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DHCPv6 Vendor-specific Message
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Abstract

This document requests a vendor-specific DHCPv6 message assignment. This message can be used for vendor specific and experimental purposes.

Internet-Draft

DHCPv6 Vendor-specific Message

August 2009

Table of Contents

1.	Introduction	3
2.	Terminology	3
3.	Vendor-specific Message	3
4.	Security Considerations	5
5.	IANA Considerations	5
6.	References	6
6.1.	Normative References	6
6.2.	Informative References	6
	Author's Address	6

Internet-Draft

DHCPv6 Vendor-specific Message

August 2009

1. Introduction

DHCPv6 [[RFC3315](#)] specifies a mechanism for the assignment of addresses and configuration information to nodes. The protocol provides for 256 possible message codes, of which a small number are assigned ([[DHCPv6Params](#)]). Each of the assigned message codes have specific purposes. New message codes are assigned through Standards Action (see [Section 24 of \[RFC3315\]](#)).

There may be a need for vendors of DHCPv6 clients, relay agents, or servers to experiment with new capabilities that require new messages to be exchanged between these elements. Thus, this document defines the format for and requests that a new message code be reserved for vendor-specific and experimental purposes.

2. 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 [[RFC2119](#)].

3. Vendor-specific Message

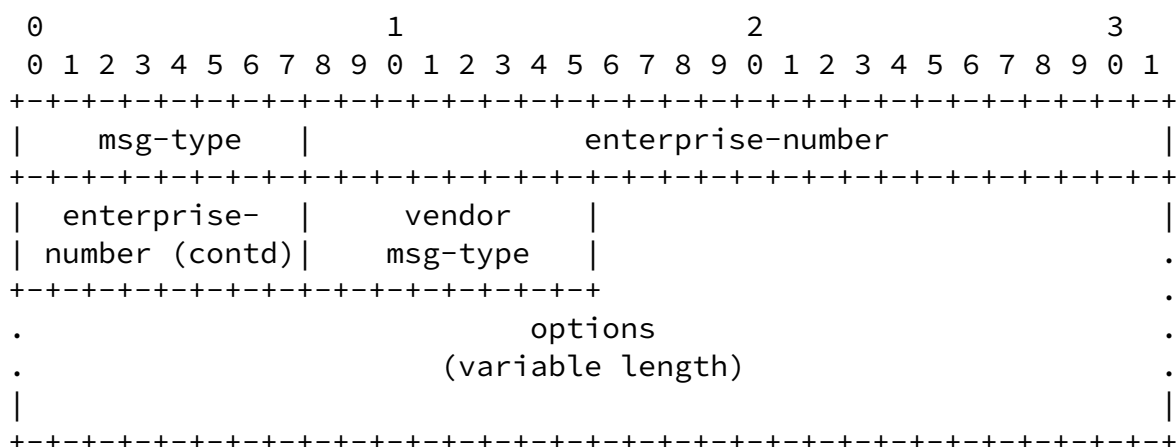
The vendor-specific message may be exchanged between clients, relay agents, and/or servers and allows multiple vendors to make use of the message for completely different and independent purposes.

Clients and servers MAY chose to support this message; those that do not, MUST discard the message. Relay agents SHOULD relay these messages as they would other DHCPv6 messages unless the relay agent understands the specific message and knows that the message was directed at it.

Applications using these messages MUST NOT assume that all DHCPv6

clients, relay agents, and servers support them and MUST use good networking practices when transmitting and retransmitting these messages (see [Section 14 of \[RFC3315\]](#) for recommendations). For some applications, it may be appropriate to use a Vendor Class or Vendor-specific Information Option ([\[RFC3315\]](#)) in a standard DHCPv6 exchange to negotiate whether the end-points support the vendor-specific message.

The format of the DHCPv6 Vendor-specific Message is shown below:



msg-type VENDOR-SPECIFIC (TBD)

enterprise-number The vendor's registered Enterprise Number as registered with [\[EID\]](#).

vendor-msg-type The vendor's message-type. The values are defined by the vendor identified in the enterprise-number field and are not managed by IANA.

options The vendor specific options carried in this message.

The options MUST be encoded as a sequence of code/length/value fields

of identical format to the DHCPv6 options field. The option codes are defined by the vendor identified in the enterprise-number field and are not managed by IANA. Each of the options is formatted as follows:

Volz

Expires February 4, 2010

[Page 4]

Internet-Draft

DHCPv6 Vendor-specific Message

August 2009

[illegible]

opt-code	The code for the option.
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option-len	An unsigned integer giving the length of the option-data field in this option in octets.
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option-data	The data area for the option.
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4. Security Considerations

The Security Considerations of [RFC3315] apply.

This new message does potentially open up new avenues of attacking clients, relay agents, or servers. The exact nature of these attacks will depend on what functions and capabilities the message exposes and are thus not possible to describe in this document. Clients and servers that have no use for these messages SHOULD discard them and thus the threat is no different than before this message was assigned.

Vendors using this new message should use the DHCPv6 security mechanisms (the Auth option or IPsec [[RFC3315](#)] as appropriate) and carefully consider the security implications of the functions and capabilities exposed.

[5.](#) IANA Considerations

IANA is requested to assign DHCPv6 Message type 254 to the Vendor-specific Message in the registry maintained in [[DHCPv6Params](#)]:

254 VENDOR-SPECIFIC

[6.](#) References

Volz	Expires February 4, 2010	[Page 5]
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Internet-Draft	DHCPv6 Vendor-specific Message	August 2009
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[6.1.](#) Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

[RFC3315] Droms, R., Bound, J., Volz, B., Lemon, T., Perkins, C., and M. Carney, "Dynamic Host Configuration Protocol for IPv6 (DHCPv6)", [RFC 3315](#), July 2003.

[EID] IANA, "Private Enterprise Numbers."
<http://www.iana.org/assignments/enterprise-numbers>".

[6.2.](#) Informative References

[DHCPv6Params]

IANA, "Dynamic Host Configuration Protocol for IPv6
(DHCPv6).
<http://www.iana.org/assignments/dhcpv6-parameters>".

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