

Network Working Group
Internet-Draft
Updates: [2119](#) (if approved)
Intended status: Best Current Practice
Expires: August 08, 2017

B. Leiba
Huawei Technologies
February 06, 2017

Ambiguity of Uppercase vs Lowercase in [RFC 2119](#) Key Words
draft-leiba-rfc2119-update-01

Abstract

[RFC 2119](#) specifies common key words that may be used in protocol specifications. This document aims to reduce the ambiguity by clarifying that only UPPERCASE usage of the key words have the defined special meanings.

Status of this Memo

This Internet-Draft is submitted in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <http://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on August 08, 2017.

Copyright Notice

Copyright (c) 2017 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<http://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the [Trust Legal Provisions](#) and are provided without warranty as described in the Simplified BSD License.

[1.](#) Introduction

[RFC 2119](#) specifies common key words, such as "MUST", "SHOULD", and "MAY", that may be used in protocol specifications. It says that those key words "are often capitalized," and that has caused confusion about how to interpret non-capitalized words such as "must" and "should".

This document updates [RFC 2119](#) by clarifying that only UPPERCASE usage of the key words have the defined special meanings. This document will become part of [BCP 14](#) when it is approved. [[RFC-Editor: Please change the previous sentence to "This document is part of [BCP 14](#)."]]

[1.1.](#) Some Notes for Reviewers (not for publication)

[[RFC-Editor: Please remove this section before publishing.]]

This update is intentionally small and focused, and quite intentionally updates, but does not replace, [RFC 2119](#). The author considers it important to retain the reference to [RFC 2119](#) because of the general familiarity with the number, and to phase in the use of "[BCP 14](#)". Note, though, that the References section uses the RFC numbers, not the BCP number. This is because it needs to be clear when a document has adopted this update, and the dual reference to [RFC 2119](#) *and* this document gives that clarity.

The point has been made by some that having case be significant to the meanings of words is unusual and may be a bad idea. There is specific concern about causing confusion to readers whose native languages do not have a distinction between upper and lower case (consider Chinese and Hebrew, for example). The author believes this has been discussed and addressed, and that those maintaining this point are in the rough.

There have been suggestions that while we're here we should consider a broader [BCP 14](#) update that also talks about proper use of the key words, when they should not be used, avoiding overuse, and so on. The author agrees, but thinks it is best to keep that as a separate effort, as coming to consensus on such an update is likely to be much more difficult, and is likely to take much longer.

[2.](#) Clarifying Capitalization of Key Words

The following change is made to [[RFC2119](#)]:

=== OLD ===

In many standards track documents several words are used to signify the requirements in the specification. These words are often capitalized. This document defines these words as they should be

interpreted in IETF documents. Authors who follow these guidelines should incorporate this phrase near the beginning of their document:

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 [RFC 2119](#).

=== NEW ===

In many IETF documents several words are used to signify the requirements in the specification, when they are in all capitals as shown below. This document defines how these words are interpreted in IETF documents when the words are in all capitals.

- o These words can be used as defined here, but using them is not required. Specifically, normative text does not require the use of these key words. They are used for clarity and consistency when that is what's wanted, but a lot of normative text does not use them, and is still normative.
- o The words have the meanings specified herein only when they are in all capitals.
- o When these words are not capitalized, they have their normal English meanings; this document has nothing to do with them.

Authors who follow these guidelines should incorporate this phrase near the beginning of their document:

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [BCP 14](#) [[RFC2119](#)],[RFCxxxx] when, and only when, they appear in all capitals, as shown here.

=== END ===

[[RFC Editor: Please replace "RFCxxxx", above, with a reference to this RFC number, and remove this note.]]

[3.](#) IANA Considerations

There are no IANA considerations for this document.

[4.](#) Security Considerations

This document is purely procedural, and there are no related security considerations.

[5.](#) Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate

Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

Author's Address

Leiba

Expires August 08, 2017

[Page 3]

Barry Leiba
Huawei Technologies

Phone: +1 646 827 0648

Email: barryleiba@computer.org

URI: <http://internetmessagingtechnology.org/>

