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DHCPv6 Relay Agent Remote ID Option
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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.

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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].

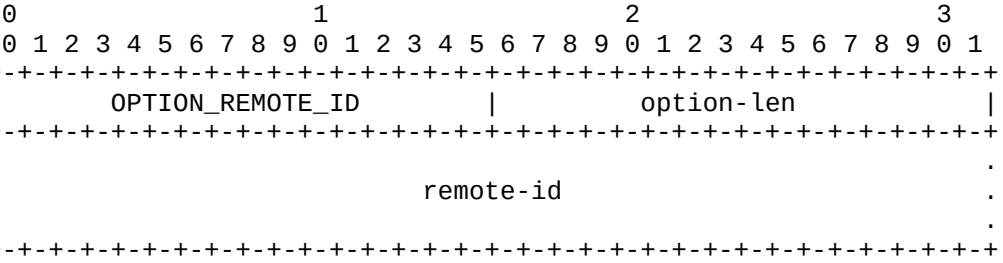
3. The Relay Agent Remote-ID Option

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:

- a "caller ID" telephone number for dial-up connection
- a "user name" prompted for by a Remote Access Server
- a remote caller ATM address
- a "modem ID" of a cable data modem
- the remote IP address of a point-to-point link
- a remote X.25 address for X.25 connections
- 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.

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