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MN Identifier Option for Mobile IPv6
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Abstract

This document defines new mobility option to identify mobility entities using identifiers other than the home IP address. This option can be used in messages containing a mobility header.

Table of Contents

1.	Introduction	3
2.	Terminology	4
3.	MN Identifier option	5
3.1	MN-NAI mobility option	6
3.2	Processing Considerations	6
4.	Security Considerations	7
5.	IANA Considerations	8
6.	Acknowledgements	9
7.	Normative References	9
	Authors' Addresses	9
	Intellectual Property and Copyright Statements	11

1. Introduction

The base specification of Mobile IPv6 [[RFC3775](#)] identifies mobility entities using an IPv6 address. A mechanism is needed where in mobility entities can be identified using other identifiers (for example, a network access identifier (NAI) [[RFC2486](#)], International Mobile Station Identifier (IMSI), an application/deployment specific opaque identifier etc). Using other identities for a mobile node (MN) permits various applicabilities, e.g. authentication using existing infrastructure (AAA (Authentication, Authorization and Accounting), HLR/AuC (Home Location Register/Authentication Center)), dynamic allocation of a mobility anchor point, dynamic allocation of an address etc.

This document defines an option with subtype number which identify a specific type of identifier. One instance of subtype, the NAI is defined in [Section 3.1](#). It is expected that other types of identifiers will be defined by other documents in the future.

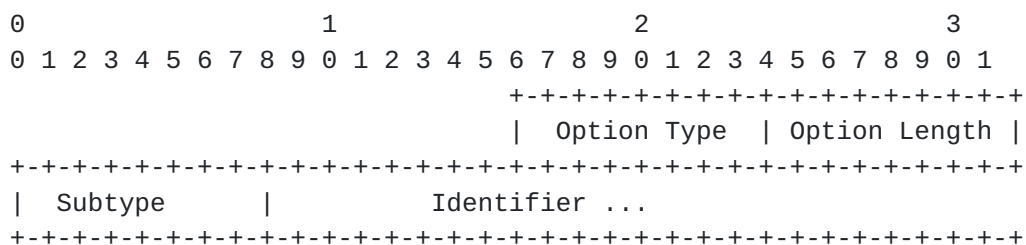
2. Terminology

The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#).

3. MN Identifier option

This section defines the Mobile Node Identifier option. Various forms of identifiers can be used to identify a MN. Some examples include a Network Access Identifier (NAI) [RFC2486], an opaque identifier applicable to a particular application, etc. The sub-type field in the option defines the specific type of identifier.

This option can be used in mobility messages containing a mobility header. The subtype field in the option is used to interpret the specific type of identifier.



Option Type:

MN-ID-OPTION-TYPE to be defined by IANA. An 8-bit identifier of the type mobility option.

Option Length:

8-bit unsigned integer, representing the length in octets of the Subtype and Identifier fields.

Subtype:

Subtype field defines the specific type of identifier included in the identifier field.

Identifier:

A variable length identifier of type as specified by the subtype field of this option.

Alignment requirements:

This option does not have any alignment requirements.

3.1 MN-NAI mobility option

The format of the MN-NAI mobility option is as defined in [Section 3](#). This option uses the subtype value of 1. The MN-NAI mobility option is used to identify the mobile node.

The MN-NAI mobility option uses an identifier of the form user@realm [[RFC2486](#)].

3.2 Processing Considerations

When present, this option MUST appear before any authentication enabling extension in a message containing a mobility header. Also, if this option is present in the first Binding Update used to create a binding cache entry at the Home Agent, it MUST be present in all subsequent Binding Updates used to renew the binding cache entry. If this option is present in the Binding Update, it MUST be included in the corresponding reply (Binding Acknowledgement).

4. Security Considerations

None. This document defines new identifiers for a mobile node and does not introduce new security threats.

5. IANA Considerations

IANA services are required for this document. The values for new mobility options must be assigned from the Mobile IPv6 [[RFC3775](#)] numbering space.

The values for Mobility Option types MN-ID-OPTION-TYPE as defined in [Section 3](#) need to be assigned. The suggested value is 7 for the MN-ID-OPTION-TYPE.

IANA should record value for this new Mobility Option.

6. Acknowledgements

The authors would like to thank Basavaraj Patil for his review and suggestions on this draft.

7 Normative References

- [RFC2486] Aboba, B. and M. Beadles, "The Network Access Identifier", [RFC 2486](#), January 1999.
- [RFC3775] Johnson, D., Perkins, C. and J. Arkko, "Mobility Support in IPv6", [RFC 3775](#), June 2004.

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