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Vendor Specific LISP Canonical Address Format (LCAF)
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Abstract

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

Status of This Memo

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[1.](#) Introduction

The LISP Canonical Address Format (LCAF) [[RFC8060](#)] defines the format and encoding for different address types that can be used on LISP [[I-D.ietf-lisp-rfc6830bis](#)] [[I-D.ietf-lisp-rfc6833bis](#)] deployments. However, certain deployments require specific format encodings that may not be applicable outside of the use-case for which they are defined. This document updates [[RFC8060](#)] to introduce a Vendor Specific LCAF that defines how organizations can create LCAF addresses to be used only internally on particular LISP deployments.

[2.](#) Requirements Notation

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [BCP 14](#) [[RFC2119](#)] [[RFC8174](#)] when, and only when, they appear in all capitals, as shown here.

[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.

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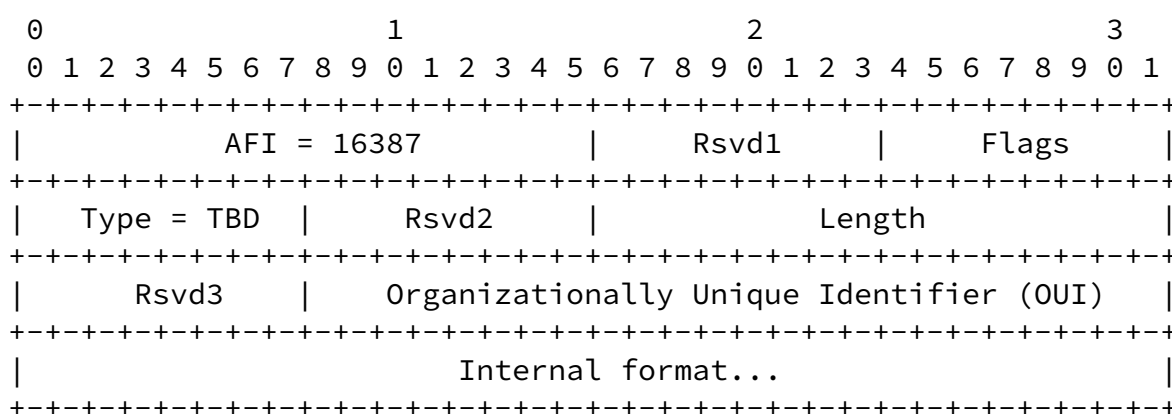


Figure 1: Vendor Specific LCAF

The fields in the first 8 octets of the above Vendor Specific LCAF are actually the fields defined in the general LCAF format specified in [\[RFC8060\]](#). The "Type" field MUST be set to the value 255 to indicate that this is a Vendor Specific LCAF. The Length field has to be set accordingly to the length of the internal format plus the OUI plus the Rsvd3 fields as for [\[RFC8060\]](#). The fields defined by the Vendor Specific LCAF are:

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 Vendor Specific LCAF type SHOULD NOT be used in deployments where different organizations interoperate. However, there may be cases where two (or more) organizations share a common deployment on which

they explicitly and mutually agree to use a particular Vendor Specific LCAF. In that case, the organizations involved need to carefully assess the interoperability concerns for that particular deployment.

If a LISP device receives a LISP message containing a Vendor Specific LCAF with an OUI that it does not understand, it MUST drop the message and it SHOULD create a log message.

[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. Security considerations from [\[RFC8060\]](#) apply to this document.

[5.](#) Acknowledgments

The authors would like to thank Joel Halpern and Luigi Iannone for their suggestions and guidance regarding this document.

[6.](#) IANA Considerations

Following the guidelines of [\[RFC8126\]](#), IANA is asked to assign a value (255 is suggested) for the Vendor Specific LCAF from the "LISP Canonical Address Format (LCAF) Types" registry (defined in [\[RFC8060\]](#)) as follows:

+=====+=====+=====+=====+		
Value #	LISP LCAF Type Name	Reference
+=====+=====+=====+=====+		
TBD	Vendor Specific	[This Document], Section 3
+-----+-----+-----+-----+		

Table 1: Vendor Specific LCAF assignment

[7.](#) Normative References

[I-D.ietf-lisp-rfc6830bis]

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