                IANA Considerations for PPP over Ethernet (PPPoE)

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Abstract

   This document describes the IANA considerations for the PPP over
   Ethernet (PPPoE) protocol.

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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
   PPP over Ethernet Protocol (PPPoE), defined in [RFC2516], in
   accordance with BCP 26, [RFC2434]. It also reserves PPPoE TAG values
   as well as PPPoE packet Code fields, which are or have been in use on
   the Internet.

1.1. Terminology

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

   The following policies are used here with the meanings defined in BCP
   26: "First Come First Served".

1.2. Specification of Requirements

   In this document, several words are used to signify the requirements
   of the specification. These words are often capitalized. 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].

2. IANA Considerations

   The PPPoE protocol, as defined in [RFC2516], defines two name spaces
   that require registration, the PPPoE TAG and the PPPoE Code field.

2.1. Registration Policies for PPPoE TAG Values

   IANA has set up a registry of "PPPoE TAG Values". These are 16-bit
   values. PPPoE TAG values already in use are specified as reserved in
   this document. All other TAG values between 0 and 65535 are to be
   assigned by IANA, using the "First Come First Served" policy defined
   in [RFC2434].

   A TAG-Name and a description for the usage, as well as a point of
   contact, MUST be provided for any assignment from this registry. A
   document reference SHOULD also be provided.

2.2. Reserved PPPoE TAG Values

TAG Value		TAG Name	Tag Description	Reference
0	0x0000	End-Of-List	See the reference	[RFC2516]
257	0x0101	Service-Name	See the reference	[RFC2516]
258	0x0102	AC-Name	See the reference	[RFC2516]
259	0x0103	Host-Uniq	See the reference	[RFC2516]
260	0x0104	AC-Cookie	See the reference	[RFC2516]
261	0x0105	Vendor-Specific	See the reference	[RFC2516]
262	0x0106	Credits	See the reference	[RFC4938]
263	0x0107	Metrics	See the reference	[RFC4938]
264	0x0108	Sequence Number	See the reference	[RFC4938]
272	0x0110	Relay-Session-Id	See the reference	[RFC2516]
273	0x0111	HURL	See the reference	[CARREL]
274	0x0112	MOTM	See the reference	[CARREL]
288	0x0120	PPP-Max-Payload	See the reference	[RFC4638]
289	0x0121	IP_Route_Add	See the reference	[CARREL]
513	0x0201	Service-Name-Error	See the reference	[RFC2516]
514	0x0202	AC-System-Error	See the reference	[RFC2516]
515	0x0203	Generic-Error	See the reference	[RFC2516]

2.3. Registration Policies for PPPoE Code Fields

   IANA has set up a registry of PPPoE Active Discovery Code fields.
   These are 8-bit values. PPPoE Code fields already in use are
   specified as reserved in this document. All other Code values
   between 0 and 255 are to be assigned by IANA, using the "First Come
   First Served" policy defined in [RFC2434].

   A PPPoE Active Discovery packet name and a description for the usage,
   as well as a point of contact, MUST be provided for any assignment
   from this registry.

   A document reference SHOULD also be provided.

2.4. Reserved PPPoE Code fields

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   Code       PPPoE Packet Name              Description        Reference
   --------   -----------------------------  -----------------  ---------
   0   0x00   PPP Session Stage              See the reference  [RFC2516]

   7   0x07   PADO, Offer                    See the reference  [RFC2516]
   9   0x09   PADI, Initiation               See the reference  [RFC2516]

   10  0x0a   PADG, Session-Grant            See the reference  [RFC4938]
   11  0x0b   PADC, Session-Credit Response  See the reference  [RFC4938]
   12  0x0c   PADQ, Quality                  See the reference  [RFC4938]

   25  0x19   PADR, Request                  See the reference  [RFC2516]
   101 0x65   PADS, Session-confirmation     See the reference  [RFC2516]

   167 0xa7   PADT, Terminate                See the reference  [RFC2516]

   211 0xd3   PADM, Message                  See the reference  [CARREL]
   212 0xd4   PADN, Network                  See the reference  [CARREL]
```

3. Security Considerations

   This document focuses on IANA considerations for the PPPoE protocol,
   and as such, should help remove the possibility of the same PPPoE
   code field and PPPoE TAG value being used for different
   functionalities.

4. References

4.1. Normative References

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

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

   [RFC2516] Mamakos, L., Lidl, K., Evarts, J., Carrel, D., Simone, D.,
             and R. Wheeler, "A Method for Transmitting PPP Over
             Ethernet (PPPoE)", RFC 2516, February 1999.

4.2. Informative References

   [CARREL] Carrel D., Simone D., Ho C. and T. Stoner, "Extensions to a
             Method for Transmitting PPP Over Ethernet (PPPoE)", Work in
             Progress.

   [RFC4938] Berry, B. and H. Holgate, "PPP Over Ethernet (PPPoE)
             Extensions for Credit Flow and Link Metrics", RFC 4938,
             June 2007.

   [RFC4638] Arberg, P., Kourkouzelis, D., Duckett, M., Anschutz, T.,
             and J. Moisand, "Accommodating a Maximum Transit
             Unit/Maximum Receive Unit (MTU/MRU) Greater Than 1492 in
             the Point-to-Point Protocol over Ethernet (PPPoE)", RFC
             4638, September 2006.

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