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**LISP Shared Extension Message & IANA Registry for LISP Packet Type
Allocations
draft-ietf-lisp-type-iana-05**

Abstract

This document defines a registry for Locator/ID Separation Protocol (LISP) Packet Type allocations. It also specifies a LISP shared message type for defining future extensions and conducting experiments without consuming a LISP packet type codepoint for each extension.

This document updates [RFC6830](#).

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 [RFC 2119](#) [[RFC2119](#)].

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[1.](#) Introduction

The Locator/ID Separation Protocol (LISP, [[RFC6830](#)]) base specification defines a set of primitives that are identified with a packet type code. Several extensions have been proposed to add more LISP functionalities. For example, new message types are proposed in [[I-D.ietf-lisp-ddt](#)], [[I-D.zhao-lisp-mn-extension](#)], [[I-D.boucadair-lisp-bulk](#)], [[I-D.ermagan-lisp-nat-traversal](#)], or [[I-D.boucadair-lisp-subscribe](#)]. It is expected that additional LISP extensions will be proposed in the future.

In order to ease the tracking of LISP message types, this document proposes to create a "LISP Packet Types" IANA registry (see [Section 4](#)).

Because of the limited type space [[RFC6830](#)] and the need to conduct experiments to assess new LISP extensions, this document specifies a shared LISP extension message type and proposes a procedure for registering LISP shared extension sub-types (see [Section 2](#)).

Concretely, one single LISP message type code is dedicated to future LISP extensions; sub-types are used to uniquely identify a given LISP extension making use of the shared LISP extension message type. These identifiers are selected by the author(s) of the corresponding LISP specification that introduces a new LISP extension message type.

2. LISP Shared Extension Message Type

Figure 1 depicts the common format of the LISP shared extension message. The type field **MUST** be set to 15 (see [Section 4](#)).

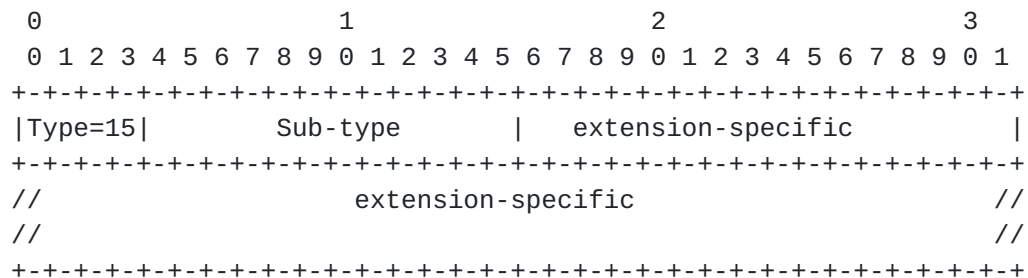


Figure 1: LISP Shared Extension Message Type

The "Sub-type" field conveys a unique identifier that **MUST** be registered with IANA (see [Section 4.2](#)).

The exact structure of the 'extension-specific' portion of the message is specified in the corresponding specification document.

3. Security Considerations

This document does not introduce any additional security issues other than those discussed in [[RFC6830](#)].

4. IANA Considerations

4.1. LISP Packet Types

IANA is requested to create a new protocol registry for LISP Packet Types, numbered 0-15. The registry must be initially populated with the following values:

Message	Code	Reference
=====	=====	=====
Reserved	0	[RFC6830]
LISP Map-Request	1	[RFC6830]
LISP Map-Reply	2	[RFC6830]
LISP Map-Register	3	[RFC6830]
LISP Map-Notify	4	[RFC6830]
LISP Encapsulated Control Message	8	[RFC6830]
LISP Shared Extension Message	15	[This document]

The values in the ranges 5-7 and 9-14 can be assigned via Standards Action [[RFC5226](#)]. Documents that request for a new LISP packet type may indicate a preferred value in the corresponding IANA sections.

4.2. Sub-Types

IANA is requested to create a "LISP Shared Extension Message type Sub-types" registry. No initial values are assigned at the creation of the registry; (0-4095) are available for future assignments.

The values in the range 0-1023 are assigned via Standards Action. This range is provisioned to anticipate, in particular, the exhaustion of the LISP Packet types.

The values in 1024-4095 are assigned on a First Come, First Served (FCFS) basis. The registration procedure should provide IANA with the desired codepoint and a point of contact. Providing a short description (together with an acronym, if relevant) of the foreseen usage of the extension message is also encouraged.

5. Acknowledgments

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Thanks to Geoff Huston for the RtgDir directorate review.

6. References

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