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LISP MIB
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Abstract

This document defines the MIB module that contains managed objects to support the monitoring devices that support the Locator/ID Separation Protocol (LISP). These objects provide information useful for monitoring LISP devices, including determining basic LISP configuration information, LISP functional status, and operational counters and other statistics.

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1. Introduction

This document describes the Management Information Base (MIB) module for use with network management protocols in the Internet community. Specifically, the MIB for managing devices that support the Locator/ID Separation Protocol (LISP) is described.

LISP [[RFC6830](#)] specifies a network-based architecture and mechanisms that implement a new semantic for IP addressing using two separate name spaces: Endpoint Identifiers (EIDs), used within sites, and Routing Locators (RLOCs), used on the transit networks that make up the Internet infrastructure. To achieve this separation, LISP defines protocol mechanisms for mapping from EIDs to RLOCs.

From a data plane perspective, LISP traffic is handled exclusively at the network layer by devices performing Ingress Tunnel Router (ITR) and Egress Tunnel Router (ETR) LISP functions. Data plane operations performed by these devices are described in [[RFC6830](#)]. Additionally, data plane interworking between legacy (Internet) and LISP sites is implemented by devices performing Proxy ITR (PITR) and Proxy ETR (PETR) functions. The data plane operations of these devices is described in [[RFC6832](#)].

From a control plane perspective, LISP employs mechanisms related to creating, maintaining, and resolving mappings from EIDs to RLOCs. LISP ITRs, ETRs, PITRs, and PETRs perform specific control plane functions, and these control plane operations are described in [[RFC6830](#)]. Additionally, LISP infrastructure devices supporting LISP control plane functionality include Map-Servers and Map-Resolvers, and the control plane operations of these devices are described in [[RFC6833](#)].

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 [\[RFC2119\]](#).

3. The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to [section 7 of RFC 3410](#) [\[RFC3410\]](#).

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP).

Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIV2, which is described in STD 58, [RFC 2578](#) [\[RFC2578\]](#), STD 58, [RFC 2579](#) [\[RFC2579\]](#) and STD 58, [RFC 2580](#) [\[RFC2580\]](#).

4. Definition of Terms

This document does not define any new terms. All terms used in this document are listed here for completeness; the authoritative definition of each term can be found in the definition section of the respective, specified reference.

Endpoint ID (EID): [\[RFC6830\]](#)

Routing Locator (RLOC): [\[RFC6830\]](#)

EID-to-RLOC Cache: [\[RFC6830\]](#)

EID-to-RLOC Database: [\[RFC6830\]](#)

Ingress Tunnel Router (ITR): [\[RFC6830\]](#)

Egress Tunnel Router (ETR): [\[RFC6830\]](#)

xTR: [\[RFC6830\]](#)

Proxy ITR (PITR): [\[RFC6832\]](#)

Proxy ETR (PETR): [[RFC6832](#)]

LISP Site: [[RFC6830](#)]

Map-Server: [[RFC6833](#)]

Map-Resolver: [[RFC6833](#)]

Map-Request: [[RFC6833](#)]

Map-Reply: [[RFC6833](#)]

Negative Map-Reply: [[RFC6833](#)]

5. LISP MIB Objectives

The objectives for this LISP MIB module are to provide a read-only mechanism to support the following functions:

- o Provide a means for obtaining (read-only) a current status of LISP features enabled on a device, and (read-only) a current status of configuration attributes related to those features. As one example, this MIB could determine the ON/OFF status of LISP features such as ITR, ETR, PITR, PETR, MS or MR support, specifically as related to both IPv4 or IPv6 address families. Other examples could include: obtaining the (read-only) status of whether rloc-probing is enabled, whether the use of a PETR is configured, and obtaining the (read-only) values of other related attributes such as the map-cache limit value, or a mapping time-to-live value.
- o Provide a means for obtaining (read-only) the current attributes of various LISP tables, such as the EID-to-RLOC policy data contained in the Map-Cache, or the local EID-to-RLOC policy data contained in the Mapping-Database.
- o Provide a means for obtaining (read-only) the current operational statistics of various LISP functions, such as the number of packets encapsulated and decapsulated by the device. Other counters of operational interest, depending on LISP function, include things like the current number of map-cache entries, and

the total number and rate of map-requests received and sent by the device.

[6.](#) Structure of LISP MIB Module

[6.1.](#) Overview of Defined Notifications

No LISP MIB notifications are defined.

[6.2.](#) Overview of Defined Tables

The LISP MIB module is composed of the following tables of objects:

`lispFeatures` - This table provides information representing the various lisp features that can be enabled on LISP devices.

`lispIidToVrf` - This table provides information representing the mapping of a LISP instance ID to a VRF (Virtual Routing/Forwarding).

`lispGlobalStats` - This table provides global statistics for a given Instance ID per address-family on a LISP device.

`lispMappingDatabase` - This table represents the EID-to-RLOC database that contains the EID-prefix to RLOC mappings configured on an ETR. In general, this table would be representative of all such mappings for a given site that this device belongs to.

`lispMappingDatabaseLocator` - This table represents the set of routing locators contained in the EID-to-RLOC database configured on an ETR.

`lispMapCache` - This table represents the short-lived, on-demand table maintained on an ITR that stores, tracks, and times-out EID-to-RLOC mappings.

`lispMapCacheLocator` - This table represents the set of locators per EID prefix contained in the map-cache table of an ITR.

lispConfiguredLocator - This table represents the set of routing locators configured on a LISP device.

lispEidRegistration - This table provides the properties of each EID prefix that is registered with this device when configured to be a Map-Server.

lispEidRegistrationEtr - This table provides the properties of the different ETRs that send registers, for a given EID prefix, to this device when configured to be a Map-Server.

lispEidRegistrationLocator - This table provides the properties of the different locators per EID prefix that is registered with this device when configured to be a Map-Server.

lispUseMapServer - This table provides the properties of all Map-Servers that this device is configured to use.

lispUseMapResolver - This table provides the properties of all Map-Resolvers that this device is configured to use.

lispUseProxyEtr - This table provides the properties of all Proxy ETRs that this device is configured to use.

7. LISP MIB Definitions

```
LISP-MIB DEFINITIONS ::= BEGIN
```

```
IMPORTS
```

```
    MODULE-IDENTITY, OBJECT-TYPE,  
    mib-2, Unsigned32, Counter64,
```

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```
Integer32, TimeTicks          FROM SNMPv2-SMI          -- [RFC2578]  
TruthValue, TEXTUAL-CONVENTION,  
TimeStamp                    FROM SNMPv2-TC          -- [RFC2579]  
MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF      -- [RFC2580]  
MplsL3VpnName  
    FROM MPLS-L3VPN-STD-MIB    -- [RFC4382]  
AddressFamilyNumbers  
    FROM IANA-ADDRESS-FAMILY-NUMBERS-MIB;          --
```

<http://www.iana.org/assignments/ianaaddressfamilynumbers-mib>

```
lispMIB MODULE-IDENTITY
  LAST-UPDATED "201309090000Z" -- 9 September 2013
  ORGANIZATION
    "IETF Locator/ID Separation Protocol (LISP) Working Group"
  CONTACT-INFO
    "Email: lisp@ietf.org
    WG charter:
    http://www.ietf.org/html.charters/lisp-charter.html"
  DESCRIPTION
    "This MIB module contains managed objects to support
    monitoring devices that support the Locator/ID Separation
    Protocol (LISP).

    Copyright (C) The IETF Trust (2013)."
```

REVISION "201309090000Z" -- 9 September 2013
DESCRIPTION "Initial version of the IETF LISP-MIB module. Published
as RFC xxxx."

-- RFC Ed.: RFC-editor pls fill in xxxx
 ::= { mib-2 XXX }
-- RFC Ed.: assigned by IANA, see [section 10](#) for details

--
-- Textual Conventions
--

```
LispAddressType ::= TEXTUAL-CONVENTION
  DISPLAY-HINT "39a"
  STATUS current
  DESCRIPTION
    "LISP architecture can be applied to a wide variety of
    address-families. This textual-convention is a generalization
    for representing addresses belonging to those address-families.
    For convenience, this document refers to any such address as a
    LISP address. LispAddressType textual-convention consists of
    the following four-tuple:
    1. IANA Address Family Number: A field of length 2-octets,
    whose value is of the form following the assigned
    AddressFamilyNumbers textual-convention described in
```


<http://www.iana.org/assignments/ianaaddressfamilynumbers-mib>.

The enumerations are also listed in [IANA]. Note that this list of address family numbers is maintained by IANA.

2. Length of LISP address: A field of length 1-octet, whose value indicates the octet-length of the next (third) field of this LispAddressType four-tuple.

3. LISP address: A field of variable length as indicated in the previous (second) field, whose value is an address of the IANA Address Family indicated in the first field of this LispAddressType four-tuple. Note that any of the IANA Address Families can be represented.

Particularly when the address family is LISP Canonical Address Format (LCAF) [LCAF]

<http://tools.ietf.org/id/draft-ietf-lisp-lcaf-02.txt>

with IANA assigned Address Family Number 16387, then the first octet of this field indicates the LCAF type, and the rest of this field is same as the encoding format of the LISP Canonical Address after the length field, as defined in [LCAF].

4. Mask-length of address: A field of length 1-octet, whose value is the mask-length to be applied to the LISP address specified in the previous (third) field.

To illustrate the use of this object, consider the LISP MIB Object below entitled lispMapCacheEntry. This object begins with the following entities:

```
lispMapCacheEntry ::= SEQUENCE {
    lispMapCacheEidLength      INTEGER,
    lispMapCacheEid           LispAddressType,
    ... [skip] ...
```

Example 1: Suppose that the IPv4 EID prefix stored is 192.0.2.0/24. In this case, the values within lispMapCacheEntry would be:

```
lispMapCacheEidLength = 8
lispMapCacheEid = 1, 4, 192.0.2.0, 24
... [skip] ...
```

where 8 is the total length in octets of the next object (lispMapCacheEID of type LispAddressType). Then, the value 1 indicates the IPv4 AF (per [IANA]), the value 4 indicates that the AF is 4-octets in length, 192.0.2.0 is the IPv4 address, and the value 24 is the mask-length in bits. Note that the lispMapCacheEidLength value of 8 is used to compute the length of the fourth

(last) field in `lispMapCacheEid` to be 1 octet - as computed by $8 - (2 + 1 + 4) = 1$.

Example 2: Suppose that the IPv6 EID prefix stored is `2001:db8:a::/48`. In this case, the values within `lispMapCacheEntry` would be:

```
lispMapCacheEidLength = 20
lispMapCacheEid = 2, 16, 2001:db8:a::, 48
... [skip] ...
```

where 20 is the total length in octets of the next object (`lispMapCacheEID` of type `LispAddressType`). Then, the value 2 indicates the IPv4 AF (per [\[IANA\]](#)), the value 16 indicates that the AF is 16-octets in length, `2001:db8:a::` is the IPv6 address, and the value 48 is the mask-length in bits. Note that the `lispMapCacheEidLength` value of 20 is used to compute the length of the fourth (last) field in `lispMapCacheEid` to be 1 octet - as computed by $20 - (2 + 1 + 16) = 1$.

Example 3: As an example where LCAF is used, suppose that the IPv4 EID prefix stored is `192.0.2.0/24` and it is part of LISP Instance ID 101. In this case, the values within `lispMapCacheEntry` would be:

```
lispMapCacheEidLength = 11
lispMapCacheEid = 16387, 7, 2, 101, 1, 192.0.2.0, 24
... [skip] ...
```

where 11 is the total length in octets of the next object (`lispMapCacheEID` of type `LispAddressType`). Then, the value 16387 indicates the LCAF AF (see [\[IANA\]](#)), the value 7 indicates that the LCAF AF is 7-octets in length in this case, 2 indicates that LCAF Type 2 encoding is used (see [\[LCAF\]](#)), 101 gives the Instance ID, 1 gives the AFI (per [\[IANA\]](#)) for an IPv4 address, `192.0.2.0` is the IPv4 address, and 24 is the mask-length in bits. Note that the `lispMapCacheEidLength` value of 11 octets is used to compute the length of the last field in `lispMapCacheEid` to be 1 octet, as computed by $11 - (2 + 1 + 1 + 1 + 1 + 4) = 1$.

Note: all LISP header formats and locations of specific flags, bits, and fields are as given in the base LISP references of [RFC6830](#), [RFC6832](#), and [RFC6833](#)."

REFERENCE

["RFC6830, Section 14.2, draft-ietf-lisp-lcaf-02.txt."](#)

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SYNTAX OCTET STRING (SIZE (5..39))

--

-- Top level components of this MIB.

--

lispObjects OBJECT IDENTIFIER ::= { lispMIB 1 }

lispConformance OBJECT IDENTIFIER ::= { lispMIB 2 }

lispFeaturesTable OBJECT-TYPE

SYNTAX SEQUENCE OF LispFeaturesEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table represents the ON/OFF status of the various LISP features that can be enabled on LISP devices."

REFERENCE

["RFC6830, Section 4.0., Section 5.5., Section 6.3."](#)

::= { lispObjects 1 }

lispFeaturesEntry OBJECT-TYPE

SYNTAX LispFeaturesEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry (conceptual row) in the lispFeaturesTable."

INDEX { lispFeaturesInstanceID,
lispFeaturesAddressFamily }

::= { lispFeaturesTable 1 }

LispFeaturesEntry ::= SEQUENCE {

lispFeaturesInstanceID

Unsigned32,

lispFeaturesAddressFamily

AddressFamilyNumbers,

lispFeaturesItrEnabled

TruthValue,

lispFeaturesEtrEnabled

TruthValue,

lispFeaturesProxyItrEnabled

TruthValue,

lispFeaturesProxyEtrEnabled

TruthValue,

lispFeaturesMapServerEnabled	TruthValue,
lispFeaturesMapResolverEnabled	TruthValue,
lispFeaturesMapCacheSize	Unsigned32,
lispFeaturesMapCacheLimit	Unsigned32,
lispFeaturesEtrMapCacheTtl	Unsigned32,
lispFeaturesRlocProbeEnabled	TruthValue,
lispFeaturesEtrAcceptMapDataEnabled	TruthValue,
lispFeaturesEtrAcceptMapDataVerifyEnabled	TruthValue,
lispFeaturesRouterTimeStamp	TimeStamp

```
}

```

```
lispFeaturesInstanceID OBJECT-TYPE

```

```
SYNTAX      Unsigned32 (0..16777215)

```

```
MAX-ACCESS not-accessible

```

```
STATUS      current

```

```
DESCRIPTION

```

```
    "This represents the Instance ID of the LISP header.
    An Instance ID in the LISP address encoding helps
    uniquely identify the AFI-based address space to which
    a given EID belongs. It's default value is 0."

```

```
DEFVAL { 0 }

```

```
::= { lispFeaturesEntry 1 }

```

```
lispFeaturesAddressFamily OBJECT-TYPE

```

```
SYNTAX      AddressFamilyNumbers

```

```
MAX-ACCESS not-accessible

```

```
STATUS      current

```

```
DESCRIPTION

```

```
    "The IANA address family number of destination address
    of packets that this LISP device is enabled to process."

```

```
::= { lispFeaturesEntry 2 }

```

```
lispFeaturesItrEnabled OBJECT-TYPE

```

```
SYNTAX      TruthValue

```

```
MAX-ACCESS read-only

```

```
STATUS      current

```

```
DESCRIPTION

```

```
    "Indicates the status of ITR role on this device. If
    this object is true, then ITR feature is enabled."

```

```
::= { lispFeaturesEntry 3 }

```

lispFeaturesEtrEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the status of ETR role on this device. If this object is true, then ETR feature is enabled."

::= { lispFeaturesEntry 4 }

lispFeaturesProxyItrEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the status of Proxy-ITR role on this device.

If this object is true, then Proxy-ITR feature is enabled."

::= { lispFeaturesEntry 5 }

lispFeaturesProxyEtrEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the status of Proxy-ETR role on this device.

If this object is true, then Proxy-ETR feature is enabled."

::= { lispFeaturesEntry 6 }

lispFeaturesMapServerEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the status of Map Server role on this device.

If this object is true, then Map Server feature is enabled."

::= { lispFeaturesEntry 7 }

lispFeaturesMapResolverEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the status of Map Resolver role on this device. If this object is true, then Map Resolver feature is enabled."

::= { lispFeaturesEntry 8 }

lispFeaturesMapCacheSize OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Size of EID-to-RLOC map cache on this device."

::= { lispFeaturesEntry 9 }

lispFeaturesMapCacheLimit OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Maximum permissible entries in EID-to-RLOC map cache on this device."

::= { lispFeaturesEntry 10 }

lispFeaturesEtrMapCacheTtl OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The stored Record TTL of the EID-to-RLOC map record in the map cache."

::= { lispFeaturesEntry 11 }

lispFeaturesRlocProbeEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the status of rloc-probing feature on this device. If this object is true, then this feature is enabled."

::= { lispFeaturesEntry 12 }

lispFeaturesEtrAcceptMapDataEnabled OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Indicates the status of accepting piggybacked mapping data received in a map-request on this device. If this object is true, then this device accepts piggybacked mapping data."
 ::= { lispFeaturesEntry 13 }

lispFeaturesEtrAcceptMapDataVerifyEnabled OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Indicates the status of verifying accepted piggybacked mapping data received in a map-request on this device. If this object is true, then this device verifies accepted piggybacked mapping data."
 ::= { lispFeaturesEntry 14 }

lispFeaturesRouterTimeStamp OBJECT-TYPE
SYNTAX TimeStamp
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The value of sysUpTime at which LISP feature was enabled on this device."

If this information was present at the most recent re-initialization of the local management subsystem, then this object contains a zero value."
DEFVAL { 0 }
 ::= { lispFeaturesEntry 15 }

lispIidToVrfTable OBJECT-TYPE
SYNTAX SEQUENCE OF LispIidToVrfEntry
MAX-ACCESS not-accessible

STATUS current
DESCRIPTION
"This table represents the mapping of LISP Instance ID
to a VRF."
REFERENCE
"[RFC6830, Section 5.5.](#) and [RFC4382, Section 7.](#)"
 ::= { lispObjects 2 }

lispIidToVrfEntry OBJECT-TYPE
SYNTAX LispIidToVrfEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry (conceptual row) in the lispIidToVrfTable."
INDEX { lispFeaturesInstanceID }
 ::= { lispIidToVrfTable 1 }

LispIidToVrfEntry ::= SEQUENCE {
 lispIidToVrfName MplsL3VpnName
 }

lispIidToVrfName OBJECT-TYPE
SYNTAX MplsL3VpnName
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The identifier for each VPN that is mapped to the
given LISP Instance ID."
 ::= { lispIidToVrfEntry 1 }

lispGlobalStatsTable OBJECT-TYPE
SYNTAX SEQUENCE OF LispGlobalStatsEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This table provides global statistics for a given

Instance ID per address-family on a LISP device."
REFERENCE
"[RFC6830, Section 6.1.](#)"
 ::= { lispObjects 3 }


```

lispGlobalStatsEntry OBJECT-TYPE
    SYNTAX      LispGlobalStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "An entry (conceptual row) in the
         lispGlobalStatsTable."
    INDEX       { lispFeaturesInstanceID,
                 lispFeaturesAddressFamily }
    ::= { lispGlobalStatsTable 1 }

```

```

LispGlobalStatsEntry ::= SEQUENCE {
    lispGlobalStatsMapRequestsIn      Counter64,
    lispGlobalStatsMapRequestsOut     Counter64,
    lispGlobalStatsMapRepliesIn       Counter64,
    lispGlobalStatsMapRepliesOut      Counter64,
    lispGlobalStatsMapRegistersIn     Counter64,
    lispGlobalStatsMapRegistersOut    Counter64
}

```

```

lispGlobalStatsMapRequestsIn OBJECT-TYPE
    SYNTAX      Counter64
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Total number of map requests received by this device for
         any EID prefix of the given address family and Instance ID.

         Discontinuities in this monotonically increasing value occur
         at re-initialization of the management system.
         Discontinuities can also occur as a result of LISP features
         being removed, which can be detected by observing the value
         of lispFeaturesRouterTimeStamp."
    ::= { lispGlobalStatsEntry 1 }

```

```

lispGlobalStatsMapRequestsOut OBJECT-TYPE
    SYNTAX      Counter64
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Total number of map requests sent by this device for any
         EID prefix of the given address family and Instance ID.

```

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of LISP features being removed, which can be detected by observing the value of `lispFeaturesRouterTimeStamp`."

```
::= { lispGlobalStatsEntry 2 }
```

`lispGlobalStatsMapRepliesIn` OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Total number of map replies received by this device for any EID prefix of the given address family and Instance ID.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of LISP features being removed, which can be detected by observing the value of `lispFeaturesRouterTimeStamp`."

```
::= { lispGlobalStatsEntry 3 }
```

`lispGlobalStatsMapRepliesOut` OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Total number of map replies sent by this device for any EID prefix of the given address family and Instance ID.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of LISP features being removed, which can be detected by observing the value of `lispFeaturesRouterTimeStamp`."

```
::= { lispGlobalStatsEntry 4 }
```

`lispGlobalStatsMapRegistersIn` OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Total number of map registers received by this device for any EID prefix of the given address family and Instance ID.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

being removed, which can be detected by observing the value of `lispFeaturesRouterTimeStamp`."
 ::= { lispGlobalStatsEntry 5 }

`lispGlobalStatsMapRegistersOut` OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Total number of map registers sent by this device for any EID prefix of the given address family and Instance ID.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of LISP features being removed, which can be detected by observing the value of `lispFeaturesRouterTimeStamp`."

::= { lispGlobalStatsEntry 6 }

`lispMappingDatabaseTable` OBJECT-TYPE

SYNTAX SEQUENCE OF LispMappingDatabaseEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table represents the EID-to-RLOC mapping database that contains the EID-prefix to RLOC mappings configured on an ETR.

This table represents all such mappings for the given LISP site to which this device belongs."

REFERENCE

["RFC6830, Section 6.0."](#)

::= { lispObjects 4 }

`lispMappingDatabaseEntry` OBJECT-TYPE

SYNTAX LispMappingDatabaseEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry (conceptual row) in lispMappingDatabaseTable."

INDEX { lispMappingDatabaseEidLength,
 lispMappingDatabaseEid }
::= { lispMappingDatabaseTable 1 }

lispMappingDatabaseEntry ::= SEQUENCE {
 lispMappingDatabaseEidLength Integer32,

 lispMappingDatabaseEid LispAddressType,
 lispMappingDatabaseLsb Unsigned32,
 lispMappingDatabaseEidPartitioned TruthValue,
 lispMappingDatabaseTimeStamp TimeStamp,
 lispMappingDatabaseDecapOctets Counter64,
 lispMappingDatabaseDecapPackets Counter64,
 lispMappingDatabaseEncapOctets Counter64,
 lispMappingDatabaseEncapPackets Counter64
}

lispMappingDatabaseEidLength OBJECT-TYPE

SYNTAX Integer32 (5..39)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object gives the octet-length of
 lispMappingDatabaseEid."

::= { lispMappingDatabaseEntry 1 }

lispMappingDatabaseEid OBJECT-TYPE

SYNTAX LispAddressType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The EID prefix of the mapping database."

::= { lispMappingDatabaseEntry 2 }

lispMappingDatabaseLsb OBJECT-TYPE

SYNTAX Unsigned32 (0..4294967295)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The locator status bits for this EID prefix."

```
::= { lispMappingDatabaseEntry 3 }
```

```
lispMappingDatabaseEidPartitioned OBJECT-TYPE
```

```
SYNTAX      TruthValue
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"Indicates if this device is partitioned from the site that contains this EID prefix. If this object is true, then it means this device is partitioned from the site."
```

```
::= { lispMappingDatabaseEntry 4 }
```

```
lispMappingDatabaseTimeStamp OBJECT-TYPE
```

```
SYNTAX      TimeStamp
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The value of sysUpTime at which the EID Prefix information represented by this mapping database entry was configured on this device.
```

```
If this information was present at the most recent re-initialization of the local management subsystem, then this object contains a zero value."
```

```
DEFVAL { 0 }
```

```
::= { lispMappingDatabaseEntry 5 }
```

```
lispMappingDatabaseDecapOctets OBJECT-TYPE
```

```
SYNTAX      Counter64
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The number of octets, after decapsulation, of LISP packets that were decapsulated by this device addressed to a host within this EID-prefix.
```

```
Discontinuities in this monotonically increasing value occur at re-initialization of the management system.
```

```
Discontinuities can also occur as a result of LISP features being removed, which can be detected by observing the value
```

```
of lispMappingDatabaseTimeStamp."  
 ::= { lispMappingDatabaseEntry 6 }
```

```
lispMappingDatabaseDecapPackets OBJECT-TYPE
```

```
SYNTAX Counter64
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
"The number of LISP packets that were decapsulated by this  
device addressed to a host within this EID-prefix.
```

```
Discontinuities in this monotonically increasing value occur  
at re-initialization of the management system.
```

```
Discontinuities can also occur as a result of LISP features  
being removed, which can be detected by observing the value  
of lispMappingDatabaseTimeStamp."
```

```
 ::= { lispMappingDatabaseEntry 7 }
```

```
lispMappingDatabaseEncapOctets OBJECT-TYPE
```

```
SYNTAX Counter64
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
"The number of octets, before encapsulation, of LISP packets  
that were encapsulated by this device, whose inner header  
source address matched this EID prefix.
```

```
Discontinuities in this monotonically increasing value occur  
at re-initialization of the management system.
```

```
Discontinuities can also occur as a result of LISP features  
being removed, which can be detected by observing the value  
of lispMappingDatabaseTimeStamp."
```

```
 ::= { lispMappingDatabaseEntry 8 }
```

```
lispMappingDatabaseEncapPackets OBJECT-TYPE
```

```
SYNTAX Counter64
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
"The number of LISP packets that were encapsulated by this  
device whose inner header source address matched this EID
```

prefix.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of LISP features being removed, which can be detected by observing the value of `lispMappingDatabaseTimeStamp`."

```
::= { lispMappingDatabaseEntry 9 }
```

`lispMappingDatabaseLocatorTable` OBJECT-TYPE

SYNTAX SEQUENCE OF `LispMappingDatabaseLocatorEntry`

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table represents the set of routing locators per EID prefix contained in the EID-to-RLOC database configured on this ETR."

REFERENCE

["RFC6830, Section 6.2."](#)

```
::= { lispObjects 5 }
```

`lispMappingDatabaseLocatorEntry` OBJECT-TYPE

SYNTAX `LispMappingDatabaseLocatorEntry`

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry (conceptual row) in the `lispMappingDatabaseLocatorTable`."

```
INDEX { lispMappingDatabaseEidLength,  
        lispMappingDatabaseEid,  
        lispMappingDatabaseLocatorRlocLength,  
        lispMappingDatabaseLocatorRloc }
```

```
::= { lispMappingDatabaseLocatorTable 1 }
```

```
LispMappingDatabaseLocatorEntry ::= SEQUENCE {
```

```
    lispMappingDatabaseLocatorRlocLength      Integer32,  
    lispMappingDatabaseLocatorRloc           LispAddressType,  
    lispMappingDatabaseLocatorRlocPriority    Integer32,  
    lispMappingDatabaseLocatorRlocWeight     Integer32,  
    lispMappingDatabaseLocatorRlocMPriority  Integer32,
```

```

lispMappingDatabaseLocatorRlocMWeight      Integer32,
lispMappingDatabaseLocatorRlocState        INTEGER,
lispMappingDatabaseLocatorRlocLocal        INTEGER,
lispMappingDatabaseLocatorRlocTimeStamp    TimeStamp,
lispMappingDatabaseLocatorRlocDecapOctets  Counter64,
lispMappingDatabaseLocatorRlocDecapPackets Counter64,
lispMappingDatabaseLocatorRlocEncapOctets  Counter64,
lispMappingDatabaseLocatorRlocEncapPackets Counter64
}

```

lispMappingDatabaseLocatorRlocLength OBJECT-TYPE

SYNTAX Integer32 (5..39)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object is used to get the octet-length of
lispMappingDatabaseLocatorRloc."

::= { lispMappingDatabaseLocatorEntry 1 }

lispMappingDatabaseLocatorRloc OBJECT-TYPE

SYNTAX LispAddressType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object is a locator for the given EID prefix in
the mapping database."

::= { lispMappingDatabaseLocatorEntry 2 }

lispMappingDatabaseLocatorRlocPriority OBJECT-TYPE

SYNTAX Integer32 (0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The unicast priority of the RLOC."

::= { lispMappingDatabaseLocatorEntry 3 }

lispMappingDatabaseLocatorRlocWeight OBJECT-TYPE

SYNTAX Integer32 (0..100)

MAX-ACCESS read-only

STATUS current

DESCRIPTION


```
    "The unicast weight of the RLOC."  
 ::= { lispMappingDatabaseLocatorEntry 4 }
```

```
lispMappingDatabaseLocatorRlocMPriority OBJECT-TYPE  
SYNTAX      Integer32 (0..255)  
MAX-ACCESS  read-only  
STATUS      current  
DESCRIPTION  
    "The multicast priority of the RLOC."  
 ::= { lispMappingDatabaseLocatorEntry 5 }
```

```
lispMappingDatabaseLocatorRlocMWeight OBJECT-TYPE  
SYNTAX      Integer32 (0..100)  
MAX-ACCESS  read-only  
STATUS      current  
DESCRIPTION  
    "The multicast weight of the RLOC."  
 ::= { lispMappingDatabaseLocatorEntry 6 }
```

```
lispMappingDatabaseLocatorRlocState OBJECT-TYPE  
SYNTAX      INTEGER {  
                up (1),  
                down (2),  
                unreachable (3)  
                }  
MAX-ACCESS  read-only  
STATUS      current  
DESCRIPTION  
    "The state of this RLOC as per this device.  
    (1 = RLOC is up; 2 = RLOC is down; 3 = RLOC is unreachable)."  
 ::= { lispMappingDatabaseLocatorEntry 7 }
```

```
lispMappingDatabaseLocatorRlocLocal OBJECT-TYPE  
SYNTAX      INTEGER {  
                siteself (1),  
                sitelocal (2)  
                }  
MAX-ACCESS  read-only  
STATUS      current  
DESCRIPTION  
    "Indicates whether the RLOC is local to this device  
    (or remote, meaning local to another device in the same LISP  
    site). (1 = RLOC is an address on this device; 2 = RLOC is
```

an address on another device)."
 ::= { lispMappingDatabaseLocatorEntry 8 }

lispMappingDatabaseLocatorRlocTimeStamp OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The value of sysUpTime at which the RLOC of the EID Prefix represented by this mapping database entry was configured on this device.

If this information was present at the most recent re-initialization of the local management subsystem, then this object contains a zero value."

DEFVAL { 0 }

::= { lispMappingDatabaseLocatorEntry 9 }

lispMappingDatabaseLocatorRlocDecapOctets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of octets of LISP packets that were addressed to this RLOC of the EID-prefix and were decapsulated.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of database mappings getting re-configured or RLOC status changes, which can be detected by observing the value of lispMappingDatabaseLocatorRlocTimeStamp."

::= { lispMappingDatabaseLocatorEntry 10 }

lispMappingDatabaseLocatorRlocDecapPackets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of LISP packets that were addressed to this RLOC of the EID-prefix and were decapsulated.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of database mappings getting re-configured or RLOC status changes, which can be detected by observing the value of

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```
    lispMappingDatabaseLocatorRlocTimeStamp."  
 ::= { lispMappingDatabaseLocatorEntry 11 }
```

lispMappingDatabaseLocatorRlocEncapOctets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of octets of LISP packets that were encapsulated by this device using this RLOC address as the source, and that were sourced by an address of this EID-prefix.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of database mappings getting re-configured or RLOC status changes, which can be detected by observing the value of lispMappingDatabaseLocatorRlocTimeStamp."

```
 ::= { lispMappingDatabaseLocatorEntry 12 }
```

lispMappingDatabaseLocatorRlocEncapPackets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of LISP packets that were encapsulated by this device using this RLOC address as the source, and that were sourced by an address of this EID-prefix.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of database mappings getting re-configured or RLOC status changes, which can be detected by observing the value of lispMappingDatabaseLocatorRlocTimeStamp."

```
 ::= { lispMappingDatabaseLocatorEntry 13 }
```

lispMapCacheTable OBJECT-TYPE

SYNTAX SEQUENCE OF LispMapCacheEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table represents the short-lived, on-demand table on an ITR that stores, tracks, and is responsible for timing-out and otherwise validating EID-to-RLOC mappings."

REFERENCE

["RFC6830, Section 6.0., Section 12.0."](#)

::= { lispObjects 6 }

lispMapCacheEntry OBJECT-TYPE

SYNTAX LispMapCacheEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry (conceptual row) in the
lispMapCacheTable."

INDEX { lispMapCacheEidLength,
lispMapCacheEid }

::= { lispMapCacheTable 1 }

LispMapCacheEntry ::= SEQUENCE {

lispMapCacheEidLength	Integer32,
lispMapCacheEid	LispAddressType,
lispMapCacheEidTimeStamp	TimeStamp,
lispMapCacheEidExpiryTime	TimeTicks,
lispMapCacheEidState	TruthValue,
lispMapCacheEidAuthoritative	TruthValue,
lispMapCacheEidDecapOoctets	Counter64,
lispMapCacheEidDecapPackets	Counter64,
lispMapCacheEidEncapOoctets	Counter64,
lispMapCacheEidEncapPackets	Counter64

}

lispMapCacheEidLength OBJECT-TYPE

SYNTAX Integer32 (5..39)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object is used to get the octet-length of
lispMapCacheEid."

::= { lispMapCacheEntry 1 }

lispMapCacheEid OBJECT-TYPE
SYNTAX LispAddressType
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"The EID prefix in the mapping cache."
::= { lispMapCacheEntry 2 }

lispMapCacheEidTimeStamp OBJECT-TYPE
SYNTAX TimeStamp
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"The value of sysUpTime at which the EID Prefix information represented by this entry was learned by this device.

If this information was present at the most recent re-initialization of the local management subsystem, then this object contains a zero value."

DEFVAL { 0 }
::= { lispMapCacheEntry 3 }

lispMapCacheEidExpiryTime OBJECT-TYPE
SYNTAX TimeTicks
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The time remaining before the ITR times-out this EID prefix."
::= { lispMapCacheEntry 4 }

lispMapCacheEidState OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This object is used to indicate the activity of this EID prefix. If this object is true, then it means this EID prefix is seeing activity."
::= { lispMapCacheEntry 5 }

lispMapCacheEidAuthoritative OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object is used to indicate whether the EID prefix was installed by an authoritative map-reply. If this object is true, then it means this EID prefix was installed by an authoritative map-reply."

::= { lispMapCacheEntry 6 }

lispMapCacheEidDecapOctets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of octets of LISP packets that were decapsulated by this device and were sourced from a remote host within this EID-prefix."

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of cache being removed and replaced, which can be detected by observing the value of lispMapCacheEidTimeStamp."

::= { lispMapCacheEntry 7 }

lispMapCacheEidDecapPackets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of LISP packets that were decapsulated by this device and were sourced from a remote host within this EID-prefix."

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of cache being removed and replaced, which can be detected by observing the value of lispMapCacheEidTimeStamp."

```
::= { lispMapCacheEntry 8 }
```

```
lispMapCacheEidEncapOctets OBJECT-TYPE
```

```
SYNTAX Counter64
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

"The number of octets of LISP packets that were encapsulated by this device using the given EID-prefix in the map cache.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of cache being removed and replaced, which can be detected by observing the value of lispMapCacheEidTimeStamp."

```
::= { lispMapCacheEntry 9 }
```

```
lispMapCacheEidEncapPackets OBJECT-TYPE
```

```
SYNTAX Counter64
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

"The number of LISP packets that were encapsulated by this device using the given EID-prefix in the map cache.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of cache being removed and replaced, which can be detected by observing the value of lispMapCacheEidTimeStamp."

```
::= { lispMapCacheEntry 10 }
```

```
lispMapCacheLocatorTable OBJECT-TYPE
```

```
SYNTAX SEQUENCE OF LispMapCacheLocatorEntry
```

```
MAX-ACCESS not-accessible
```

```
STATUS current
```

```
DESCRIPTION
```

"This table represents the set of locators per EID prefix contained in the map-cache table of an ITR."

```
REFERENCE
```

["RFC6830, Section 6.3."](#)

::= { lispObjects 7 }

lispMapCacheLocatorEntry OBJECT-TYPE

SYNTAX LispMapCacheLocatorEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry (conceptual row) in the
lispMapCacheLocatorTable."

INDEX { lispMapCacheEidLength,
lispMapCacheEid,
lispMapCacheLocatorRlocLength,
lispMapCacheLocatorRloc }

::= { lispMapCacheLocatorTable 1 }

LispMapCacheLocatorEntry ::= SEQUENCE {

lispMapCacheLocatorRlocLength	Integer32,
lispMapCacheLocatorRloc	LispAddressType,
lispMapCacheLocatorRlocPriority	Integer32,
lispMapCacheLocatorRlocWeight	Integer32,
lispMapCacheLocatorRlocMPriority	Integer32,
lispMapCacheLocatorRlocMWeight	Integer32,
lispMapCacheLocatorRlocState	INTEGER,
lispMapCacheLocatorRlocTimeStamp	TimeStamp,
lispMapCacheLocatorRlocLastPriorityChange	TimeTicks,
lispMapCacheLocatorRlocLastWeightChange	TimeTicks,
lispMapCacheLocatorRlocLastMPriorityChange	TimeTicks,
lispMapCacheLocatorRlocLastMWeightChange	TimeTicks,
lispMapCacheLocatorRlocLastStateChange	TimeTicks,
lispMapCacheLocatorRlocRtt	TimeTicks,
lispMapCacheLocatorRlocDecapOoctets	Counter64,
lispMapCacheLocatorRlocDecapPackets	Counter64,
lispMapCacheLocatorRlocEncapOoctets	Counter64,

lispMapCacheLocatorRlocEncapPackets Counter64
}

lispMapCacheLocatorRlocLength OBJECT-TYPE

SYNTAX Integer32 (5..39)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object is used to get the octet-length of
lispMapCacheLocatorRloc."

::= { lispMapCacheLocatorEntry 1 }

lispMapCacheLocatorRloc OBJECT-TYPE

SYNTAX LispAddressType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The locator for the EID prefix in the mapping cache."

::= { lispMapCacheLocatorEntry 2 }

lispMapCacheLocatorRlocPriority OBJECT-TYPE

SYNTAX Integer32 (0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The unicast priority of the RLOC for this EID prefix
(0-255); lower more preferred. "

::= { lispMapCacheLocatorEntry 3 }

lispMapCacheLocatorRlocWeight OBJECT-TYPE

SYNTAX Integer32 (0..100)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The unicast weight of the RLOC for this EID prefix
(0 - 100) percentage. "

::= { lispMapCacheLocatorEntry 4 }

lispMapCacheLocatorRlocMPriority OBJECT-TYPE

SYNTAX Integer32 (0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The multicast priority of the RLOC for this EID prefix
(0-255); lower more preferred."

::= { lispMapCacheLocatorEntry 5 }

lispMapCacheLocatorRlocMWeight OBJECT-TYPE

SYNTAX Integer32 (0..100)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The multicast weight of the RLOC for this EID prefix
(0 - 100) percentage."
::= { lispMapCacheLocatorEntry 6 }

lispMapCacheLocatorRlocState OBJECT-TYPE

SYNTAX INTEGER {
up (1),
down (2),
unreachable (3)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The state of this RLOC as per this device
(1 = RLOC is up; 2 = RLOC is down; 3 = RLOC is unreachable)."
::= { lispMapCacheLocatorEntry 7 }

lispMapCacheLocatorRlocTimeStamp OBJECT-TYPE

SYNTAX TimeStamp
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The value of sysUpTime at which the RLOC of EID prefix
information represented by this entry was learned by
this device.

If this information was present at the most recent
re-initialization of the local management subsystem,
then this object contains a zero value."
DEFVAL { 0 }
::= { lispMapCacheLocatorEntry 8 }

lispMapCacheLocatorRlocLastPriorityChange OBJECT-TYPE

SYNTAX TimeTicks
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Time elapsed since the last change of the unicast priority
of the RLOC for this EID prefix. Note that this is
independent of lispMapCacheLocatorRlocTimeStamp."
::= { lispMapCacheLocatorEntry 9 }

lispMapCacheLocatorRlocLastWeightChange OBJECT-TYPE

SYNTAX TimeTicks

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```
MAX-ACCESS read-only
STATUS      current
DESCRIPTION
    "Time elapsed since the last change of the unicast weight
    of the RLOC for this EID prefix. Note that this is
    independent of lispMapCacheLocatorRlocTimeStamp."
 ::= { lispMapCacheLocatorEntry 10 }
```

```
lispMapCacheLocatorRlocLastMPriorityChange OBJECT-TYPE
SYNTAX      TimeTicks
MAX-ACCESS read-only
STATUS      current
DESCRIPTION
    "Time since the last change of the multicast priority of the
    RLOC for this EID prefix."
 ::= { lispMapCacheLocatorEntry 11 }
```

```
lispMapCacheLocatorRlocLastMWeightChange OBJECT-TYPE
SYNTAX      TimeTicks
MAX-ACCESS read-only
STATUS      current
DESCRIPTION
    "Time since the last change of the multicast weight of the
    RLOC for this EID prefix."
 ::= { lispMapCacheLocatorEntry 12 }
```

```
lispMapCacheLocatorRlocLastStateChange OBJECT-TYPE
SYNTAX      TimeTicks
MAX-ACCESS read-only
STATUS      current
DESCRIPTION
    "Time since the last change of the up/down state of the
    RLOC for this EID prefix."
 ::= { lispMapCacheLocatorEntry 13 }
```

```
lispMapCacheLocatorRlocRtt OBJECT-TYPE
SYNTAX      TimeTicks
MAX-ACCESS read-only
STATUS      current
DESCRIPTION
    "Round trip time of RLOC probe and map-reply for this RLOC
    address for this prefix."
 ::= { lispMapCacheLocatorEntry 14 }
```

lispMapCacheLocatorRlocDecapOctets OBJECT-TYPE
SYNTAX Counter64
MAX-ACCESS read-only
STATUS current

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DESCRIPTION

"The number of octets of LISP packets that were decapsulated by this device and were sourced from a remote host within this EID-prefix and were encapsulated for this RLOC.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of RLOC of cache being removed and replaced, which can be detected by observing the value of lispMapCacheLocatorRlocTimeStamp."

::= { lispMapCacheLocatorEntry 15 }

lispMapCacheLocatorRlocDecapPackets OBJECT-TYPE

SYNTAX Counter64
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The number of LISP packets that were decapsulated by this device and were sourced from a remote host within this EID-prefix and were encapsulated for this RLOC.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of RLOC of cache being removed and replaced, which can be detected by observing the value of lispMapCacheLocatorRlocTimeStamp."

::= { lispMapCacheLocatorEntry 16 }

lispMapCacheLocatorRlocEncapOctets OBJECT-TYPE

SYNTAX Counter64
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The number of octets of LISP packets that matched this EID prefix and were encapsulated using this RLOC address.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system. Discontinuities can also occur as a result of RLOC of cache being removed and replaced, which can be detected by observing the value of lispMapCacheLocatorRlocTimeStamp."

```
::= { lispMapCacheLocatorEntry 17 }
```

```
lispMapCacheLocatorRlocEncapPackets OBJECT-TYPE  
SYNTAX Counter64  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION
```

"The number of LISP packets that matched this EID prefix and were encapsulated using this RLOC address.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system. Discontinuities can also occur as a result of RLOC of cache being removed and replaced, which can be detected by observing the value of lispMapCacheLocatorRlocTimeStamp."

```
::= { lispMapCacheLocatorEntry 18 }
```

```
lispConfiguredLocatorTable OBJECT-TYPE  
SYNTAX SEQUENCE OF LispConfiguredLocatorEntry  
MAX-ACCESS not-accessible  
STATUS current  
DESCRIPTION  
    "This table represents the set of routing locators  
    configured on this device. Note that the Proxy-ITR  
    configured addresses are treated as routing locators  
    and therefore can be part of this table."  
REFERENCE  
    "RFC6830, Section 6.3."  
 ::= { lispObjects 8 }
```

```
lispConfiguredLocatorEntry OBJECT-TYPE  
SYNTAX LispConfiguredLocatorEntry  
MAX-ACCESS not-accessible  
STATUS current  
DESCRIPTION
```

```

        "An entry (conceptual row) in the
        lispConfiguredLocatorTable."
INDEX { lispConfiguredLocatorRlocLength,
        lispConfiguredLocatorRloc }
 ::= { lispConfiguredLocatorTable 1 }

LispConfiguredLocatorEntry ::= SEQUENCE {
    lispConfiguredLocatorRlocLength      Integer32,
    lispConfiguredLocatorRloc           LispAddressType,
    lispConfiguredLocatorRlocState      INTEGER,
    lispConfiguredLocatorRlocLocal     INTEGER,
    lispConfiguredLocatorRlocTimeStamp  TimeStamp,
    lispConfiguredLocatorRlocDecapOctets Counter64,
    lispConfiguredLocatorRlocDecapPackets Counter64,
    lispConfiguredLocatorRlocEncapOctets Counter64,
    lispConfiguredLocatorRlocEncapPackets Counter64
}

lispConfiguredLocatorRlocLength OBJECT-TYPE

```

```

SYNTAX      Integer32 (5..39)
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "This object is used to get the octet-length of
    lispConfiguredLocatorRloc."
 ::= { lispConfiguredLocatorEntry 1 }

lispConfiguredLocatorRloc OBJECT-TYPE
SYNTAX      LispAddressType
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "This object is a RLOC address configured on this device.
    It can be an RLOC that is local to this device or can be an
    RLOC which belongs to another ETR within the same site.
    Proxy-ITR address is treated as an RLOC."
 ::= { lispConfiguredLocatorEntry 2 }

lispConfiguredLocatorRlocState OBJECT-TYPE
SYNTAX      INTEGER {
                up (1),

```

```

        down (2),
        unreachable (3)
    }
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The state of this RLOC as per this device. (1 = RLOC is up;
    2 = RLOC is down; 3 = RLOC is unreachable)."
```

::= { lispConfiguredLocatorEntry 3 }

lispConfiguredLocatorRlocLocal OBJECT-TYPE

```

SYNTAX INTEGER {
    siteself (1),
    sitelocal (2)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Indicates whether the RLOC is local to this device (or
    remote, meaning local to another device in the same LISP
    site). (1 = RLOC is an address on this device; 2 = RLOC is
    an address on another device)."
```

::= { lispConfiguredLocatorEntry 4 }

lispConfiguredLocatorRlocTimeStamp OBJECT-TYPE

```

SYNTAX TimeStamp
```

```

MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The value of sysUpTime at which the RLOC was configured on
    this device.

    If this information was present at the most recent
    re-initialization of the local management subsystem, then
    this object contains a zero value."
DEFVAL { 0 }
 ::= { lispConfiguredLocatorEntry 5 }
```

lispConfiguredLocatorRlocDecapOctets OBJECT-TYPE

```

SYNTAX Counter64
MAX-ACCESS read-only
```

STATUS current

DESCRIPTION

"The number of octets of LISP packets that were addressed to this RLOC and were decapsulated.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of configured RLOC being removed and replaced, which can be detected by observing the value of lispConfiguredLocatorRlocTimeStamp."

::= { lispConfiguredLocatorEntry 6 }

lispConfiguredLocatorRlocDecapPackets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of LISP packets that were addressed to this RLOC and were decapsulated.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of configured RLOC being removed and replaced, which can be detected by observing the value of lispConfiguredLocatorRlocTimeStamp."

::= { lispConfiguredLocatorEntry 7 }

lispConfiguredLocatorRlocEncapOctets OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of octets of LISP packets that were encapsulated

by this device using this RLOC address as the source.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.

Discontinuities can also occur as a result of configured RLOC being removed and replaced, which can be detected by observing the value of lispConfiguredLocatorRlocTimeStamp."

::= { lispConfiguredLocatorEntry 8 }

lispConfiguredLocatorRlocEncapPackets OBJECT-TYPE
SYNTAX Counter64
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of LISP packets that were encapsulated by this device using this RLOC address as the source.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system.
Discontinuities can also occur as a result of configured RLOC being removed and replaced, which can be detected by observing the value of lispConfiguredLocatorRlocTimeStamp."
 ::= { lispConfiguredLocatorEntry 9 }

lispEidRegistrationTable OBJECT-TYPE
SYNTAX SEQUENCE OF LispEidRegistrationEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This table provides the properties of each LISP EID prefix that is registered with this device when configured to be a Map-Server."
REFERENCE
["RFC6833, Section 4.0."](#)
 ::= { lispObjects 9 }

lispEidRegistrationEntry OBJECT-TYPE
SYNTAX LispEidRegistrationEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry (conceptual row) in the lispEidRegistrationTable."
INDEX { lispEidRegistrationEidLength,
 lispEidRegistrationEid }
 ::= { lispEidRegistrationTable 1 }

LispEidRegistrationEntry ::= SEQUENCE {

```

lispEidRegistrationEidLength      Integer32,
lispEidRegistrationEid           LispAddressType,
lispEidRegistrationSiteName      OCTET STRING,
lispEidRegistrationSiteDescription OCTET STRING,
lispEidRegistrationIsRegistered  TruthValue,
lispEidRegistrationFirstTimeStamp TimeStamp,
lispEidRegistrationLastTimeStamp TimeStamp,
lispEidRegistrationLastRegisterSenderLength Integer32,
lispEidRegistrationLastRegisterSender  LispAddressType,
lispEidRegistrationAuthenticationErrors Counter64,
lispEidRegistrationRlocsMismatch     Counter64
}

```

```

lispEidRegistrationEidLength OBJECT-TYPE
SYNTAX      Integer32 (5..39)
MAX-ACCESS not-accessible
STATUS      current
DESCRIPTION
    "This object is used to get the octet-length of
    lispEidRegistrationEid."
 ::= { lispEidRegistrationEntry 1 }

```

```

lispEidRegistrationEid OBJECT-TYPE
SYNTAX      LispAddressType
MAX-ACCESS not-accessible
STATUS      current
DESCRIPTION
    "The EID prefix that is being registered."
 ::= { lispEidRegistrationEntry 2 }

```

```

lispEidRegistrationSiteName OBJECT-TYPE
SYNTAX      OCTET STRING (SIZE(0..63))
MAX-ACCESS read-only
STATUS      current
DESCRIPTION
    "Site name used by a Map-Server to distinguish different
    LISP sites that are registering with it."
 ::= { lispEidRegistrationEntry 3 }

```

```

lispEidRegistrationSiteDescription OBJECT-TYPE
SYNTAX      OCTET STRING (SIZE(0..255))
MAX-ACCESS read-only
STATUS      current
DESCRIPTION
    "Description for a site name used by a Map-Server. The EID
    prefix that is being registered belongs to this site."
 ::= { lispEidRegistrationEntry 4 }

```

`lispEidRegistrationIsRegistered OBJECT-TYPE``SYNTAX TruthValue``MAX-ACCESS read-only``STATUS current``DESCRIPTION`

"Indicates the registration status of the given EID prefix. If this object is true, then it means the EID prefix is registered.

The value false implies the EID prefix is not registered with the Map Server. There are multiple scenarios when this could happen like authentication failures, routing problems, misconfigs to name a few."

`::= { lispEidRegistrationEntry 5 }``lispEidRegistrationFirstTimeStamp OBJECT-TYPE``SYNTAX TimeStamp``MAX-ACCESS read-only``STATUS current``DESCRIPTION`

"The value of sysUpTime at which the first valid register message for the EID Prefix information represented by this entry was received by this device.

If this information was present at the most recent re-initialization of the local management subsystem, then this object contains a zero value."

`DEFVAL { 0 }``::= { lispEidRegistrationEntry 6 }``lispEidRegistrationLastTimeStamp OBJECT-TYPE``SYNTAX TimeStamp``MAX-ACCESS read-only``STATUS current``DESCRIPTION`

"The value of sysUpTime at which the last valid register message for the EID Prefix information represented by this entry was received by this device.

If this information was present at the most recent re-initialization of the local management subsystem, then this object contains a zero value."

`DEFVAL { 0 }``::= { lispEidRegistrationEntry 7 }``lispEidRegistrationLastRegisterSenderLength OBJECT-TYPE`

SYNTAX Integer32 (5..39)
MAX-ACCESS read-only

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STATUS current

DESCRIPTION

"This object is used to get the octet-length of
lispEidRegistrationLastRegisterSender, the next
object."

::= { lispEidRegistrationEntry 8 }

lispEidRegistrationLastRegisterSender OBJECT-TYPE

SYNTAX LispAddressType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Source address of the last valid register message for the
given EID prefix that was received by this device."

::= { lispEidRegistrationEntry 9 }

lispEidRegistrationAuthenticationErrors OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of total authentication errors of map-registers
received for the given EID prefix.

Discontinuities in this monotonically increasing value occur
at re-initialization of the management system.

Discontinuities can also occur as a result of site config
changes, which can be detected by observing the value of
lispEidRegistrationFirstTimeStamp."

::= { lispEidRegistrationEntry 10 }

lispEidRegistrationRlocsMismatch OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Count of total map-registers received that had at least one
RLOC that was not in the allowed list of RLOCs for the given
EID prefix.

Discontinuities in this monotonically increasing value occur at re-initialization of the management system. Discontinuities can also occur as a result of site config changes, which can be detected by observing the value of `lispEidRegistrationFirstTimeStamp`."

```
::= { lispEidRegistrationEntry 11 }
```

```
lispEidRegistrationEtrTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF LispEidRegistrationEtrEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This table provides the properties of ETRs that register
        the given EID prefix with this device when configured to
        be a Map-Server."
    REFERENCE
        "RFC6830, Section 6.1."
    ::= { lispObjects 10 }
```

```
lispEidRegistrationEtrEntry OBJECT-TYPE
    SYNTAX      LispEidRegistrationEtrEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "An entry (conceptual row) in the
        lispEidRegistrationEtrTable."
    INDEX       { lispEidRegistrationEidLength,
                  lispEidRegistrationEid,
                  lispEidRegistrationEtrSenderLength,
                  lispEidRegistrationEtrSender }
    ::= { lispEidRegistrationEtrTable 1 }
```

```
LispEidRegistrationEtrEntry ::= SEQUENCE {
    lispEidRegistrationEtrSenderLength      Integer32,
    lispEidRegistrationEtrSender           LispAddressType,
    lispEidRegistrationEtrLastTimeStamp    TimeStamp,
    lispEidRegistrationEtrTtl              Unsigned32,
    lispEidRegistrationEtrProxyReply       TruthValue,
    lispEidRegistrationEtrWantsMapNotify   TruthValue
```

}

```
lispEidRegistrationEtrSenderLength OBJECT-TYPE
    SYNTAX      Integer32 (5..39)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This object is used to get the octet-length of
        lispEidRegistrationEtrSender."
    ::= { lispEidRegistrationEtrEntry 1 }
```

```
lispEidRegistrationEtrSender OBJECT-TYPE
    SYNTAX      LispAddressType
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
```

```
        "Source address of the ETR that is sending valid register
        messages for this EID prefix to this device."
    ::= { lispEidRegistrationEtrEntry 2 }
```

```
lispEidRegistrationEtrLastTimeStamp OBJECT-TYPE
    SYNTAX      TimeStamp
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The value of sysUpTime at which the last valid register
        message from this ETR for the EID Prefix information
        represented by this entry was received by this device.

        If this information was present at the most recent
        re-initialization of the local management subsystem,
        then this object contains a zero value."
    DEFVAL { 0 }
    ::= { lispEidRegistrationEtrEntry 3 }
```

```
lispEidRegistrationEtrTtl OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The Record TTL of the registering ETR device for this
```

```
    EID prefix."
 ::= { lispEidRegistrationEtrEntry 4 }
```

```
lispEidRegistrationEtrProxyReply OBJECT-TYPE
```

```
SYNTAX      TruthValue
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Indicates proxy-replying status of the registering ETR for
    this EID prefix. If this object is true, then it means the
    Map-Server can proxy-reply."
```

```
 ::= { lispEidRegistrationEtrEntry 5 }
```

```
lispEidRegistrationEtrWantsMapNotify OBJECT-TYPE
```

```
SYNTAX      TruthValue
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "Indicates whether the EID prefix wants Map-Notifications.
    If this object is true, then it means the EID prefix wants
    Map-Notifications."
```

```
 ::= { lispEidRegistrationEtrEntry 6 }
```

```
lispEidRegistrationLocatorTable OBJECT-TYPE
```

```
SYNTAX      SEQUENCE OF LispEidRegistrationLocatorEntry
```

```
MAX-ACCESS  not-accessible
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "This table provides the properties of all locators per
    LISP site that are served by this device when configured
    to be a Map-Server."
```

```
REFERENCE
```

```
    "RFC6830, Section 6.1."
```

```
 ::= { lispObjects 11 }
```

```
lispEidRegistrationLocatorEntry OBJECT-TYPE
```

```
SYNTAX      LispEidRegistrationLocatorEntry
```

```
MAX-ACCESS  not-accessible
```

```
STATUS      current
```

```
DESCRIPTION
```

```
    "An entry (conceptual row) in the
```

```

        lispEidRegistrationLocatorTable."
INDEX      { lispEidRegistrationEidLength,
             lispEidRegistrationEid,
             lispEidRegistrationEtrSenderLength,
             lispEidRegistrationEtrSender,
             lispEidRegistrationLocatorRlocLength,
             lispEidRegistrationLocatorRloc }
 ::= { lispEidRegistrationLocatorTable 1 }

LispEidRegistrationLocatorEntry ::= SEQUENCE {
    lispEidRegistrationLocatorRlocLength      Integer32,
    lispEidRegistrationLocatorRloc           LispAddressType,
    lispEidRegistrationLocatorRlocState      INTEGER,
    lispEidRegistrationLocatorIsLocal        TruthValue,
    lispEidRegistrationLocatorPriority        Integer32,
    lispEidRegistrationLocatorWeight         Integer32,
    lispEidRegistrationLocatorMPriority      Integer32,
    lispEidRegistrationLocatorMWeight        Integer32
}

lispEidRegistrationLocatorRlocLength OBJECT-TYPE
SYNTAX      Integer32 (5..39)
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "This object is used to get the octet-length of
    lispEidRegistrationLocatorRloc."
 ::= { lispEidRegistrationLocatorEntry 1 }

lispEidRegistrationLocatorRloc OBJECT-TYPE

```

```

SYNTAX      LispAddressType
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "The locator of the given EID prefix being registered by the
    given ETR with this device."
 ::= { lispEidRegistrationLocatorEntry 2 }

lispEidRegistrationLocatorRlocState OBJECT-TYPE
SYNTAX      INTEGER {
             up (1),

```



```
        down (2)
    }
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The cached state of this RLOC received in map-register from
    the ETR by the device, in the capacity of a Map-Server.
    Value 1 refers to up, value 2 refers to down."
::= { lispEidRegistrationLocatorEntry 3 }
```

```
lispEidRegistrationLocatorIsLocal OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Indicates if the given locator is local to the registering
    ETR. If this object is true, it means the locator is local."
::= { lispEidRegistrationLocatorEntry 4 }
```

```
lispEidRegistrationLocatorPriority OBJECT-TYPE
SYNTAX Integer32 (0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The unicast priority of the RLOC for this EID prefix in the
    register message sent by the given ETR."
::= { lispEidRegistrationLocatorEntry 5 }
```

```
lispEidRegistrationLocatorWeight OBJECT-TYPE
SYNTAX Integer32 (0..100)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The unicast weight of the RLOC for this EID prefix in the
    register message sent by the given ETR."
::= { lispEidRegistrationLocatorEntry 6 }
```

```
lispEidRegistrationLocatorMPriority OBJECT-TYPE
SYNTAX Integer32 (0..255)
MAX-ACCESS read-only
STATUS current
```

DESCRIPTION

"The multicast priority of the RLOC for this EID prefix in the register message sent by the given ETR."

::= { lispEidRegistrationLocatorEntry 7 }

lispEidRegistrationLocatorMWeight OBJECT-TYPE

SYNTAX Integer32 (0..100)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The multicast weight of the RLOC for this EID prefix in the register message sent by the given ETR."

::= { lispEidRegistrationLocatorEntry 8 }

lispUseMapServerTable OBJECT-TYPE

SYNTAX SEQUENCE OF LispUseMapServerEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides the properties of the map-server(s) with which this device is configured to register."

REFERENCE

"[RFC6833, Section 4.3.](#)"

::= { lispObjects 12 }

lispUseMapServerEntry OBJECT-TYPE

SYNTAX LispUseMapServerEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry (conceptual row) in the lispUseMapServerTable."

INDEX { lispUseMapServerAddressLength,
lispUseMapServerAddress }

::= { lispUseMapServerTable 1 }

```
LispUseMapServerEntry ::= SEQUENCE {  
    lispUseMapServerAddressLength Integer32,  
    lispUseMapServerAddress      LispAddressType,  
    lispUseMapServerState        INTEGER  
}
```

lispUseMapServerAddressLength OBJECT-TYPE

SYNTAX Integer32 (5..39)

MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
 "This object is used to get the octet-length of
 lispUseMapServerAddress."
 ::= { lispUseMapServerEntry 1 }

lispUseMapServerAddress OBJECT-TYPE
SYNTAX LispAddressType
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
 "Address of Map-Server configured on this device."
 ::= { lispUseMapServerEntry 2 }

lispUseMapServerState OBJECT-TYPE
SYNTAX INTEGER {
 up (1),
 down (2),
 unreachable (3)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "State of this Map-Server configured on this device
 (1 = Map-Server is up; 2 = Map-Server is down)."
 ::= { lispUseMapServerEntry 3 }

lispUseMapResolverTable OBJECT-TYPE
SYNTAX SEQUENCE OF LispUseMapResolverEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
 "This table provides the properties of the map-resolver(s)
 this device is configured to use."
REFERENCE
 "[RFC6833, Section 4.4.](#)"
 ::= { lispObjects 13 }

lispUseMapResolverEntry OBJECT-TYPE
SYNTAX LispUseMapResolverEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
 "An entry (conceptual row) in the

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```
INDEX      { lispUseMapResolverAddressLength,
             lispUseMapResolverAddress }
 ::= { lispUseMapResolverTable 1 }

LispUseMapResolverEntry ::= SEQUENCE {
    lispUseMapResolverAddressLength  Integer32,
    lispUseMapResolverAddress        LispAddressType,
    lispUseMapResolverState          INTEGER
}

lispUseMapResolverAddressLength OBJECT-TYPE
    SYNTAX      Integer32 (5..39)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This object is used to get the octet-length of
        lispUseMapResolverAddress."
    ::= { lispUseMapResolverEntry 1 }

lispUseMapResolverAddress OBJECT-TYPE
    SYNTAX      LispAddressType
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Address of map-resolver configured on this device."
    ::= { lispUseMapResolverEntry 2 }

lispUseMapResolverState OBJECT-TYPE
    SYNTAX      INTEGER {
                up (1),
                down (2)
            }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "State of this Map-Resolver configured on this device
        (1 = Map-Resolver is up; 2 = Map-Resolver is down)."
    ::= { lispUseMapResolverEntry 3 }
```

lispUseProxyEtrTable OBJECT-TYPE
SYNTAX SEQUENCE OF LispUseProxyEtrEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This table provides the properties of all Proxy ETRs that
this device is configured to use."

REFERENCE

"[RFC6830, Section 6.0.](#)"
 ::= { lispObjects 14 }

lispUseProxyEtrEntry OBJECT-TYPE
SYNTAX LispUseProxyEtrEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry (conceptual row) in the
lispUseProxyEtrTable."
INDEX { lispUseProxyEtrAddressLength,
lispUseProxyEtrAddress }
 ::= { lispUseProxyEtrTable 1 }

LispUseProxyEtrEntry ::= SEQUENCE {
lispUseProxyEtrAddressLength Integer32,
lispUseProxyEtrAddress LispAddressType,
lispUseProxyEtrPriority Integer32,
lispUseProxyEtrWeight Integer32,
lispUseProxyEtrMPriority Integer32,
lispUseProxyEtrMWeight Integer32,
lispUseProxyEtrState INTEGER
}

lispUseProxyEtrAddressLength OBJECT-TYPE
SYNTAX Integer32 (5..39)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This object is used to get the octet-length of
lispUseProxyEtrAddress."
 ::= { lispUseProxyEtrEntry 1 }

lispUseProxyEtrAddress OBJECT-TYPE
SYNTAX LispAddressType
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Address of Proxy ETR configured on this device."
 ::= { lispUseProxyEtrEntry 2 }

lispUseProxyEtrPriority OBJECT-TYPE
SYNTAX Integer32 (0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The unicast priority of the PETR locator."

::= { lispUseProxyEtrEntry 3 }

lispUseProxyEtrWeight OBJECT-TYPE
SYNTAX Integer32 (0..100)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The unicast weight of the PETR locator."
 ::= { lispUseProxyEtrEntry 4 }

lispUseProxyEtrMPriority OBJECT-TYPE
SYNTAX Integer32 (0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The multicast priority of the PETR locator."
 ::= { lispUseProxyEtrEntry 5 }

lispUseProxyEtrMWeight OBJECT-TYPE
SYNTAX Integer32 (0..100)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The multicast weight of the PETR locator."
 ::= { lispUseProxyEtrEntry 6 }

```

lispUseProxyEtrState OBJECT-TYPE
    SYNTAX      INTEGER {
                    down (0),
                    up (1)
                }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "State of this Proxy ETR configured on this device
        (0 = Proxy ETR is down; 1 = Proxy ETR is up)."
```

::= { lispUseProxyEtrEntry 7 }

```

--
-- Conformance Information
--

lispCompliances OBJECT IDENTIFIER ::= { lispConformance 1 }
lispGroups      OBJECT IDENTIFIER ::= { lispConformance 2 }
```

--

```

-- Compliance Statements
--

lispMIBComplianceEtr MODULE-COMPLIANCE
    STATUS      current
    DESCRIPTION
        "The compliance statement for LISP ETRs. It conveys
        information if device supports ETR feature, and relevant
        state associated with that feature."
    MODULE     -- this module
```

MANDATORY-GROUPS { lispMIBetrGroup }

GROUP lispMIBitrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBPetrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBPitrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBMapServerGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBMapResolverGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBetrExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBitrExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBMapServerExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBTuningParametersGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBEncapStatisticsGroup
DESCRIPTION
"This group is optional."


```

GROUP    lispMIBDecapStatisticsGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBDiagnosticsGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBVrfGroup
DESCRIPTION
    "This group is optional."

::= { lispCompliances 1 }

lispMIBComplianceItr MODULE-COMPLIANCE
STATUS   current
DESCRIPTION
    "The compliance statement for LISP ITRs. It conveys
    information if device supports ITR feature, and any
    state associated with that feature."
MODULE   -- this module
MANDATORY-GROUPS { lispMIBItrGroup }

GROUP    lispMIBEtrGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBPetrGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBPitrGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBMapServerGroup

```

```

DESCRIPTION
    "This group is optional."

```

```

GROUP    lispMIBMapResolverGroup
DESCRIPTION

```

```

        "This group is optional."

GROUP    lispMIBetrExtendedGroup
DESCRIPTION
        "This group is optional."

GROUP    lispMIBitrExtendedGroup
DESCRIPTION
        "This group is optional."

GROUP    lispMIBMapServerExtendedGroup
DESCRIPTION
        "This group is optional."

GROUP    lispMIBTuningParametersGroup
DESCRIPTION
        "This group is optional."

GROUP    lispMIBEncapStatisticsGroup
DESCRIPTION
        "This group is optional."

GROUP    lispMIBDecapStatisticsGroup
DESCRIPTION
        "This group is optional."

GROUP    lispMIBDiagnosticsGroup
DESCRIPTION
        "This group is optional."

GROUP    lispMIBVrfGroup
DESCRIPTION
        "This group is optional."

 ::= { lispCompliances 2 }

lispMIBCompliancePetr MODULE-COMPLIANCE
STATUS    current
DESCRIPTION
        "The compliance statement for LISP Proxy-ETRs. It conveys
        information if given device supports Proxy-ETR feature,
        and relevant state associated with that feature."
MODULE    -- this module

```

MANDATORY-GROUPS { lispMIBPetrGroup }

GROUP lispMIBetrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBitrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBPitrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBMapServerGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBMapResolverGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBetrExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBitrExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBMapServerExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBTuningParametersGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBEncapStatisticsGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBDecapStatisticsGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBDiagnosticsGroup
DESCRIPTION

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```
"This group is optional."
```

```
GROUP lispMIBVrfGroup
```

```
DESCRIPTION
```

```
"This group is optional."
```

```
::= { lispCompliances 3 }
```

```
lispMIBCompliancePitr MODULE-COMPLIANCE
```

```
STATUS current
```

```
DESCRIPTION
```

```
"The compliance statement for LISP Proxy-ITRs. It conveys  
information if device supports Proxy-ITR feature, and  
relevant state associated with that feature."
```

```
MODULE -- this module
```

```
MANDATORY-GROUPS { lispMIBPitrGroup }
```

```
GROUP lispMIBetrGroup
```

```
DESCRIPTION
```

```
"This group is optional."
```

```
GROUP lispMIBItrGroup
```

```
DESCRIPTION
```

```
"This group is optional."
```

```
GROUP lispMIBPetrGroup
```

```
DESCRIPTION
```

```
"This group is optional."
```

```
GROUP lispMIBMapServerGroup
```

```
DESCRIPTION
```

```
"This group is optional."
```

```
GROUP lispMIBMapResolverGroup
```

```
DESCRIPTION
```

```
"This group is optional."
```

```
GROUP lispMIBetrExtendedGroup
```

```
DESCRIPTION
```

```
"This group is optional."
```

```
GROUP lispMIBItrExtendedGroup
```

DESCRIPTION
"This group is optional."

GROUP lispMIBMapServerExtendedGroup
DESCRIPTION
"This group is optional."

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GROUP lispMIBTuningParametersGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBEncapStatisticsGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBDecapStatisticsGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBDiagnosticsGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBVrfGroup
DESCRIPTION
"This group is optional."

::= { lispCompliances 4 }

lispMIBComplianceMapServer MODULE-COMPLIANCE

STATUS current

DESCRIPTION

"The compliance statement for LISP Map Servers. It conveys information if device supports Map Server feature, and relevant state associated with that feature."

MODULE -- this module

MANDATORY-GROUPS { lispMIBMapServerGroup }

GROUP lispMIBEtrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBItrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBPetrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBPitrGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBMapResolverGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBEtrExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBItrExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBMapServerExtendedGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBTuningParametersGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBEncapStatisticsGroup
DESCRIPTION
"This group is optional."

GROUP lispMIBDecapStatisticsGroup
DESCRIPTION
"This group is optional."

```

GROUP    lispMIBDiagnosticsGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBVrfGroup
DESCRIPTION
    "This group is optional."

 ::= { lispCompliances 5 }

lispMIBComplianceMapResolver MODULE-COMPLIANCE
STATUS   current
DESCRIPTION
    "The compliance statement for LISP Map Resolvers. It
    conveys information if device supports Map Server
    feature, and relevant state associated with that
    feature."
MODULE   -- this module
MANDATORY-GROUPS { lispMIBMapResolverGroup }

```

```

GROUP    lispMIBEtrGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBItrGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBPetrGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBPitrGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBMapServerGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBEtrExtendedGroup

```

```
DESCRIPTION
    "This group is optional."

GROUP    lispMIBItrExtendedGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBMapServerExtendedGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBTuningParametersGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBEncapStatisticsGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBDecapStatisticsGroup
DESCRIPTION
    "This group is optional."

GROUP    lispMIBDiagnosticsGroup
DESCRIPTION
    "This group is optional."
```

```
GROUP    lispMIBVrfGroup
DESCRIPTION
    "This group is optional."

 ::= { lispCompliances 6 }

--
-- Units of Conformance
--

lispMIBetrGroup OBJECT-GROUP
    OBJECTS { lispFeaturesEtrEnabled,
              lispMappingDatabaseLsb,
```



```

        lispMappingDatabaseLocatorRlocPriority,
        lispMappingDatabaseLocatorRlocWeight,
        lispMappingDatabaseLocatorRlocMPriority,
        lispMappingDatabaseLocatorRlocMWeight,
        lispMappingDatabaseLocatorRlocState,
        lispMappingDatabaseLocatorRlocLocal,
        lispConfiguredLocatorRlocState,
        lispConfiguredLocatorRlocLocal,
        lispUseMapServerState
    }
STATUS current
DESCRIPTION
    "A collection of objects to support reporting of basic
    LISP ETR parameters."
::= { lispGroups 1 }

lispMIBItrGroup OBJECT-GROUP
OBJECTS { lispFeaturesItrEnabled,
        lispFeaturesMapCacheSize,
        lispMappingDatabaseLsb,
        lispMapCacheLocatorRlocPriority,
        lispMapCacheLocatorRlocWeight,
        lispMapCacheLocatorRlocMPriority,
        lispMapCacheLocatorRlocMWeight,
        lispMapCacheLocatorRlocState,
        lispMapCacheEidTimeStamp,
        lispMapCacheEidExpiryTime,
        lispUseMapResolverState,
        lispUseProxyEtrPriority,
        lispUseProxyEtrWeight,
        lispUseProxyEtrMPriority,
        lispUseProxyEtrMWeight,
        lispUseProxyEtrState
    }

```

```

STATUS current
DESCRIPTION
    "A collection of objects to support reporting of basic
    LISP ITR parameters."
::= { lispGroups 2 }

lispMIBPetrGroup OBJECT-GROUP

```

```

OBJECTS { lispFeaturesProxyEtrEnabled
        }
STATUS   current
DESCRIPTION
        "A collection of objects to support reporting of basic
        LISP Proxy-ETR parameters."
 ::= { lispGroups 3 }

lispMIBPitrGroup OBJECT-GROUP
OBJECTS { lispFeaturesProxyItrEnabled,
        lispConfiguredLocatorRlocState,
        lispConfiguredLocatorRlocLocal
        }

STATUS   current
DESCRIPTION
        "A collection of objects to support reporting of basic
        LISP Proxy-ITR parameters."
 ::= { lispGroups 4 }

lispMIBMapServerGroup OBJECT-GROUP
OBJECTS { lispFeaturesMapServerEnabled,
        lispEidRegistrationIsRegistered,
        lispEidRegistrationLocatorRlocState
        }
STATUS   current
DESCRIPTION
        "A collection of objects to support reporting of basic
        LISP Map Server parameters."
 ::= { lispGroups 5 }

lispMIBMapResolverGroup OBJECT-GROUP
OBJECTS { lispFeaturesMapResolverEnabled
        }
STATUS   current
DESCRIPTION
        "A collection of objects to support reporting of basic
        LISP Map Resolver parameters."
 ::= { lispGroups 6 }

lispMIBEtrExtendedGroup OBJECT-GROUP

```

```

OBJECTS { lispFeaturesRlocProbeEnabled,
          lispFeaturesEtrAcceptMapDataEnabled,
          lispFeaturesEtrAcceptMapDataVerifyEnabled,
          lispMappingDatabaseEidPartitioned
        }
STATUS   current
DESCRIPTION
        "A collection of objects to support reporting of
        LISP features and properties on ETRs."
::= { lispGroups 7 }

lispMIBItrExtendedGroup OBJECT-GROUP
OBJECTS { lispFeaturesRlocProbeEnabled,
          lispMapCacheEidState,
          lispMapCacheEidAuthoritative,
          lispMapCacheLocatorRlocTimeStamp,
          lispMapCacheLocatorRlocLastPriorityChange,
          lispMapCacheLocatorRlocLastWeightChange,
          lispMapCacheLocatorRlocLastMPriorityChange,
          lispMapCacheLocatorRlocLastMWeightChange,
          lispMapCacheLocatorRlocLastStateChange,
          lispMapCacheLocatorRlocRtt
        }
STATUS   current
DESCRIPTION
        "A collection of objects to support reporting of
        LISP features and properties on ITRs."
::= { lispGroups 8 }

lispMIBMapServerExtendedGroup OBJECT-GROUP
OBJECTS { lispEidRegistrationSiteName,
          lispEidRegistrationSiteDescription,
          lispEidRegistrationIsRegistered,
          lispEidRegistrationFirstTimeStamp,
          lispEidRegistrationLastTimeStamp,
          lispEidRegistrationLastRegisterSenderLength,
          lispEidRegistrationLastRegisterSender,
          lispEidRegistrationEtrLastTimeStamp,
          lispEidRegistrationEtrTtl,
          lispEidRegistrationEtrProxyReply,
          lispEidRegistrationEtrWantsMapNotify,
          lispEidRegistrationLocatorIsLocal,
          lispEidRegistrationLocatorPriority,
          lispEidRegistrationLocatorWeight,
          lispEidRegistrationLocatorMPriority,
          lispEidRegistrationLocatorMWeight
        }
STATUS   current

```

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DESCRIPTION

"A collection of objects to support reporting of LISP features and properties on Map Servers related to EID registrations."

```
::= { lispGroups 9 }
```

```
lispMIBTuningParametersGroup OBJECT-GROUP
```

```
OBJECTS { lispFeaturesMapCacheLimit,  
          lispFeaturesEtrMapCacheTtl  
        }
```

```
STATUS current
```

DESCRIPTION

"A collection of objects used to support reporting of parameters used to control LISP behavior and to tune performance."

```
::= { lispGroups 10 }
```

```
lispMIBEncapStatisticsGroup OBJECT-GROUP
```

```
OBJECTS { lispMappingDatabaseTimeStamp,  
          lispMappingDatabaseEncapOctets,  
          lispMappingDatabaseEncapPackets,  
          lispMappingDatabaseLocatorRlocTimeStamp,  
          lispMappingDatabaseLocatorRlocEncapOctets,  
          lispMappingDatabaseLocatorRlocEncapPackets,  
          lispMapCacheEidTimeStamp,  
          lispMapCacheEidEncapOctets,  
          lispMapCacheEidEncapPackets,  
          lispMapCacheLocatorRlocTimeStamp,  
          lispMapCacheLocatorRlocEncapOctets,  
          lispMapCacheLocatorRlocEncapPackets,  
          lispConfiguredLocatorRlocTimeStamp,  
          lispConfiguredLocatorRlocEncapOctets,  
          lispConfiguredLocatorRlocEncapPackets  
        }
```

```
STATUS current
```

DESCRIPTION

"A collection of objects used to support reporting of LISP encapsulation statistics for the device."

```
::= { lispGroups 11 }
```

```
lispMIBDecapStatisticsGroup OBJECT-GROUP
```

```
OBJECTS { lispMappingDatabaseTimeStamp,  
          lispMappingDatabaseDecapOctets,  
        }
```

```
lispMappingDatabaseDecapPackets,  
lispMappingDatabaseLocatorRlocTimeStamp,  
lispMappingDatabaseLocatorRlocDecapOctets,  
lispMappingDatabaseLocatorRlocDecapPackets,  
lispMapCacheEidTimeStamp,
```

```
lispMapCacheEidDecapOctets,  
lispMapCacheEidDecapPackets,  
lispMapCacheLocatorRlocTimeStamp,  
lispMapCacheLocatorRlocDecapOctets,  
lispMapCacheLocatorRlocDecapPackets,  
lispConfiguredLocatorRlocTimeStamp,  
lispConfiguredLocatorRlocDecapOctets,  
lispConfiguredLocatorRlocDecapPackets  
}  
STATUS current  
DESCRIPTION  
    "A collection of objects used to support reporting of  
    LISP decapsulation statistics for the device."  
 ::= { lispGroups 12 }  
  
lispMIBDiagnosticsGroup OBJECT-GROUP  
    OBJECTS { lispFeaturesRouterTimeStamp,  
              lispGlobalStatsMapRequestsIn,  
              lispGlobalStatsMapRequestsOut,  
              lispGlobalStatsMapRepliesIn,  
              lispGlobalStatsMapRepliesOut,  
              lispGlobalStatsMapRegistersIn,  
              lispGlobalStatsMapRegistersOut,  
              lispEidRegistrationAuthenticationErrors,  
              lispEidRegistrationRlocsMismatch  
            }  
    STATUS current  
    DESCRIPTION  
        "A collection of objects used to support reporting of  
        additional diagnostics related to the LISP control plane  
        state of a LISP device."  
 ::= { lispGroups 13 }  
  
lispMIBVrfGroup OBJECT-GROUP  
    OBJECTS { lispIidToVrfName  
            }  
}
```

```
STATUS current
DESCRIPTION
    "A collection of objects used to support reporting of
    VRF-related information on a LISP device."
 ::= { lispGroups 14 }
```

END

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[8.](#) Relationship to Other MIB Modules

[8.1.](#) MIB modules required for IMPORTS

The LISP MIB imports the TEXTUAL-CONVENTION AddressFamilyNumbers from the IANA-ADDRESS-FAMILY-NUMBERS-MIB DEFINITIONS [[IANA](#)]
<http://www.iana.org/assignments/ianaaddressfamilynumbers-mib>

The LISP MIB imports mib-2, Unsigned32, Counter64, Integer32, and TimeTicks from SNMPv2-SMI -- [[RFC2578](#)].

The LISP MIB imports TruthValue, TEXTUAL-CONVENTION, TimeStamp, and TimeTicks from SNMPv2-TC -- [[RFC2579](#)].

The LISP MIB imports MODULE-COMPLIANCE from SNMPv2-TC -- [[RFC2580](#)].

The LISP MIB imports MplsL3VpnName from MPLS-L3VPN-STD-MIB -- [[RFC4382](#)].

[9.](#) Security Considerations

There are no management objects defined in this MIB module that have a MAX-ACCESS clause of read-write and/or read-create. So, if this MIB module is implemented correctly, then there is no risk that an intruder can alter or create any management objects of this MIB module via direct SNMP SET operations.

There are no readable objects in this MIB module (i.e., objects with a MAX-ACCESS other than not-accessible) that are considered

sensitive.

SNMP versions prior to SNMPv3 did not include adequate security. Even if the network itself is secure (for example by using IPsec), there is no control as to who on the secure network is allowed to access and GET/SET (read/change/create/delete) the objects in this MIB module.

Implementations SHOULD provide the security features described by the SNMPv3 framework (see [RFC3410]), and implementations claiming compliance to the SNMPv3 standard MUST include full support for authentication and privacy via the User-based Security Model (USM) [RFC3414] with the AES cipher algorithm [RFC3826]. Implementations MAY also provide support for the Transport Security Model (TSM) [RFC5591] in combination with a secure transport such as SSH [RFC5592] or TLS/DTLS [RFC6353].

Further, deployment of SNMP versions prior to SNMPv3 is NOT RECOMMENDED. Instead, it is RECOMMENDED to deploy SNMPv3 and to

enable cryptographic security. It is then a customer/operator responsibility to ensure that the SNMP entity giving access to an instance of this MIB module is properly configured to give access to the objects only to those principals (users) that have legitimate rights to indeed GET or SET (change/create/delete) them.

10. IANA Considerations

The MIB module in this document uses the following IANA-assigned OBJECT IDENTIFIER values recorded in the SMI Numbers registry:

Descriptor -----	OBJECT IDENTIFIER value -----
lispMIB	{ mib-2 XXX }

This document instructs IANA to allocate a new value in the "SMI Network Management MGMT Codes Internet-standard MIB" subregistry of the "Network Management Parameters" registry, according to the following registration data: Decimal: [TBD by IANA] Name: lispMIB Description: Locator/ID Separation Protocol (LISP) References: [RFC

XXXX (this RFC)]

11. References

11.1. Normative References

- [IANA] "IANA-ADDRESS-FAMILY-NUMBERS-MIB DEFINITIONS", <<http://www.iana.org/assignments/ianaaddressfamilynumbers-mib>>.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC2578] McCloghrie, K., Ed., Perkins, D., Ed., and J. Schoenwaelder, Ed., "Structure of Management Information Version 2 (SMIv2)", STD 58, [RFC 2578](#), April 1999.
- [RFC2579] McCloghrie, K., Ed., Perkins, D., Ed., and J. Schoenwaelder, Ed., "Textual Conventions for SMIv2", STD 58, [RFC 2579](#), April 1999.
- [RFC2580] McCloghrie, K., Perkins, D., and J. Schoenwaelder, "Conformance Statements for SMIv2", STD 58, [RFC 2580](#), April 1999.
- [RFC4382] Nadeau, T. and H. van der Linde, "MPLS/BGP Layer 3 Virtual Private Network (VPN) Management Information Base",

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[RFC 4382](#), February 2006.

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- [RFC6832] Lewis, D., Meyer, D., Farinacci, D., and V. Fuller, "Interworking between Locator/ID Separation Protocol (LISP) and Non-LISP Sites", [RFC 6832](#), January 2013.
- [RFC6833] Fuller, V. and D. Farinacci, "Locator/ID Separation Protocol (LISP) Map-Server Interface", [RFC 6833](#), January 2013.

11.2. Informative References

- [LCAF] Farinacci, D., Meyer, D., and J. Snijders, "LISP Canonical Address Format", [draft-ietf-lisp-lcaf-02.txt](#) (work in progress), March 2013.
- [RFC3410] Case, J., Mundy, R., Partain, D., and B. Stewart, "Introduction and Applicability Statements for Internet-Standard Management Framework", [RFC 3410](#), December 2002.

[Appendix A](#). Acknowledgments

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