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Vendor Specific LCAF
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Abstract

This document describes a new LCAF for LISP, the Vendor Specific LCAF. This LCAF enables organizations to have internal encodings for LCAF addresses.

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Table of Contents

1.	Introduction	2
2.	Requirements Language	2
3.	Vendor Specific LCAF	2
4.	Security Considerations	3
5.	Acknowledgments	3
6.	IANA Considerations	4
7.	Normative References	4
	Authors' Addresses	4

[1.](#) Introduction

The LISP Canonical Address Format [[RFC8060](#)] defines the format and encoding for different address types that can be used on LISP [[RFC6830](#)] deployments. However, certain deployments require specific format encodings that may not be applicable outside of the use-case for which they are defined. The Vendor Specific LCAF allows organizations to create LCAF addresses to be used only internally on particular LISP deployments.

[2.](#) Requirements Language

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 LCAF

The Vendor Specific LCAF relies on using the IEEE Organizationally Unique Identifier (OUI) [[IEEE.802.2001](#)] to prevent collisions across vendors or organizations using the LCAF. The format of the Vendor Specific LCAF is provided below.


```

0                               1                               2                               3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|           AFI = 16387           |      Rsvd1      |      Flags      |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|  Type = 255  |      Rsvd2      |           Length           |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|      Rsvd3      |  Organizationally Unique Identifier (OUI)  |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|           Internal format...           |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+

```

Vendor Specific LCAF

The Vendor Specific LCAF has the following fields.

Rsvd3: This 8-bit field is reserved for future use. It MUST be set to 0 on transmit and MUST be ignored on receipt.

Organizationally Unique Identifier (OUI): This is a 24-bit field that carries the IEEE OUI [[IEEE.802.2001](#)] of the organization.

Internal format: This is a variable length field that is left undefined on purpose. Each vendor or organization can define its own internal format(s) to use with the Vendor Specific LCAF.

The definition for the rest of the fields can be found in [[RFC8060](#)].

The Vendor Specific LCAF type SHOULD not be used in deployments where different organizations interoperate. If a LISP device receives a LISP message containing a Vendor Specific LCAF with an OUI that it does not understand, it SHOULD drop the message and a log action MUST be taken.

4. Security Considerations

This document enables organizations to define new LCAFs for their internal use. It is the responsibility of these organizations to properly assess the security implications of the formats they define.

5. Acknowledgments

The authors would like to thank Joel Halpern for his suggestions and comments regarding this document.

6. IANA Considerations

Following the guidelines of [RFC5226], this document requests IANA to update the "LISP Canonical Address Format (LCAF) Types" Registry defined in [RFC8060] to allocate the following assignment:

Value #	LISP LCAF Type Name	Reference
255	Vendor Specific	Section 3

Table 1: Vendor Specific LCAF assignment

7. Normative References

- [IEEE.802_2001]
IEEE, "IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture", IEEE 802-2001, DOI 10.1109/ieeestd.2002.93395, July 2002, <<http://ieeexplore.ieee.org/servlet/opac?punumber=7732>>.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.
- [RFC5226] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", [RFC 5226](#), DOI 10.17487/RFC5226, May 2008, <<https://www.rfc-editor.org/info/rfc5226>>.
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- [RFC8060] Farinacci, D., Meyer, D., and J. Snijders, "LISP Canonical Address Format (LCAF)", [RFC 8060](#), DOI 10.17487/RFC8060, February 2017, <<https://www.rfc-editor.org/info/rfc8060>>.

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