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LISP Shared Extension Message & IANA Registry for LISP Packet Type
Allocations
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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](#) by defining a registry for LISP Packet Types assignments.

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](#)).

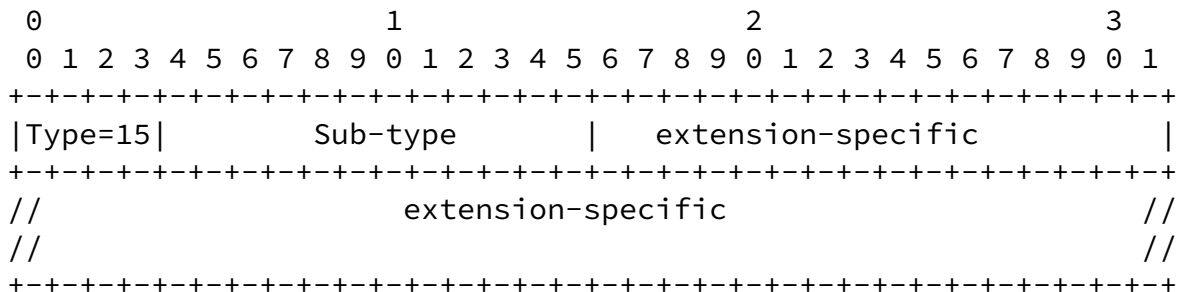


Figure 1: LISP Shared Extension Message Type

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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