

Network Working Group
Internet-Draft
Intended status: Experimental
Expires: March 22, 2018

D. Farinacci
lispers.net
September 18, 2017

LISP Distinguished Name Encoding
draft-farinacci-lisp-name-encoding-04

Abstract

This draft defines how to use the AFI=17 Distinguished Names in LISP.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <https://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on March 22, 2018.

Copyright Notice

Copyright (c) 2017 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<https://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

Table of Contents

1.	Introduction	2
2.	Definition of Terms	3
3.	Distinguished Name Format	3
4.	Security Considerations	4
5.	IANA Considerations	4
6.	Normative References	4
Appendix A.	Acknowledgments	4
Appendix B.	Document Change Log	4
B.1.	Changes to draft-farinacci-lisp-name-encoding-04	4
B.2.	Changes to draft-farinacci-lisp-name-encoding-03	4
B.3.	Changes to draft-farinacci-lisp-name-encoding-02	5
B.4.	Changes to draft-farinacci-lisp-name-encoding-01	5
B.5.	Changes to draft-farinacci-lisp-name-encoding-00	5
	Author's Address	5

[1.](#) Introduction

The LISP architecture and protocols [[RFC6830](#)] introduces two new numbering spaces, Endpoint Identifiers (EIDs) and Routing Locators (RLOCs) which are intended to replace most use of IP addresses on the Internet. To provide flexibility for current and future applications, these values can be encoded in LISP control messages using a general syntax that includes Address Family Identifier (AFI) [[RFC1700](#)].

The length of the value field is implicit in the type of address that follows. For AFI 17, a Distinguished Name can be encoded. A name can be a variable length field so the length cannot be determined solely from the AFI value 17. This draft defines a termination character, an 8-bit value of 0 to be used as a string terminator so the length can be determined.

LISP Distinguished Names are useful when encoded either in EID-records or RLOC-records in LISP control messages. As EIDs, they can be registered in the mapping system to find resources, services, or simply used as a self-documenting feature that accompany other address specific EIDs. As RLOCs, Distinguished Names, along with RLOC specific addresses and parameters, can be used as labels to identify equipment type, location, or any self-documenting string a registering device desires to convey.

2. Definition of Terms

Address Family Identifier (AFI): a term used to describe an address encoding in a packet. An address family currently defined for IPv4 or IPv6 addresses. See [[AFI](#)] and [[RFC1700](#)] for details on other types of information that can be AFI encoded.

3. Distinguished Name Format

An AFI=17 Distinguished Name is encoded as:

```

      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 = 17          |      ASCII String ...      |
+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+
|      ... ASCII String      |          0          |
+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+

```

The string of characters are encoded in the ASCII character-set definition [[RFC0020](#)].

4. Security Considerations

There are no security considerations.

5. IANA Considerations

The code-point values in this specification are already allocated in [\[AFI\]](#).

6. Normative References

- [AFI] IANA, "Address Family Identifier (AFIs)", ADDRESS FAMILY NUMBERS <http://www.iana.org/numbers.html>, February 2007.
- [RFC0020] Cerf, V., "ASCII format for network interchange", STD 80, [RFC 20](#), DOI 10.17487/RFC0020, October 1969, <<https://www.rfc-editor.org/info/rfc20>>.
- [RFC1700] Reynolds, J. and J. Postel, "Assigned Numbers", [RFC 1700](#), DOI 10.17487/RFC1700, October 1994, <<https://www.rfc-editor.org/info/rfc1700>>.
- [RFC6830] Farinacci, D., Fuller, V., Meyer, D., and D. Lewis, "The Locator/ID Separation Protocol (LISP)", [RFC 6830](#), DOI 10.17487/RFC6830, January 2013, <<https://www.rfc-editor.org/info/rfc6830>>.

Appendix A. Acknowledgments

The author would like to thank the LISP WG for their review and acceptance of this draft.

Appendix B. Document Change Log

B.1. Changes to [draft-farinacci-lisp-name-encoding-04](#)

- o Submitted September 2017.
- o Update document expiry timer.

B.2. Changes to [draft-farinacci-lisp-name-encoding-03](#)

- o Submitted March 2017.
- o Update document expiry timer.

B.3. Changes to [draft-farinacci-lisp-name-encoding-02](#)

- o Submitted October 2016.
- o Add a comment that the distinguished-name encoding is restricted to ASCII character encodings only.

B.4. Changes to [draft-farinacci-lisp-name-encoding-01](#)

- o Submitted October 2016.
- o Update document timer.

B.5. Changes to [draft-farinacci-lisp-name-encoding-00](#)

- o Initial draft submitted April 2016.

Author's Address

Dino Farinacci
lispers.net
San Jose, CA
USA

Email: farinacci@gmail.com

