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G. Zorn
Microsoft Corporation

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PPP LCP Internationalization Configuration Option

Status of this Memo

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1. Abstract

The Point-to-Point Protocol (PPP) [1] provides a standard method for transporting multi-protocol datagrams over point-to-point links. PPP also defines an extensible Link Control Protocol (LCP), which allows negotiation of an Authentication Protocol for authenticating its peer before allowing Network Layer protocols to transmit over the link.

Both LCP and Authentication Protocol packets may contain text which is intended to be human-readable [2,3,4]. This document defines an LCP configuration option for the negotiation of character set and language usage, as required by RFC 2277 [5].

2. Specification of Requirements

In this document, the key words "MAY", "MUST, "MUST NOT", "optional", "recommended", "SHOULD", and "SHOULD NOT" are to be interpreted as described in [6].

3. Additional LCP Configuration Option

The Configuration Option format and basic options are already defined for LCP [1].

Up-to-date values of the LCP Option Type field are specified in STD 2 [7]. This document concerns the following value:

28 Internationalization

The Internationalization option described here MAY be negotiated independently in each direction.

Only one instance of this option SHOULD be sent by an implementation, representing its preferred language and charset.

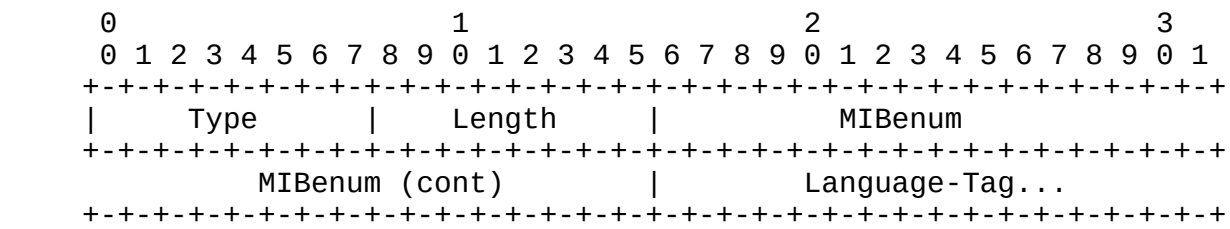
If Internationalization option is rejected by the peer, the default language and charset MUST be used to construct all human-readable messages sent to the peer.

4.1. Internationalization

Description

This Configuration Option provides a method for an implementation to indicate to the peer both the language in which human-readable messages it sends should be composed and the charset in which that language should be represented.

A summary of the Internationalization option format is shown below. The fields are transmitted from left to right.



Type

28

Length

>= 7

MIBenum

The MIBenum field is four octets in length. It contains a unique integer value identifying a charset [5,11].

This value MUST represent one of the set of charsets listed in the IANA charset registry [7].

The charset registration procedure is described in RFC 2278 [9].

The default charset value is UTF-8 [10]. The MIBenum value for the UTF-8 charset is 106.

Language-Tag

The Language-Tag field is an ASCII string which contains a language tag, as defined in RFC 1766 [8].

Language tags are in principle case-insensitive; however, since the capitalization of a tag does not carry any meaning, implementations SHOULD send only lower-case Tag fields.

The default Tag value is "i-default" [8].

4. References

[1] Simpson, W., "The Point-to-Point Protocol (PPP)", STD 51, RFC 1661, July 1994.

[2] Simpson, W., "PPP Challenge Handshake Authentication Protocol (CHAP)", RFC 1994, August 1996.

[3] Simpson, W., "PPP LCP Extensions", RFC 1570, January 1994.

[4] Blunk, L. and J. Vollbrecht, "PPP Extensible Authentication Protocol (EAP)", RFC 2284, March 1998.

[5] Alvestrand, H., "IETF Policy on Character Sets and Languages", BCP 18, RFC 2277, January 1998.

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

[7] Reynolds, J. and J. Postel, "Assigned Numbers", STD 2, RFC 1700, October 1994. See also: http://www.iana.org/numbers.html

[8] Alvestrand, H., "Tags for the Identification of Languages", RFC 1766, March 1995.

[9] Freed, N. and J. Postel, "IANA Charset Registration Procedures", BCP 19, RFC 2278, January 1998.

[10] Yergeau, F., "UTF-8, a transformation format of ISO 10646", RFC 2279, January 1998.

[11] Smith, R., Wright, F., Hastings, T., Zilles, S. and J. Gyllenskog, "Printer MIB", RFC 1759, March 1995.

5. Security Considerations

It is possible that an attacker might manipulate the option in such a way that displayable messages would be unintelligible to the reader.

6. Acknowledgements

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7. Chair’s Address

Karl Fox
Ascend Communications
3518 Riverside Drive
Suite 101
Columbus, OH 43221

Phone: +1 614 326 6841
EMail: karl@ascend.com

8. Author’s Address

Glen Zorn
Microsoft Corporation
One Microsoft Way
Redmond, Washington 98052

Phone: +1 425 703 1559
Fax: +1 425 936 7329
EMail: glennz@microsoft.com

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