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# Mobile IPv6 Vendor Specific Option
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Abstract

There is a need for vendor specific extensions to Mobility Header messages so that Mobile IPv6 vendors are able to extend the protocol for research or deployment purposes. This document defines a new vendor specific mobility option.

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## 1. Introduction

Vendor specific messages have traditionally allowed vendors to implement extensions to some protocols and distinguish themselves from other vendors. These messages are clearly marked by a Vendor ID that identifies the vendor. A particular vendor's implementation identifies the vendor extension by recognizing the Vendor ID. Implementations that do not recognize the Vendor ID either discard or skip processing the message.

Mobile IPv6 [2] is being deployed and there is a need for vendor specific extensions to Mobility Header messages so that vendors are able to extend the Mobile IPv6 protocol for research or deployment purposes.

This document defines a new mobility option, the Vendor Specific Mobility option, which can be carried in any Mobility Header message. The Vendor Specific mobility option MUST be used only with a Mobility Header message. Mobility options, by definition, can be skipped if an implementation does not recognize the mobility option type [2].

The messages defined in this document can also be used for NEMO [3] and Proxy MIPv6 [4] since these protocols also use Mobility Header messages.

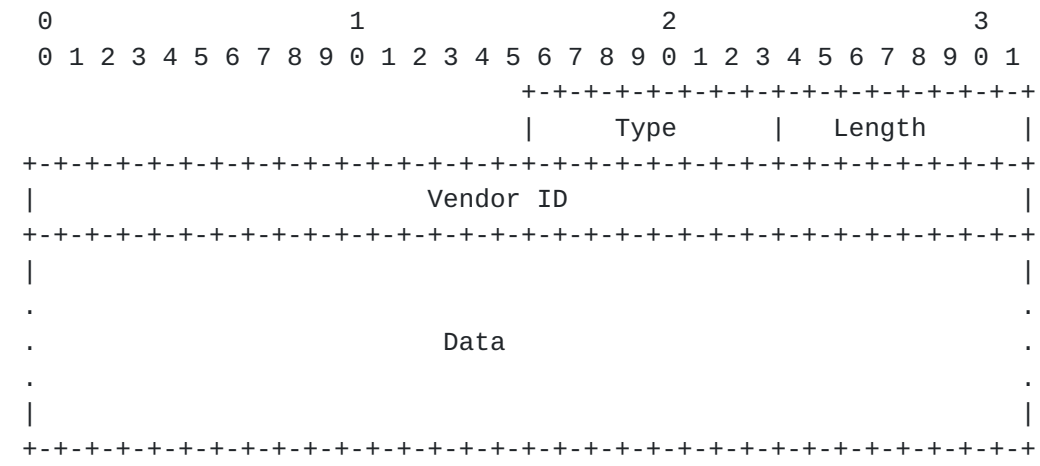
Vendor specific extensions to protocols can cause serious interoperability issues if they are not used carefully. The vendor specific extensions MUST be standardized in the IETF if they are to be deployed in a large scale or if multiple vendors are involved in a particular system or deployment. Experience has shown that vendor specific extensions benefit from IETF review and standardization.

## 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 [1].

## 3. Vendor Specific Mobility Option

The Vendor Specific Mobility Option can be included in any Mobility Header message and has an alignment requirement of 4n+2. If the Mobility Header message includes a Binding Authorization Data option [2], then the Vendor Specific mobility option should appear before the Binding Authorization Data option. Multiple Vendor Specific mobility options MAY be present in a Mobility Header message.




Type

A 8-bit field indicating that it is a Vendor Specific mobility option.

Length

A 8-bit indicating the length of the option in octets excluding the Type and Length fields.

Vendor ID

The SMI Network Management Private Enterprise Code of the Vendor/ Organization as defined by IANA.

Data

Vendor specific data that is carried in this message.

## 4. Security Considerations

The Vendor Specific mobility messages should be protected in a manner similar to Binding Updates and Binding acknowledgements if it carries information that should not be revealed on the wire or that can affect the binding cache entry at the home agent or the correspondent node.

## 5. IANA Considerations

The Vendor Specific mobility option defined in Section 3, should have the type value allocated from the same space as Mobility Options [2].

## 6. Acknowledgements

The author would like to thank Jari Arkko and Basavaraj Patil with whom the contents of this document were discussed first.

## 7. References

### 7.1. Normative References

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

[2] Johnson, D., Perkins, C., and J. Arkko, "Mobility Support in IPv6", RFC 3775, June 2004.

### 7.2. Informative References

[3] Devarapalli, V., Wakikawa, R., Petrescu, A., and P. Thubert, "Network Mobility (NEMO) Basic Support Protocol", RFC 3963, January 2005.

[4] Gundavelli, S., "Proxy Mobile IPv6", draft-sgundave-mip6-proxymip6-01 (work in progress), January 2007.

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