	<a href="#">3</a>
<a href="#">3.</a>	The Relay Agent Remote-ID Option . . . . .	<a href="#">3</a>
<a href="#">4.</a>	DHCPv6 Relay Agent Behavior . . . . .	<a href="#">4</a>
<a href="#">5.</a>	DHCPv6 Server Behavior . . . . .	<a href="#">4</a>
<a href="#">6.</a>	Security Considerations . . . . .	<a href="#">4</a>
<a href="#">7.</a>	IANA Considerations . . . . .	<a href="#">5</a>
<a href="#">8.</a>	Acknowledgements . . . . .	<a href="#">5</a>
<a href="#">9.</a>	References . . . . .	<a href="#">5</a>
<a href="#">9.1</a>	Normative References . . . . .	<a href="#">5</a>
<a href="#">9.2</a>	Informative References . . . . .	<a href="#">5</a>
	Author's Address . . . . .	<a href="#">5</a>
	Intellectual Property and Copyright Statements . . . . .	<a href="#">6</a>



## **1. Introduction**

DHCPv6 [[1](#)] provides IP addresses and configuration information for IPv6 clients. It includes a relay agent capability, in which processes within the network infrastructure receive multicast messages from clients and relay them to DHCPv6 servers. In some network environments, it will be useful for the relay agent to add information to the DHCPv6 message before relaying it.

The information that relay agents supply can also be used in the server's decision making about the addresses, delegated prefixes [[4](#)], and configuration parameters that the client is to receive.

The memo specifies the DHCPv6 equivalent of the DHCPv4 Relay Agent option's Remote-ID suboption as specified in [[2](#)]. The motivation and usage scenarios are provided in [[2](#)].

## **2. Requirements Terminology**

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 [[3](#)].

## **3. The Relay Agent Remote-ID Option**

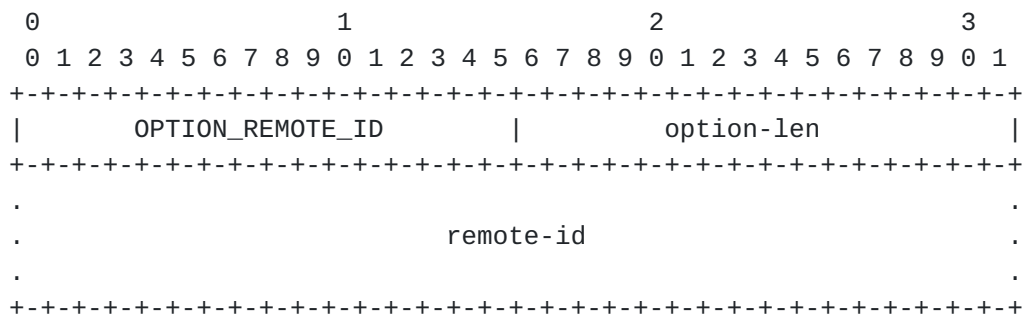
This option MAY be added by DHCPv6 relay agents which terminate switched or permanent circuits and have mechanisms to identify the remote host end of the circuit. The remote-id field MAY be used to encode, for instance:

- o a "caller ID" telephone number for dial-up connection
- o a "user name" prompted for by a Remote Access Server
- o a remote caller ATM address
- o a "modem ID" of a cable data modem
- o the remote IP address of a point-to-point link
- o a remote X.25 address for X.25 connections
- o an interface identity, which might be the switch's DUID [[1](#)] suffixed by the interface-id from the DHCPv6 Interface-Id option.

The remote ID MUST be globally unique.



The format of the DHCPv6 Relay Agent Remote-ID option is shown below:



option-code	OPTION_REMOTE_ID (TBD)
option-len	length, in octets, of the remote-id field. The minimum length is 1 octet.
remote-id	The opaque value for the globally unique remote-id.

#### 4. DHCPv6 Relay Agent Behavior

DHCPv6 relay agents MAY be configured to include a Remote-ID option in relayed (RELAY-FORW) DHCPv6 messages.

#### 5. DHCPv6 Server Behavior

This option provides additional information to the DHCPv6 server. The DHCPv6 server, if it is configured to support this option, MAY use this information to select parameters specific to particular users, hosts, or subscriber modems. The remote-id SHOULD be considered an opaque value, with policies based on exact string match only; that is, the option SHOULD NOT be internally parsed by the server.

There is no requirement that a server return this option and its data in a RELAY-REPLY message.

#### 6. Security Considerations

See [1] [section 21.1](#), on securing DHCPv6 messages sent between servers and relay agents, and [section 23](#), on general DHCPv6 security considerations. [2] discusses how this information can be used to enhance trust in some environments.





## **7. IANA Considerations**

IANA is requested to assign a DHCPv6 option code for the Relay Agent Remote-ID Option.

## **8. Acknowledgements**

Thanks to Michael Patrick for [\[2\]](#), from which I've liberally borrowed text.

## **9. References**

### **9.1 Normative References**

- [1] Droms, R., Bound, J., Volz, B., Lemon, T., Perkins, C. and M. Carney, "Dynamic Host Configuration Protocol for IPv6 (DHCPv6)", [RFC 3315](#), July 2003.
- [2] Patrick, M., "DHCP Relay Agent Information Option", [RFC 3046](#), January 2001.
- [3] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

### **9.2 Informative References**

- [4] Troan, O. and R. Droms, "IPv6 Prefix Options for Dynamic Host Configuration Protocol (DHCP) version 6", [RFC 3633](#), December 2003.

## Author's Address

Bernard Volz  
Cisco Systems, Inc.  
1414 Massachusetts Ave.  
Boxborough, MA 01719  
USA

Phone: +1 978 936 0382  
EMail: [volz@cisco.com](mailto:volz@cisco.com)



## Intellectual Property Statement

The IETF takes no position regarding the validity or scope of any Intellectual Property Rights or other rights that might be claimed to pertain to the implementation or use of the technology described in this document or the extent to which any license under such rights might or might not be available; nor does it represent that it has made any independent effort to identify any such rights. Information on the procedures with respect to rights in RFC documents can be found in [BCP 78](#) and [BCP 79](#).

Copies of IPR disclosures made to the IETF Secretariat and any assurances of licenses to be made available, or the result of an attempt made to obtain a general license or permission for the use of such proprietary rights by implementers or users of this specification can be obtained from the IETF on-line IPR repository at <http://www.ietf.org/ipr>.

The IETF invites any interested party to bring to its attention any copyrights, patents or patent applications, or other proprietary rights that may cover technology that may be required to implement this standard. Please address the information to the IETF at [ietf-ipr@ietf.org](mailto:ietf-ipr@ietf.org).

## Disclaimer of Validity

This document and the information contained herein are provided on an "AS IS" basis and THE CONTRIBUTOR, THE ORGANIZATION HE/SHE REPRESENTS OR IS SPONSORED BY (IF ANY), THE INTERNET SOCIETY AND THE INTERNET ENGINEERING TASK FORCE DISCLAIM 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.

## Copyright Statement

Copyright (C) The Internet Society (2004). This document is subject to the rights, licenses and restrictions contained in [BCP 78](#), and except as set forth therein, the authors retain all their rights.

## Acknowledgment

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

