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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

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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