LISP-Related Configuration Commands

lig

To initiate a Locator/ID Separation Protocol (LISP) Internet Groper (**lig**) operation for a destination endpoint identifier (EID) or to test the routers' local EID prefix(es), use the **lig** command in privileged EXEC mode.

lig {*hostname*| *destination-EID*} [**count** *count*] [**source** *source-EID*] [**to** *map-resolver*]

lig self all [**count** *count*] [**source** *source-EID*] [**to** *map-resolver*]

lig self [**ipv4**| **ipv6**] [**all-eid**] [**count** *count*] [**source** *source-EID*] [**to** *map-resolver*]

Syntax Description

hostname	Destination hostname.
destination-EID	Destination IPv4 or IPv6 Endpoint Identifier (EID) for the lig operation.
count *count*	(Optional) Send this number of map requests (value between 1 and 5).
source *source-EID*	(Optional) Send the map request using this IPv4 or IPv6 source EID.
to *map resolver*	(Optional) Send the map request to this map resolver locator instead of the configured map resolver.
self	Use lig to test if the local EID prefix is registered in the mapping database.
all	(Optional) Specifies that a map request is sent for all local EIDs configured on the router (IPv4 and IPv6).
ipv4	(Optional) Specifies that map requests should be sent only for local IPv4 EIDs configured on the router.
ipv6	(Optional) Specifies that map requests should be sent only for local IPv6 EIDs configured on the router.
all-eid	(Optional) Used in conjunction with the **ipv4** or **ipv6** keyword, specifies that a map request is sent for all local EIDs configured on the router in the referenced address family.

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
15.1(1)XB	This command was introduced.
2.5.1XA	This command was integrated into Cisco IOS XE Release 2.5.1XA.
Cisco IOS XE Release 3.3.0S	This command was integrated into Cisco IOS XE Release 3.3.0S.
15.1(4)M	This command was integrated into Cisco IOS Release 15.1(4)M.

Usage Guidelines

This command initiates a LISP Internet Groper (**lig**) query for the indicated destination hostname or EID, or the routers local EID-prefix. The **lig** function is analogous to the domain name service (DNS)-related **dig** function. Use this command as a simple means of testing whether a destination EID exists in the LISP mapping database system, or as a convenient way to see if your site is registered with the mapping database system.

When a **lig** query is initiated with a hostname or destination EID, the router sends a map request to the configured map resolver for the indicated destination hostname or EID. When a map reply is returned, its contents are displayed to the user and entered in the LISP map-cache.

When a **lig self** query is initiated, the routers local EID prefix is substituted in place of the destination EID when the router sends a map request to the configured map resolver.

By default, at a minimum one map request is sent to the map resolver but up to three map requests may be sent to the map resolver. After a map reply is returned for a map request, no further map requests are sent. When the **count** option is applied, the specified number of map requests is sent.

By default, the source of the map request will be the first configured EID-prefix for the site (with the host-bit set to zero). For example, if the local EID-prefix is 172.16.21.0/24, the source EID will be 172.16.21.0 for the map request. When the **source** option is applied, a specific source EID may be used. However, the source-EID must be one of the EID addresses assigned to the LISP router.

When the **lig** command is used with the **self** option, the destination EID will also be the first configured EID prefix for the site (with the host-bit set to zero). For example, if the local EID-prefix is 172.16.21.0/24, the destination EID will be 172.16.21.0 for the map request.

By default when **lig** is invoked, the map request is sent to the configured map resolver. When the **to** option is used, the map request is forwarded to the specified map resolver instead.Sending a map request to a different map resolver can be useful for testing that your EID prefix has been properly injected into the Alternative Logical Topology (ALT) infrastructure. In this case, the **lig** map request is processed by the specified map resolver and propagated through each ALT router hop to the map server you have registered to. The map server returns the map request to your site. Your site then generates a map reply to the source of the map request (which could be itself, or a different xTR within your LISP site).

Examples

The following example shows how to display all LISP map-cache entries and then use the **lig** command for the EID-prefix 172.16.10.0/24.

```
Router# show ip lisp map-cache
LISP IPv4 Mapping Cache, 1 entries
0.0.0.0/0, uptime: 01:18:22, expires: never, via static
Router# lig 172.16.10.1
Mapping information for EID 172.16.10.1 from 192.168.65.94 with RTT 12 msecs
```

```
172.16.10.0/24, uptime: 00:00:00, expires: 23:59:59, via map-reply, complete
  Locator                     Uptime      State      Pri/Wgt
  172.16.156.134              00:00:00  up            1/50
  192.168.65.94                00:00:00  up             1/50
  2001:468:D01:9C::80DF:9C86  00:00:00  up            2/100
Router# show ip lisp map-cache
LISP IPv4 Mapping Cache, 2 entries
0.0.0.0/0, uptime: 01:48:15, expires: never, via static
172.16.10.0/24, uptime: 00:00:08, expires: 23:59:51, via map-reply, complete
  Locator                     Uptime      State      Pri/Wgt
  172.16.156.134              00:00:08  up            1/50
  192.168.65.94                00:00:08  up             1/50
  2001:468:D01:9C::80DF:9C86  00:00:08  up            2/100
Router#
```
The following example shows how to display all LISP map-cache entries and then use the **lig self ipv6** command to verify that the local IPv6 EID prefix is registered to the LISP mapping database.

```
Router# show ipv6 lisp map-cache
LISP IPv6 Mapping Cache, 2 entries
::/0, uptime: 00:00:01, expires: never, via static
  Negative cache entry, action: send-map-request
2610:D0::/32, uptime: 00:00:01, expires: never, via static
  Negative cache entry, action: send-map-request
Router# lig self ipv6
Mapping information for EID 2610:D0:1209:: from 172.16.156.222 with RTT 36 msecs
2610:D0:1209::/48, uptime: 00:00:00, expires: 23:59:57, via map-reply, self
  Locator           Uptime      State      Pri/Wgt
  172.16.156.222  00:00:00  up           1/100
Router# show ipv6 lisp map-cache
LISP IPv6 Mapping Cache, 3 entries
::/0, uptime: 00:00:14, expires: never, via static
  Negative cache entry, action: send-map-request
2610:D0::/32, uptime: 00:00:14, expires: never, via static
  Negative cache entry, action: send-map-request
2610:D0:1209::/48, uptime: 00:00:02, expires: 23:59:54, via map-reply, self
  Locator           Uptime      State      Pri/Wgt
  172.16.156.222  00:00:02  up           1/100
Router#
```

Related Commands

Command	Description
show ip lisp map-cache	Displays the current dynamic and static IPv4 EID-to-RLOC map-cache entries.
show ipv6 lisp map-cache	Displays the current dynamic and static IPv6 EID-to-RLOC map-cache entries.