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Characterization of Proposed Standards
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Abstract

RFC 2026 describes the review performed by the IESG on IETF Proposed Standard RFCs and states the maturity level of those documents. This document clarifies those descriptions and updates RFC 2026 by providing a new characterization Proposed Standards.

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1. Introduction

[Editor Note: ietf@ietf.org is the mailing-list for discussing this draft.]

In the two decades after publication of RFC 2026 [RFC2026] the IESG has evolved its review processes of Proposed Standard RFCs and thus RFC 2026 section 4.1.1 no longer accurately describes IETF Proposed Standards.

This document exclusively updates the characterization of Proposed Standards from RFC2026 Section 4.1.1 and does not speak to or alter the procedures for the maintenance of Standards Track documents from RFC 2026 and RFC 6410 [RFC6410]. For complete understanding of the requirements for standardization those documents should be read in conjunction with this document.

2. IESG Reveiew of Proposed Standards

The entry-level maturity for the standards track is "Proposed Standard". A specific action by the IESG is required to move a specification onto the standards track at the "Proposed Standard" level.

Initially it was assumed that most IETF technical specifications would progress through a series of maturity stages starting with Proposed Standard, then progressing to Draft Standard then, finally, to Internet Standard (see RFC 2026 section 6). Over time, for a number of reasons, this progression became less common. In response, the IESG strengthened its review of Proposed Standards, basically operating as if the Proposed Standard was the last chance for the IESG to ensure the quality of the technology and the clarity of the Standard Track document. The result was that IETF Proposed Standards approved over the last decade or more have had extensive review. Because of this change in review assumptions, IETF Proposed Standards should be considered to be at least as mature as final standards from other standards development organizations. In fact, the IETF review is more extensive than that done in other SDOs owing to the cross-area technical review performed by the IESG, a position that is further strengthened by the common presence of interoperable running code and implementation before publication as a Proposed Standard.

3. Characterization of Specification

Section 3.1 of this document replaces RFC 2026 Section 4.1.1. Section 3.2 is a verbatim copy of the characterization of Internet Standards from RFC 2026 Section 4.1.3 and is provided for convenient reference.

3.1. Characterization of IETF Proposed Standard Specifications

The entry-level maturity for the standards track is "Proposed Standard". A specific action by the IESG is required to move a specification onto the standards track at the "Proposed Standard" level.

A Proposed Standard specification is stable, has resolved known design choices, is well-understood, has received significant community review, and appears to enjoy enough community interest to be considered valuable.

Usually, neither implementation nor operational experience is required for the designation of a specification as a Proposed Standard. However, such experience is highly desirable, and will usually represent a strong argument in favor of a Proposed Standard designation.

The IESG may require implementation and/or operational experience prior to granting Proposed Standard status to a specification that materially affects the core Internet protocols or that specifies behavior that may have significant operational impact on the Internet.

A Proposed Standard will have no known technical omissions with respect to the requirements placed upon it. Proposed Standards are of such quality that implementations can be deployed in the Internet. However, as with all technical specifications, Proposed Standards may be revised if problems are found or better solutions are identified, when experiences with deploying implementations of such technologies at scale is gathered.

3.2. Characteristics of Internet Standards

A specification for which significant implementation and successful operational experience has been obtained may be elevated to the Internet Standard level. An Internet Standard (which may simply be referred to as a Standard) is characterized by a high degree of technical maturity and by a generally held belief that the specified protocol or service provides significant benefit to the Internet community.

4. Further Considerations

While less mature specifications will usually be published as Informational or Experimental RFCs, the IETF may, on occasion, publish a specification that still contains areas for improvement or certain uncertainties about whether the best engineering choices are made. In those cases that fact will be clearly and prominently communicated in the document e.g. in the abstract, the introduction, or a separate section or statement.

5. Security Considerations

This document does not directly affect the security of the Internet.

6. IANA Considerations

There are no actions for IANA.

7. References

[RFC2026] Bradner, S., "The Internet Standards Process -- Revision 3", BCP 9, RFC 2026, October 1996.

[RFC6410] Housley, R., Crocker, D. and E. Burger, "Reducing the Standards Track to Two Maturity Levels", BCP 9, RFC 6410, October 2011.

Appendix A. Acknowledgements

This document is inspired by a discussion at the open microphone session during the technical plenary at IETF 87. Thanks to, in

alphabetical order: Jari Arko, Carsten Bormann, Scott Brim, Spencer Dawkins, Randy Bush, Dave Cridland, Adrian Farrel, John Klensin, and Subramaniam Moonesamy for motivation, input and review.

Appendix B. Internet Draft Notes and RFC Editor Instructions

This section is to assist reviewers of this document.

[Editor Note: Please remove this section and its subsections at publication]

Appendix B.1. Version 00

Introduction and motivation

Verbatim copy from section 4.1.1 and 4.1.3 of [RFC2026] of the Proposed and ant Internet Draft characterization into Section 3.1 and Section 3.2

Modification of paragraphs of the Proposed Standards characterization, namely:

OLD:

A Proposed Standard specification is generally stable, has resolved known design choices, is believed to be well-understood, has received significant community review, and appears to enjoy enough community interest to be considered valuable. However, further experience might result in a change or even retraction of the specification before it advances.

NEW:

A Proposed Standard specification is stable, has resolved known design choices, is well-understood, has received significant community review, and appears to enjoy enough community interest to be considered valuable. However, as with all technical standards, further experience might result in a change or even retraction of the specification in the future.

OLD:

A Proposed Standard should have no known technical omissions with respect to the requirements placed upon it. However, the IESG may waive this requirement in order to allow a specification to advance to the Proposed Standard state when it is considered to be useful and necessary (and timely) even with known technical omissions.

Implementors should treat Proposed Standards as immature specifications. It is desirable to implement them in order to gain experience and to validate, test, and clarify the specification. However, since the content of Proposed Standards may be changed if problems are found or better solutions are identified, deploying

implementations of such standards into a disruption-sensitive environment is not recommended.

NEW:

A Proposed Standard will have no known technical omissions with respect to the requirements placed upon it. Proposed Standards are of such quality that implementations can be deployed in the Internet. However, as with all technical specifications, Proposed Standards may be revised if problems are found or better solutions are identified, when experiences with deploying implementations of such technologies at scale is gathered.

Appendix B.2. Version 00->01

Added "Updates 2026" and added Sean's initial"

Copied the whole characterization paragraph for Internet Standards from 2026, instead of only the line that is the actual characterization itself.

Added the Further Consideration section based on discussion on the mailinglist.

Appendix B.3. Version 01->02

Sharpened the 2nd paragraph of the Introduction to be clear that the scope of the update is limited to section 4.1.1. and that this document should not be read stand-alone.

Refined the "Further Considerations" Sections to express that as part of the process less mature specs are sometimes approved as Proposed Standards but that in those cases the documents should clearly indicate that.

Minor editorial nits, and corrections.

Appendix B.4. Editors versioning info

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