            Management Guidelines for the Locator/ID Separation Protocol (LISP)
                      Endpoint Identifier (EID) Block

Abstract

   This document proposes a framework for the management of the Locator/
   ID Separation Protocol (LISP) Endpoint Identifier (EID) address
   block. The framework described relies on hierarchical distribution
   of the address space, granting temporary usage of prefixes of such
   space to requesting organizations.

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1. Introduction

   The Locator/ID Separation Protocol (LISP [RFC6830]) and related
   mechanisms ([RFC6831], [RFC6832], [RFC6833], [RFC6834], [RFC6835],
   [RFC6836], [RFC6837]) separate the IP addressing space into two
   logical spaces, the Endpoint Identifier (EID) space and the Routing
   Locator (RLOC) space. The first space is used to identify
   communication endpoints, while the second is used to locate EIDs in
   the Internet routing infrastructure topology.

   [RFC7954] requests an IPv6 address block reservation exclusively for
   use as EID prefixes in the LISP experiment. The rationale, intent,
   size, and usage of the EID address block are described in [RFC7954].

This document proposes a management framework for the registration of
EID prefixes from that block, allowing the requesting organization
exclusive use of those EID prefixes limited to the duration of the
LISP experiment.

2. Requirements Notation

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT",
"SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this
document are to be interpreted as described in [RFC2119].

3. Definition of Terms

This document does not introduce any new terms related to the set of
LISP Specifications ([RFC6830], [RFC6831], [RFC6832], [RFC6833],
[RFC6834], [RFC6835], [RFC6836], [RFC6837]), but assumes that the
reader is familiar with the LISP terminology. [INTRO] provides an
introduction to the LISP technology, including its terminology.

4. EID Prefix Registration Policy

The request for registration of EID prefixes MUST be done under the
following policies:

1. EID prefixes are made available in the reserved space on a
    temporary basis and for experimental uses. The requester of an
    experimental prefix MUST provide a short description of the
    intended use or experiment that will be carried out (see
    Section 6). If the prefix will be used for activities not
    documented in the original description, renewal of the
    registration may be denied.

2. EID prefix registrations MUST be renewed on a regular basis to
    ensure their use by active participants in the experiment. The
    registration period is 12 months. A renewal SHOULD NOT cause a
    change in the EID prefix registered in the previous request. The
    conditions of registration renewal are to be the same as the
    conditions of the first EID prefix registration request.

3. It is preferable that EID prefixes whose registrations have
    expired not be reused. When an EID prefix registration is
    removed from the registry, then the reuse of the EID prefix in a
    subsequent registration on behalf of a different end user should
    be avoided where possible. If the considerations of overall
    usage of the EID block prefix requires reuse of a previously
    registered EID prefix, then a minimum delay of at least one week
    between removal and subsequent registration SHOULD be applied by
    the registry operator.

4. When the reserved experimental LISP EID block expires, all EID
    prefix registrations expire as well. The further disposition of
    these prefixes and the associated registry entries are to be
    specified in the announcement of the cessation of this
    experiment.

5. EID Prefixes Registration Requirements

    All EID prefix registrations MUST satisfy the following requirements:

    1. All EID prefix registrations MUST use a globally unique EID
        prefix.

    2. The EID prefix registration information, as specified in
        Section 6, MUST be collected upon initial registration and
        renewal, and made publicly available through interfaces allowing
        both the retrieval of specific registration details (search) and
        the enumeration of the entire registry contents (e.g., RDAP
        ([RFC7481]), WHOIS, HTTP, or similar access methods).

    3. The registry operator MUST permit the delegation of EID prefixes
        in the reverse DNS space to holders of registered EID prefixes.

    4. Anyone can obtain an entry in the EID prefix registry, on the
        understanding that the prefix so registered is for the exclusive
        use in the LISP experimental network, and that their registration
        details (as specified in Section 6) are openly published in the
        EID prefix registry.

6. EID Prefix Request Template

    The following is a basic request template for prefix registration to
    ensure a uniform process. This template is inspired by IANA's online
    "Private Enterprise Number (PEN) Request" form
    <http://pen.iana.org/pen/PenApplication.page>.

    Note that all details in this registration become part of the
    registry and will be published in the LISP EID Prefix Registry
    managed by RIPE NCC.

    The EID Prefix Request template MUST at a minimum contain:

    1. Organization (In the case of individuals requesting an EID
        prefix, this section can be left empty)

        (a) Organization Name

        (b) Organization Address

       (c) Organization Phone

       (d) Organization Website

   2. Contact Person (Mandatory)

       (a) Name

       (b) Address

       (c) Phone

       (d) Fax (optional)

       (e) Email

   3. EID Prefix Request (Mandatory)

       (a) Prefix Size

          + Expressed as an address prefix length.

       (b) Prefix Size Rationale

       (c) Lease Period

          + Note well: All EID Prefix registrations will be valid until
             the earlier date of 12 months from the date of registration
             or August 2019.

          + All registrations may be renewed by the applicant for
             further 12-month periods, ending on August 2019.

          + According to the 3+3 year experimentation plan, defined in
             [RFC7954], all registrations MUST end by August 2019, unless
             the IETF community decides to grant a permanent LISP EID
             address block. In the latter case, registrations following
             the present document policy MUST end by August 2022 and a
             new policy (to be decided -- see Section 7) will apply
             thereafter.

   4. Experiment Description

       (a) Experiment and Deployment Description

       (b) Interoperability with Existing LISP Deployments

       (c) Interoperability with Legacy Internet

5. Reverse DNS Servers (Optional)

    (a) Name Server Name

    (b) Name Server Address

    (c) Name Server Name

    (d) Name Server Address

    (Repeat if necessary)

7. Policy Validity Period

The policy outlined in the present document is tied to the existence
of the experimental LISP EID block requested in [RFC7954] and is
valid until August 2019.

If the IETF decides to transform the block into a permanent
allocation, the usage period reserved for the LISP EID block will be
extended for three years (until August 2022) to allow time for the
IETF to define, following the policies outlined in [RFC5226], the
final size of the EID block and create a transition plan, while the
policy in the present document will still apply.

Note that, as stated in [RFC7954], the transition of the EID block
into a permanent allocation has the potential to pose policy issues
(as recognized in [RFC2860], Section 4.3); hence, discussion with the
IANA, the Regional Internet Registry (RIR) communities, and the IETF
community will be necessary to determine the appropriate policy for
permanent EID prefix management, which will be effective after August
2022.

8. Security Considerations

This document does not introduce new security threats in the LISP
architecture nor in the Legacy Internet architecture.

For accountability reasons and in line with the security
considerations in [RFC7020], each registration request MUST contain
accurate information about the requesting entity (company,
institution, individual, etc.) and valid and accurate contact
information of a referral person (see Section 6).

9. IANA Considerations

   IANA allocated the following IPv6 address block for experimental use
   as the LISP EID prefix [RFC7954]:

   o Address Block: 2001:5::/32

   o Name: EID Space for LISP

   o RFC: [RFC7954]

   o Further details are at: www.iana.org/assignments/iana-ipv6-
      special-registry

   To grant requesting organizations and individuals exclusive use of
   EID prefixes out of this reserved block (limited to the duration of
   the LISP experiment as outlined in Section 7), there is an
   operational requirement for an EID registration service.

   Provided that the policies and requirements outlined in Sections 4,
   5, and 6 are satisfied, EID prefix registration is accorded based on
   a "First Come First Served" basis.

   There is no hard limit to the number of registrations an organization
   or individual can submit, as long as the information described in
   Section 6 is provided, in particular point 4: "Experiment
   Description".

   For the duration defined in [RFC7954], RIPE NCC will manage the LISP
   EID prefix as described herein. Therefore, this document has no IANA
   actions.

10. Procedures to be Followed by RIPE NCC

   RIPE NCC will provide the registration service following the EID
   Prefix Registration Policy (Section 4) and the EID Prefix
   Registration Requirements (Section 5) provided in this document. The
   request form provided by RIPE NCC will include at least the
   information from the template in Section 6. RIPE NCC will make all
   received requests publicly available. While this document does not
   suggest any minimum allocation size; RIPE NCC is allowed to introduce
   such a minimum size for management purposes.

11. References

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