                Layer Two Tunneling Protocol (L2TP)
      Internet Assigned Numbers Authority (IANA) Considerations Update

Status of this Memo

   This document specifies an Internet Best Current Practices for the
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Abstract

   This document describes updates to the Internet Assigned Numbers
   Authority (IANA) considerations for the Layer Two Tunneling Protocol
   (L2TP).

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1. Introduction

   This document provides guidance to the Internet Assigned Numbers
   Authority (IANA) regarding the registration of values related to the
   Layer Two Tunneling Protocol (L2TP), defined in [RFC2661], in
   accordance with BCP 26, [RFC2434].

1.1 Terminology

   The following terms are used here with the meanings defined in
   BCP 26: "name space", "assigned value", "registration".

   The following policies are used here with the meanings defined in
   BCP 26: "Private Use", "First Come First Served", "Expert Review",
   "Specification Required", "IETF Consensus", "Standards Action".

2. IANA Considerations

   L2TP [RFC2661] defines a number of "magic" numbers to be maintained
   by the IANA. This section updates the criteria to be used by the
   IANA to assign additional numbers in each of these lists.

   Each of the values identified in this document that require a
   registration criteria update are currently maintained by IANA and
   have a range of values from 0 to 65 535, of which a very small number
   have been allocated (the maximum number allocated within any one
   range is 46) [L2TP-IANA]. Given the nature of these values, it is
   not expected that any will ever run into a resource allocation
   problem if registration allocation requirements are relaxed from
   their current state.

   The recommended criteria changes for IANA registration are listed in
   the following sections. In one case, the registration criteria is
   currently defined as First Come First Served and should be made more
   strict, others are defined as IETF Consensus and need to be relaxed.
   The relaxation from IETF Consensus is motivated by specific cases in
   which values that were never intended to be vendor-specific have had
   to enter early field trials or be released in generally available
   products with vendor-specific values while awaiting documents to be
   formalized. In most cases, this results in products that have to
   support both the vendor-specific value and IETF value indefinitely.

   For registration requests where a Designated Expert should be
   consulted, the responsible IESG Area Director should appoint the
   Designated Expert.

   For registration requests requiring Expert Review, the Designated
   Expert should consult relevant WGs as appropriate (e.g., the l2tpext
   WG at the time of this writing).

   The basic guideline for the Expert Review process will be to approve
   the assignment of a value only if there is a document being advanced
   that clearly defines the values to be assigned, and there is active

implementation development (perhaps entering early field or
interoperability trails, requiring assigned values to proceed without
having to resort to a chosen vendor-specific method).

2.1 Control Message AVPs

IANA manages the "Control Message Attribute Value Pairs" [L2TP-IANA]
name space, of which 0 - 46 have been assigned. The criteria for
assignment was originally IETF Consensus. Further values should be
assigned upon Expert Review.

2.2 Message Type AVP Values

IANA manages the "Message Type AVP (Attribute Type 0) Values" [L2TP-
IANA] name space, of which 0 - 16 have been assigned. The criteria
for assignment was originally IETF Consensus. Further values should
be assigned upon Expert Review.

2.3 Result Code AVP Values

IANA maintains a list of "Result Code values for the StopCCN
message," "Result Code values for the CDN message," and "General
Error Codes" [L2TP-IANA]. The criteria for Error Code assignment was
originally First Come First Served, and the criteria for CDN and
StopCCN Result Codes were originally IETF Consensus. Further values
for all Result and Error codes should be assigned upon Expert Review.

2.4 Remaining Values

All criteria for L2TP values maintained by IANA and not mentioned
specifically in this document remain unchanged.

3. Normative References

   [RFC2119]   Bradner, S., "Key words for use in RFCs to Indicate
                Requirement Levels", BCP 14, RFC 2119, March 1997.

   [RFC2434]   Alvestrand, H. and T. Narten, "Guidelines for Writing an
                IANA Considerations Section in RFCs", BCP 26, RFC 2434,
                October 1998.

   [RFC2661]   Townsley, W., Valencia, A., Rubens, A., Pall, G., Zorn,
                G. and B. Palter, "Layer Two Tunneling Layer Two
                Tunneling Protocol (L2TP)", RFC 2661, August 1999.

   [L2TP-IANA] Internet Assigned Numbers Authority (IANA), "Layer Two
                Tunneling Protocol 'L2TP' - RFC 2661",
                http://www.iana.org/assignments/l2tp-parameters

4. Security Considerations

   This focuses on IANA considerations, and does not have security
   considerations.

5. Acknowledgements

   Some of this text and much of the format of this document was taken
   from an internet document on EAP IANA Considerations authored by
   Bernard Aboba.

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Acknowledgement

   Funding for the RFC Editor function is currently provided by the
   Internet Society.